UNIVERSITAT DE VALENCIA

FACULTAD DE ECONOMÍA
DEPARTAMENTO DE ECONOMÍA APLICADA

Institutional arrangements for sustainable development: Cases from the Navarra Province (Spain).

DISSERTATION
To opt for the Degree of Doctor of Philosophy in Applied Economics

Submitted by:
Sandra Guevara de Molina, Mph

Research Director:
Isabel Pla Julian, PhD
Universidad de Valencia

Valencia, November 2015

To my son, Adrian, the brightest light in my heart illuminating not only our present but beaming on the path forward. A path to be planted with the seeds of wellbeing, fulfilment and joy.

In humble tribute to my ancestors and loved ones who bequeathed us their caring for nature and fellow human beings, as well as their willingness to look for creative responses to defies.

ACKNOWLEDMENTS

This challenging task has been possible thanks to encouragement and support of so many people, that it would be impossible to name them all. My gratitude to all of those words, messages, reflections, information, points of view and even hugs which I have received during these years of research and also when I had to stop it and take care of myself. In fact the first thing I am grateful for is life. We do not think therefore exist; it is the other way around; because we are alive we experience, think, and dare to share those thoughts...

I would like to start by expressing my thankfulness to my thesis director, Professor Isabel Pla Julián, for her guidance over the years and particularly for her understanding when the research was on hold or changed path. Her constructive comments and guidance was crucial to advance towards completion.

My deepest appreciation also to Professor Emèrit Bono. Without his encouragement I would have not joint the Doctorate program. His teachings have been fundamental in my current understanding of sustainable development, the corner stone of this work.

I would also like to mention Professor Tomas Carpi, to whom I am also profoundly grateful. To have him as a teacher in the Master in Environmental Management and Sustainable Development and then in the Doctorate has been essential, providing solid bases and stimulus, contributing to build the bridge between my global vision and the local defies requiring strategic thinking.

My deepest appreciation also to Professor Maria Sagrario Floro, from the American University who have contributed to nurture these reflections with her wisdom. Our deep conversations encompassing global challenges have inspired me a lot.

I am also grateful to Professor Fernando Toboso and Professor Francisco Higón who have enriched my perspectives; and Professor Amadeo Fuenmayor who as my MPhil director was always there with the best advice and support. That phase constitutes the foundation which allowed me to continue advancing and learning.

A special mention also deserve my superiors at the Environmental Unit of the Ministry for Foreign Affairs of Venezuela, Evelyn Horowitz, Jorge Jimenez and Gerardo Arellano whose knowledge, guidance and trust have been essential for a constructive professional experience very much related to this research. I also would like to thank my colleagues Beatriz Vigil, Mariana Romero and Ma. Conchita Viana since I have also learned a lot from them and our nurturing debates and reflections.

I would also like to thank Imelda Lorea, former Director of Employment of the Government of Navarra. Her receptiveness and kindness, has been encouraging and her advice and information invaluable.

My deepest gratitude to Ana Carmen Irigalba, for her immediate support and humble sharing of her great experience. Her trust in opening the doors to accompany her in many endeavours as participant observant has been essential.

I would like to thank Montse Guerrero, with whom I have had so many enriching and exiting conversations, deepening into the meaning and implications of circular economy and corporate social responsibility, or the challenges of systemic thinking.

My profound thankfulness also to Eva Isturiz, Equality Agent of Ansoáin, her approachability and willingness to share her experience of gender mainstreaming and her believes have been crucial for this research.

My deepest appreciation and admiration for Emilio Linzoáin, who besides being an innovative entrepreneur with a fruitful experience has become a good friend, together with his wife and children.

I would also like to express my deep appreciation to other outstanding women who in one way or the other have contributed with reflections, ideas, proposals, or key contacts: Metta Sparre, Kitty Panourgia, Liselotte Noren, Mónica Segura, Teresa Rodriguez, Shedy Plaza, Natalia Sagrario, Marta Martinez Arellano and Cecilia Wolluscheck, among others.

My word of appreciation also for the anonymous interviewees whose names I do not share to preserve the confidentiality of their testimony and information. Their contribution to the research has been immensely valuable.

Last but not less all my love and thankfulness to my family, in particular my husband and my son for giving me the time and space to dive into oceans of information, questions, ideas, theories and doubts, as well as comforting me during the phases of imperative pause. My mother, my father and brothers have also had a positive attitude and encouraging word in the best moments. But also my gratitude is for my chosen family, those who have become angels in my life, Arantxa Elizondo, Juan Sola, Maite Alejandro y Javier de la Rica, Maica Gil y Gerardo Rodriguez, Joanne Wood y José Moreno, Meridiana López, Bettina Gerbeau, Hortensia Carrer, Montsy Noel, and Dolly Valbuena.

ABSTRACT

After more than 20 years of the Earth Summit, Sustainable development is still recognized as one of the main challenges of the XXIst century. World leaders are putting new emphasis on the need to resolve urgent environmental challenges underlining their link with the wellbeing of humankind and the very conditions that made life possible on the planet. We are immersed in complex socio-ecological systems where sectoral or simplified responses are not adequate. A more systemic vision is imperative to effectively address the challenges faced.

New approaches are being developed to integrate social, environmental and economic concerns in all human activities. Particular attention is given to decoupling economic growth from environmental degradation, a prerequisite for achieving sustainable development. In this regard, innovation is essential but it has to mainstream the ecosystem approach to favour a recoupling of the relationship between economy and ecology.

It should imply a real transformation involving also the social dimension. One of the key aspects is the eradication of inequalities and discrimination, the acknowledgement of the important contribution of the work carried out in households to the whole economy, and to embrace the ethic of care in order to adequately address the multidymensional crisis humanity faces.

In this regard, the role of institutions is essential. National, regional and local administrations have the possibility of influencing the space of coexistence where all those problems originate. Meeting the challenge requires political will to lead the process, creating the conditions for changing the perspective. This implies fostering technological and social innovation, as well as a new entrepreneurial culture focused on creating shared value. It is also crucial to enhance citizens´ capacities to actively participate not only with their opinions regarding their needs, but also enabling them to assume their responsibility and

contribute with their talents, skills and creativity to transform the current conditions. Many change agents are required.

With this integrative perspective, a qualitative research has been carried out in the autonomous community of Navarra, (Spain). Two strategies combining sustainability and gender issues have been identified in the public and the private sectors, which will be exposed as case studies. One relates to a gender and sustainability mainstreaming initiative at a municipality, and the other to the implementation of a Corporate Social Responsibility strategy, at the firm level, promoted by the provincial government. A third case has also been included: the Enterprise-Environment Program. Its recent evolution represents a step forward in the transformation of patterns of production and consumption with potentiality to introduce the ethic of care beyond the natural environment.

The aim of the research is to better understand how those initiatives have been forged and which lessons could be learn from them. The findings confirm the relevance of flexible and adaptive institutional arrangements as main drivers of sustainable development, which should take into account the need to keep the balance among the dimensions of sustainability as well as the diversity of the contexts. On the other hand, it also shows the technological defies, the difficulties to integrate gender and sustainability at the enterprise level and the challenges ahead to really advance on the transformations required from an integrative perspective to sustainable development.

Key words: sustainable development, institutions, governance, gender mainstreaming, eco-innovation, circular economy, ethic of care, corporate social responsibility, socioecological systems.

RESUMEN

Más de 20 años después de la celebración de la Cumbre de la Tierra, todavía el Desarrollo Sostenible es reconocido como uno de los principales desafíos del siglo XXI. Líderes mundiales muestran un renovado interés en la necesidad de resolver urgentes desafíos ambientales, subrayando su relación con el bienestar de la especie humana en su conjunto y las condiciones que hacen posible la vida en nuestro planeta. Los seres humanos y la naturaleza conformamos un complejo sistema socio-ecológicos donde las respuestas sectoriales o simplificadas ya no son adecuadas. Una visión más sistémica es imperativa para bordar eficazmente los desafíos a los cuales nos enfrentamos.

Actualmente se están desarrollando nuevos enfoques para facilitar la integración de las preocupaciones sociales, ambientales y económicas en todas las actividades humanas. Particular atención adquieren los patrones de producción y consumo al considerarse fundamentales para desacoplar el crecimiento económico de la degradación ambiental, un requisito esencial del desarrollo sostenible. La innovación es crucial para afrontar este reto, pero ésta debe integrar el enfoque eco-sistémico favoreciendo una reconciliación real entre economía y ecología.

Ello implica una verdadera transformación que tiene que incluir también la dimensión social, eliminando las desigualdades y reconociendo la importante relación entre el llamado sector productivo y los hogares, y asumiendo la ética del cuidado a fin de orientar adecuadamente nuestros esfuerzos hacia la superación de la crisis multidimensional que confronta la humanidad.

En este contexto, el papel de las instituciones es esencial. Las administraciones nacionales, regionales y locales tienen la posibilidad de influir en este espacio de convivencia donde todos estos problemas se originan. Abordar tal desafío requiere de una firme voluntad política para liderar este

proceso, creando las condiciones para que se produzcan los cambios necesarios. Ello implica fomentar la innovación tecnológica y social, así como una nueva cultura empresarial centrada en la generación de valor compartido. Es crucial que se fortalezcan las capacidades de los ciudadanos, hombres y mujeres, para participar activamente no sólo con sus opiniones, sino también asumiendo su responsabilidad y contribuyendo con su talento, habilidades y creatividad a transformar la realidad. Se requieren muchos agentes de cambio.

Con esta visión se ha llevado a cabo una investigación cualitativa en la Navarra (España) donde se han identificado dos estrategias que permiten combinar sostenibilidad y género. Las mismas serán expuestas como estudios de caso. El primero se refiere a una iniciativa de transversalidad del género y sostenibilidad en una municipalidad, y el segundo a la estrategia gubernamental de Responsabilidad Social Empresarial. Se ha incluido un tercer caso: el Programa Empresa-Medio Ambiente ya que si bien se centra en los aspectos ambientales, su más reciente evolución representa un avance en la transformación de los patrones de producción y consumo con potencialidad para incluir la ética del cuidado, más allá de lo concerniente al medio natural.

El propósito del estudio es comprender cómo se han forjado estas iniciativas y qué lecciones podrían derivarse de las mismas. Los resultados confirman la relevancia de los arreglos institucionales flexibles y adaptados al contexto como principales impulsores del desarrollo sostenible; los cuales deben tomar en consideración la necesidad de mantener un equilibrio entre las distintas dimensiones de la sostenibilidad así como la diversidad de los contextos espaciales, sociales y culturales. También ponen de relieve las dificultades para integrar género y medio ambiente en las empresas, los desafíos tecnológicos y la necesidad de estimular la innovación.

Palabras claves: desarrollo sostenible, instituciones, gobernanza, transversalidad de género, eco-innovación, economía circular, ética del cuidado, responsabilidad social empresarial, sistemas socio-ecológicos.

ABBREVIATIONS AND ACRONYMS

A21	Agenda 21
CEN	Navarre Confederation of Entrepreneurs
CEPAL	Economic Commission for Latin America and the Caribbean
CERES	Coalition for Environmental Responsible Economies
COP	Conference of the Parties
CRANA	Navarre Centre for Environmental Resources
CS	Corporate Sustainability
CSR	Corporate Social Responsibility
CSV	Creating Shared Value
EC	European Commission
ECOSOC	Economic and Social Council
EEP	Enterprise-Environment Program
EFQM	European Foundation of Quality Management
EU	European Union
EUROSTAT	Statistical Office of the European Communities
GDP	Gross Domestic Product
GEO	Global Environmental Look
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GVA	Gross Value Added
HDI	Human Development Index
IAD	Institutional Analysis and Development
IAFFE	International Association for Feminist Economics
ICLEI	International Council for Local Environmental Initiatives
IEN	Navarre Institute of Statistics
ILO	International Labour Organization
INE	National (Spanish) Institute of Statistics

INI	Navarre Institute of Equality
IPCC	Intergovernmental Panel on Climate Change
LA21	Local Agenda 21
MDGs	Millennium Development Goals
NGO	Non-Governmental Organization
OCDE	Organization for Economic Cooperation and Development
PSN	Socialist Party of Navarra
SDGs	Sustainable Development Goals
SES	Socio-Ecological Systems
SME	Small and Medium Enterprises
SNE	Navarre Employment Service
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UPN	Navarre People´s Union

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 INTRODUCTION

"…*tomorrow is not only very close, but in many respects it is already here"* K. Boulding (1966).

This affirmation by Kennet Boulding has a direct connection with recent scientific confirmations on the risks of ignoring the environmental challenges the world faces, as well as with the urgent task to address human defies in all its dimensions. Since the sustainable development concept emerged, back in the late 1980s, three fundamental aspects were highlighted: the balance between the economic, social and environmental dimensions, the need for shifting our short-term sight for a longer one being crucial to ponder on the future generation's rights, and the compelling need for global justice. In other words a strategic vision is needed, so much so that nowadays it is considered one of the characteristics of a good governance. But it has to be accompanied by timely action.

So many years have passed since the release of the Brundtland Report and it seems that we have not completely realized that the problems envisaged by the famous report are nowadays impacting our lives, the lives of our children and the generations to come. Part of those future generations that were referred to, have already been born. They are sharing our present, aspiring to enjoy the same opportunities we have had. Evidently they also have to think strategically, in terms of their own descendants and the sustainability of the resources they use to transform their lives as they wish, and the impact it has on other people and the environment. It is therefore critical to promote sustainable development.

Obviously my background represents the lenses I see the world through and the way I approach this research. Short after the release of this ground-

breaking report I was working with the South Commission Office in Venezuela, which allowed me to learn from so many outstanding people as Hazel Henderson, Manfred Max Neef, Mabuq Ul Haq, Devaki Jain, Marie Angelique Savane and Mwalimu Julius Nyerere, among other personalities from the South who were not only interested in the development debate but have devoted their lives to contribute with their ideas and work to improve the lives of present and future generations. I feel so fortunate for having had the opportunity to attend their gatherings, seminars and talks about different subjects relevant for developing countries and world order, particularly their reflections on the sustainable development concept. Some of them with positive expectations on what it would mean for the South, others a bit sceptics about the consequences for developing countries´ aspirations. However, nurturing thoughts that revealed the challenge that sustainability implies for global governance.

It was by far the most exciting and formative experience I could have ever dream of, which have had such a long-lasting effect on me that almost 30 years later I am still reflecting on those issues trying to understand the different perceptions and viewpoints, always having in mind the need for balance among the different components of the development process while holding the vision of sustainability as globally inclusive to be real. A conviction certainly reinforced by the contact with local development experiences and divers living conditions in my own country and others I was posted to (India, Algeria, Nepal, Belgium Denmark and Norway) or visited during the years I was a career diplomat (India, Sri Lanka, Thailand, China, or Brazil, among others).

On the other hand, having served in Scandinavia during 7 years gave me the opportunity to dig into the complex equilibrium underlying the welfare state. Likewise, participating as a delegate of my country, Venezuela, in some international negotiations processes on the environmental agenda, in the framework of the UN system or the World Trade Organization, represented another occasion to understand the different positions and tensions underlying sustainable development.

Therefore, the fact to see that sustainable development is back on the international agenda is a source of great satisfaction and hope. The approval of the Sustainable Development Goals (SDGs) on September 25th, 2015, which have set the global development agenda for the next fifteen years is a very good news. Whereas the scope of the goals reflects its integrative character (see Annex 1), the slogan chosen `2015 TIME FOR GLOBAL ACTION for people and planet´ brings to my memory the above mentioned Bounding's affirmation.

The UN secretary general, Ban Ki-moon has described the new goals as a "universal, transformative and integrated agenda that heralds an historic turning point for our world"[1]. It results from several years of collective action involving governments, international organizations, advocacy movements and civil organizations, conscious business sectors, scientific and epistemic community (Haas, 1992) as well as global and local leadership, including religious one, which is unprecedented.

In effect, Pope Francis´s unparalleled Encyclical `*Laudato Sí´* addresses not only Catholics but "all people about our common home". The aim is to bring "the whole human family together to seek a sustainable and integral development" which requires an inclusive conversation, "since the environmental challenge we are undergoing, and its human roots, concern and affects us all." (Pope St. Francis, 2015: par 13 and 14). Pope Francis acknowledges that the effort to protect and improve our world entails profound changes in the current patterns of production and consumption, as well as the established structures of power. Other leaders during the UN General Assembly´s summit on the adoption of the SDGs also made reference to the governance challenge, while an interactive dialogue was held with regard to the need to build effective, accountable, and inclusive institutions[2].

Even the World Economic Forum (WEF) is talking about sustainability. A white paper on Business Sustainability, published in 2014, underlines the need to

[1] The guardian, September 25th, 2015
[2] http://www.un.org/press/en/2015/ga11691.doc.htm

understand business sustainability in terms of the environment, economic development, human rights, women empowerment, and rule of law.

This coincides with the preparation of the next Conference of the Parties (COP 21) of the United Nations Framework Convention on Climate Change to be held in December 2015. All this in a year with widespread news regarding the highest temperatures ever recorded during summer (particularly in countries such as Spain, the USA, and Great Britain as well as entire regions such as South America, Western Africa or even the Antarctica)[3] while the frequency of climate-related natural disasters continue to increase. The Intergovernmental Panel on Climate Change –among other institutions- have underlined that, according to the evidence they have gathered on the causal relationship between weather changes and the increasing levels of Green House Gases (GHG) emissions[4] after the industrial revolution, it is urgent to take far-reaching measures. In fact a real transformation of the model is needed.

In this context, let us recall the words of the president of the United States. Barak Obama, when recently announcing the American government´s Clean Power Plan and acknowledging the important responsibility of his country in terms of the high level of greenhouse gases (GHG) emissions they account for. "We are the first generation to feel the impact of climate change, we are the last generation that can do something about it. We only get one home, we only get one planet. There is no plan B"[5].

The need to address the root causes of the problem are evident. Recent scientific findings about the situation of extra-limitation in terms of the climate change, biodiversity lost, and the acidification of ocean for example confirm the

[3] Washington post, 17/07/20015 https://www.washingtonpost.com/blogs/capital-weather-gang/wp/2015/07/17/earths-warmest-june-keeps-2015-on-record-breaking-pace/ http://www.theguardian.com/environment/2015/mar/31/potential-record-high-temperature-in-antarctica-alarms-scientists

[4] The IPCC is an international body devoted to the assessment of climate change established by the United Nations Environment Programme (UNEP). Its reports are available at http://www.ipcc.ch

[5] Barack Obama, president of the United States, during the announcement of the new Clean Power Plan, August 3, 2015 https://www.whitehouse.gov//climate-change

importance given to the issue. It relates to longstanding claims from ecological economics with regard to the need to mainstream the ecosystem approach in the consideration of productive processes in order to render them sustainable. Whilst at the same time, it implies bearing in mind the need to address the human dimensions of development, since the environmental challenges represent an increasing risk which adds to many other social concerns (economic crisis, poverty, discrimination, insecurity, diminished rights and freedoms, etc.). The recent adoption of the Sustainable Development Goals reflects the consensus reached by the international community with regard to fostering the transition towards sustainable development, with national, regional and local expressions.

It is indeed an important commitment. But how to advance towards those goals? How to ensure that the translation of these global goals into local policies preserve the systemic approach? Since the Earth Summit in 1992, international organizations and national, regional and local governments have been embarked in the pursuit of sustainable development, but most of the strategies lack comprehensive scope, and have not highlighted the interconnections among all dimensions of sustainability.

Sustainable development is a concern that have elicited and continues to elicit interest in the academic world, as well as among public policy makers, managers, leaders, institutions and citizens, all involved in trying to develop theoretical and instrumental approaches to make possible the integration of social, environmental and economic concerns in their area of influence.

The business sector has also been looking for ways to address the impact of their economic activities on the environment and society, oftentimes led by legal constrains. Many aware citizens (users of resources, consumers, individuals) have also organized themselves to cope with those defies. This societal interest justifies the relevance of the theoretical and applied researches being carried out on the field.

Many experts have insisted that a great technological transformation is required to uncoupled economic growth from environmental degradation, going beyond measures to reduce environmental "externalities" of the production process. Such profound transformation requires institutions to create favourable conditions for disruptive innovations to occur and ensure the systemic vision. Some voices also argue that not only formal and informal institutions at different scales must be engaged, but also citizens with all their talents and creativity mobilized by an inspired and committed leadership which builds consensus on the shared vision of caring for the environment and for the people.

Such considerations led me to choose not only sustainable development as a topic of research but also the institutional approach to try to understand the lessons derived from those efforts to further promote sustainability from an integrative perspective, caring for people and the environment.

At the beginning, the intention was to carry out the research in Valencia, where I had followed the PhD program, and a first project was designed to do so. However, the fact that I have had to move to Navarra, and the constrains to engage in a qualitative research from such a distance, even more facing health problems, led me first to take a break and then shift the location. On the other hand, the North part of Spain combines a high quality of life and eco-innovation records that had cached my attention.

On the bases of the initial project, a new one was designed aiming to understand sustainability at the level of organizations. The interest was to ponder on the drivers of eco-innovation or the advancement in environmental performance and the integration of social considerations in the management of enterprises, in particular regarding gender equality. At the same time, I approached other organizations to see whether merging those two concerns was easier at the public sector level.

Why this gender approach? Well it has to do with the particular itinerary followed during the PhD program at the University of Valencia/ Department of

Applied Economics, which gave me the opportunity to get deeper into sustainable development from three perspectives: ecological economics, gender economics, and institutional economics. It led me to comprehend the claims about the unsustainability of current production and consumption models, the need for a strategic vision of sustainability which includes all parts of the system, including those which have been discriminated or excluded, the important contribution of households to the so called productive sector, and the interconnection among all those aspects. The underlying assumption is that complex system thinking is imperative to understand and address the problem, which include the institutional arrangements for governing sustainability.

Besides, we must acknowledge that gender inequalities are still deep-rooted in every society and remains a major barrier to human development. Despite the work on gender equality that governments and other institutions accomplish, the fact is that women still suffer from lack of access to decent work or face occupational segregation and gender wage gaps. In some regions, they are denied access to basic education and health care and are victims of violence and discrimination. On the other hand, they are under-represented in political and economic decision-making processes. A disparity present even in those countries with the highest human development index (UNDP, 2014).

A first exploration of the synergies between sustainable development and gender was done with my thesis director, Isabel Pla Julián in a paper presented at the 2012 Annual Conference of the International Association for Feminist Economics (IAFFE). The following year we went deeper into the issue in an article published by the CEPAL Review, “Towards an integrative approach to sustainability, exploring potential synergies between gender and environment”. We reviewed some feminist economists’ contributions (theoretical and methodological proposals) with regard to the value of domestic work, which could be strengthened by integrating an ecological perspective, introducing the ecofeminists perspective. We argued that, in turn, sustainable development could be enhanced by mainstreaming the gender perspective and the ethics of care.

Thereafter, the encounter with Professor Maria Sagrario Floro, co-director of the Graduate Program on Gender Analysis in Economics at the American University, inspired me to continue on this path. The enlightening conversations with her about these topics led me to continue drawing from those three streams of economic knowledge in order to understand how to foster a development which takes care of people and the environment, while being economically sustainable too. In fact, it is a crucial aspect to face the multidimensional crises humanity faces.

The first part of the research has implied of course an in-depth literature review and then, to approach the field study. It has been encouraging to note an increasing number of forward-looking initiatives by institutions, academics, citizens or business people throughout the world are exploring ways and tools to advance towards a sustainable development, some of them with a systemic approach, but not always incorporating the gender concerns or the ethics of care. Therefore it would be relevant to find out how to foster sustainable development with a gender perspective and which strategies could serve this purpose; to explore whether there are already methodologies or strategies being used to address sustainability and gender concerns at the same time.

With this in mind, a qualitative research has been carried out in Navarra, where some such initiatives have been identified. A closer look at those experiences combining sustainability and gender or the ethic of care has been the core of this research. The aim of this study is to better understand how those initiatives have been forged, their scope, and which lessons could be learned from them. This could be useful not only from a theoretical point of view, but also in terms of policy making.

The Institutional Analysis and Development framework seemed as the right approach to use in this research, in particular its latest evolution to study socioecological systems. The narrative of the experiences, the reflection on the underlying reasons behind a decision were some of the key aspects analysed. A

detailed explanation of the methodological aspects is given in the following section.

The findings confirm the relevance of flexible and adaptive institutional arrangements as main drivers of sustainable development, which should take into account the need to keep the balance among the dimensions of sustainability as well as the diversity of the contexts. On the other hand, it also shows the difficulties to integrate gender and sustainability at the enterprise level and the challenges ahead to really advance on the transformations required from an integrative perspective to sustainable development.

The subsequent section gives account of the bases which inform this research. The concept of sustainable development would be analysed as a theoretical and socio-economic and political construct. A combination of deconstruction of its components, its multidimensional nature and its bases, with a narrative of its evolution. A concept which now represent a societal aspiration amidst the challenging conditions humanity faces at the moment and the opportunities any crisis entail.

With regard to the meaning itself, it has been considered necessary to start with the clarification of the term development as opposed to growth, a confusion which has led to prioritize the achievements of our society in terms of money and not valuing the transformation of our economic means in better living conditions or realizations of rights and freedoms. This leads to addressing other related notions and theoretical contribution from different perspectives to better grasp its sense as well as the need to deploy concerted efforts to advance towards sustainable development

Section 3 presents the three case studies selected. One relates to a gender and sustainability mainstreaming initiative in a municipality (Ansoáin) close to the provincial capital, Pamplona. The second one refers to the implementation of the Corporate Social Responsibility strategy, at the firm level, promoted by the provincial government, serving as an umbrella to integrate

equality policies. A third case, focuses on the environmental aspect of sustainability, has also been included: the Enterprise-Environment Program agreed between the public and private sector. The reason to include it is that its recent evolution involves a step forward in the transformation of patterns of production and consumption, a crucial aspect of sustainability, with potentiality to introduce the ethic of care beyond the natural environment.

The final section gathers the reflections and conclusions drawn from these case studies, acknowledging the limitations and challenges. The intention is to draw lessons from those experiences, not aiming at blue-prints or formulas.

2 METHODOLOGY

As previously stated, this research is considered justified by the growing consensus on the need to advance towards sustainable development in order to meet the challenges faced in terms of socio economic crises and the extra-limitation of biophysical boundaries of the natural system which support life on Earth and puts human beings at risk. It seems the answer lies on fostering the transition towards sustainable development in accordance with the comprehensive SDGs recently approved. Notwithstanding, sustainability strategies have been around for quite some time now, not only at global level but at local level too. This leads to some questions:

- What have we learned from those more than 20 years of sustainable development efforts?
- How could we all advance more rapidly and effectively towards sustainability?
- Are current strategies taking into account the biosphere limits and the need to integrate social concerns?
- Do they account for gender inequalities which have a great impact on development?
- What is the role of government and other institutional arrangements in translating those general consensus into reality?
- Which strategies or methodologies could serve the purpose of advancing towards sustainable development with a systemic approach which includes the gender perspective and the ethic of care?

It would be too pretentious to intent giving a replay to all those broad questions in a work like this. In any case, the answers vary according to the level of research, the geographical area we refer to and the perspective of the observer. Therefore, a general theoretical and documental overview is shared in the first part of the thesis which has served as a base to embark on the more empirical part of the study. That second part involved inquiring about qualitative aspects of the implementation of sustainability and is limited geographically to relevant strategies being carried out in the autonomous province of Navarra, in the North of Spain. The aim is to contribute to the identification of the key institutional arrangements which could foster the transition towards sustainable development, assuming that it is a societal aspiration.

It must be acknowledged that the research has been approached from a transdisciplinary point of view, as it is increasingly common, which in this case draws from the fusion of insights from ecological economics, gender economics and institutional economics, which are part of the itinerary followed at the PhD program. This adds to the personal and professional background of the author where political sciences, development theories, and experience on economic and environmental diplomacy melt to constitute an important bias. At the same time, these learned skills in thinking about certain aspects and actors represent what Straus (1987) calls experiential data. Contrary to usual canons, the author considers it should be taken advantage of -within boundaries- controlling it through a carefully triad of data collection.

2.1 Objectives of the research

The main objectives of the research are:

- To deconstruct sustainable development, going into the theoretical meaning of its components and the process of its social construction.

- Reflect on the importance of introducing the gender perspective and the ethic of care in the conceptualization of sustainable development.
- To analyse the role of governance to boost sustainable development at a global level as well as a local one and some of the strategies in place.
- Explore experiences at a local level (Navarra) which could serve as reference of the integrative approach to sustainability in public or private sectors.
- Identify the institutional arrangements that could foster the transformation required to achieve sustainable development and the challenges ahead.

It is important to clarify that no blue print solutions are purported. The emphasis is on exploring the experiences and a better understanding of the process that serve as a bridge connecting global goals with implementation at a local level.

2.2 Research design

The research design has been evolving since its initial stages according to the findings and learning experiences, a typical characteristic of what is known as **emergent research design** (Hesse-Biber & Levy, 2010). It is common in constructivist approaches which look for the *how* and *why* of a certain subject, allowing for the study to unfold in unanticipated directions. Since our understanding of the world evolves, so too must our methods to approach reality. They should adapt, while the researcher should remain flexible and open to

modifications. It is worth noting that emergent methods stress the interconnections between epistemology, methodology and method.

The **organizing principle** of the theoretical framework combines theory and temporality, reflecting the evolution of the core concept of the thesis, sustainable development, as a social construct.

The **case study** approach was found to be best suited to carry out this qualitative research inquiring about the experiences identified. According to Van Wynsberghe and Khan (2007), there are fundamentally three definitions of case:

- A phenomenon for which we report and interpret only a single measure on any pertinent value;
- An empirical enquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context area not clearly evident (Yin, 2003); and
- In-depth understanding of a case bonded system, which involves understanding the event, activity, process or one or more individuals.

Case studies stress the integrative examination of a situation avoiding the separation of components from the larger context to which these matters may be related. Additionally, Yin (203) states that case study is uniquely suitable for research on situations where there is little control over the behaviour. Both aspects are connected to the aim and conditions of this work.

On the other hand, the main method used to collect the data has been **participant observation**. As defined by Marshall and Rossman (1989:79) it “is the systematic description of events, behaviours, and artefacts in the social setting chosen for study” which requires that the researcher become directly involved as a participant in peoples' daily lives. Thus, the act of observation becomes the primary method of gathering information”. Casual conversations, in-

depth semi-structured interviews as well as informal ones have also been used, in addition to reports, articles, books and other information which could help verifying the data collected by other means.

According to Jorgensen (1989) participant observation is an appropriate strategy to those research problems related to human meanings and interactions viewed from the insider's perspective, exploratory or descriptive studies and those aiming at theoretical interpretations. This perfectly reflects our intention of understanding the cases selected. Participant observation is also characterized by the *here* and *now* of everyday life situations and settings as the foundation of inquiry which is open-ended. It also involves establishing and maintaining relationships with natives in the field in order to reveal the sense of their decisions.

The research execution has involved the following stages:

a. **Definition of the problem and design of the project**. It started with a desk study on the relevant topics such as development and growth, sustainable development, its different dimensions, the gender equality relevance, governance, social-ecological system, ecological economics, eco-innovation, the Navarra context, among others. This stage involved literature review, including academic publications (books and peer-reviewed articles) and grey literature (annual reports, working papers, evaluations, etc.). It was mainly conducted since 2013 and has been has been going on even after starting collecting data for the cases, in order to further explore issues raised during conversations with informants, to complement t or contrast data collected by looking into other sources. Nevertheless, according to the emergent design previously mentioned, the project was at this level a flexible sketch which unfolded as the research developed.

b. **Field study:** Participant observation in the Navarre province provided direct access to daily experiences to learn about the socioecological and political context. Then, the selection of cases was progressively made on the bases of their relation to the aim of the research. For this purpose, the approach was to look for sustainability strategies carried out in the region (Local Agenda 21, improvement of the environmental performance of enterprises, corporate social responsibility, and promotion of eco-innovation) and then searching for the gender dimension in those strategies. Gender equality and gender mainstreaming strategies with an environmental dimension were also searched for. This second phase involved searching on the internet, visiting libraries and documentation centres, attending conferences on related subjects, and talking to people about those topics in different settings which allowed to meet the right people or be referred to another person or source of information. It also implied change in the initial sketch of the research, redefining it and taking advantage of any opportunity to observe and learn. Following the Institutional Analysis and Development framework/Socio-Ecological System (Ostrom, 2011), actors, situations, interactions, and outcomes were identified. A semi-structured interview was applied to key actors in order to collect information, leaving space for enriching perspectives to emerge during the conversation. Other informants were also approached less formal ways but also involving taking notes and classifying it. This phase was carried out since the second half of 2014 until mid-2015.

c. **Analysis of the data and structure of excerpts:** The analysis of data was progressive and begun with the first interview. The content sparked interest in additional aspects or served to guide the next decisions on further key actors, informants or sources. A re-

examination of data collected was sometimes needed to contrast with findings in the other cases. Therefore this phase interacted with the previous one. The three cases were analysed in the light of the theoretical and conceptual framework. A first general structure of the dissertation was outlined.

d. **Dissertation on the main findings** this last stage implied pondering on the lessons from the cases in terms of our main assumptions and communicating in written form these reflections. Getting off the ground has been a very complex phase. It implied to go through the vast amount of information collected and select the right pieces of information, discard a lot of ideas, comments, notes, and synthesizing the observations and interpretations. Although some testimonial information is provided, a more synthesized or abstract way of presenting the information has been preferred. A crucial aspect in this phase has been the drafting the concluding remarks as it has allowed to integrate the cases by thinking comparatively and has contributed to shed some light on future reseach.

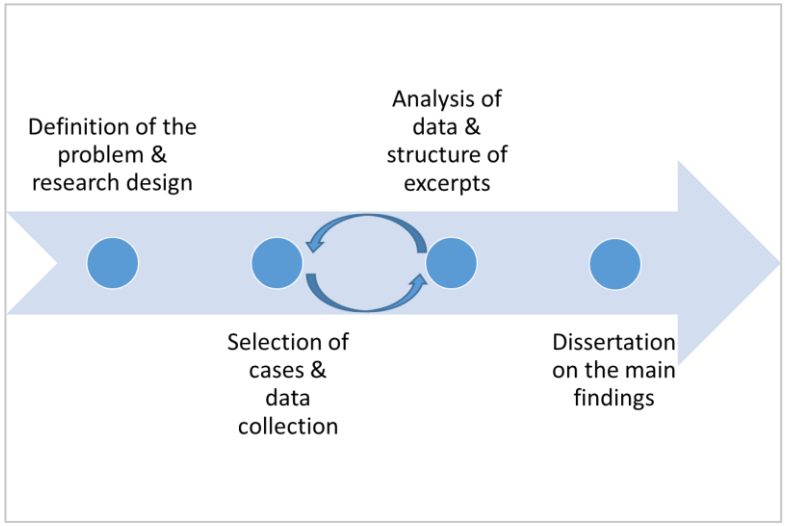


Figure 1- Stages of the research
Own elaboration

2.3 Case Studies

Two strategies combining sustainability and gender issues have been identified in the public and the private sector, which will be exposed as case studies. One relates to a gender and sustainability mainstreaming initiative at a municipality and the second one refers to the implementation of a Corporate Social Responsibility strategy, at the firm level, promoted by the provincial government. A third case, focused on the environmental aspect of sustainability, has also been included: the Enterprise-Environment Program agreed between the public and private sector. The reason for such inclusion was its connection to the previous case and its recent evolution, which represents a step forward in the transformation of patterns of production and consumption with potentiality to introduce the ethic of care beyond the natural environment.

First case: Mainstreaming sustainability with a gender perspective across the municipality of Ansoáin. It relates the case how the local government of this small town close to the capital of Navarra, has not only approved a Local Agenda 21 to promote sustainable development but has also been looking into the interconnections among certain sectoral areas, implementing a mainstreaming strategy -characterized by an integrative approach to sustainability- in all programs developed by the Town Council, integrating the gender perspective.

Second case: The regional Program to Encourage, Promote and Leverage Corporate Social Responsibility in Navarra in small and medium enterprises, which was jointly prepared by the Directorate of Innovation, Enterprise and Labour, and the Navarre Centre for Natural Resources (CRANA, an agency of the Directorate of Environment); involving a multi-stakeholder consultation.

Third case: The Enterprise-Environment Program, a joint initiative that the provincial government and the Navarre Entrepreneurs Confederation

(CEN) have been developing to improve the environmental performance of the industrial sector, designing a pathway to environmental excellence which has now started a pilot project on Circular Economy. This recent evolution represents a step forward in the transformation of patterns of production and consumption with potentiality to introduce the ethic of care beyond the natural environment.

Although the three cases are different, a general approach was selected to structure the analysis in a similar and simplified way: context, the focus of the case, the assessment and the enabling factors. The chronology of the relevant events that lead to the present situation is reconstructed, together with information on the political and legal framework.

2.4 The Institutional Analysis and Development framework

Although the Institutional Analysis and Development (IAD) framework should not to be equated to a methodology, it is important to mention it here as it provides a general set of variables that can be used to analyse all types of institutional arrangements and helps to generate the questions that need to be addressed. Therefore it has been very helpful to guide the case studies. The ISD framework highlights the relevance of looking into the action situations (which refer to the action arena or space where individuals interact). So identifying actors, positions and interactions allowed to understand outcomes. The first step in analysing those cases was to identify the action situation, the actors, its resources or characteristics, and the way they take decisions or a particular course of action.

The actor in a situation can be a single individual or a group (corporate actor, organization, entity…) while action refers to the behaviours with instrumental meaning in the referred context. This actions take place within governance systems, which affect and are affected by social, economic and political settings and related ecosystems.

Different written and oral sources have been used for accomplishing the study of each case. Excluding a few exceptions, names of people, associations, and enterprises are being kept confidential to protect their privacy, since Navarra is a small community where most people in certain circles know each other and could guess who said what, or where did a certain information come from.

The set of questions which guided the key actors interviewed is included in the appendixes (Annex 2). The first approach to key actors vary, some of them were met in public events or conferences on related topics, attended as part of the participant observation method. But in most of the cases a mail was sent, followed by a phone call to arrange the interview. This strategy worked well with some institutional actors but not with others. There were some key actors from different sectors replying to the mails rejecting the interview while others did not replay. The arguments of the researcher were not sufficient to elicit the interest of some representatives of the business sector as to devote time to the interview.

On the contrary, those who gave the opportunity for a personal meeting were willing to share information and kindly enough dedicate plenty of time to the conversation (even 2 hours or more). That was the case with the Director of Employment of the Government of Navarra, the former representative of the Navarre Centre for Environmental Resources, the Equality Agent of the Municipality of Ansoáin, some private consultants, Trade Union representative, NGOs representatives, and even a few CEOs. In some cases a second interview was possible, aiming at clarifying some points or going further into aspects relevant for the study.

The following table (Table 1) presents the key actors of the three cases. Still, many more informant have contributed to the study with their insights in informal conversations or encounters, as it has been previously mentioned.

Table 1. Key Actors

KEY ACTORS: INSTITUTIONS, ORGANIZATIONS, ENTERPRISES AND INDIVIDUALS	
Directorate of Employment / Government of Navarra	Former CRANA Representatives
Confederation of Entrepreneurs	Entrepreneurs: CEOs 10 (different sectors: paper, graphics, construction, legal services, remanufacturing, commerce, renewable energy, metal mechanics, and communications) as well as employees and solopreneurs.
Trade Union representative	Equality Agents
NGOs	A21 agents
Consultants	Public University of Navarra
Cooperatives	Experts
Innovation and creativity centres	Women groups
Women documentation centres	Educational services

Own elaboration

The participant observation method has allowed to get access to the different perspectives of the actors involved, contributing to a better understanding of their actions, decisions, and motives. This research strategy has favoured a process of learning through exposure, favouring a sort of blending into the community so its members act in a natural way to allow data collection to flow naturally too. Sharing spaces with key actors and normal citizens have been a great opportunity to better grasp the meaning of some documental information. This strategy, combined with the literature review and analysis of data have been enriching and has proved to be very effective.

On the other hand, as a new comer, Navarra was all new for the candidate. No much information about it and no previous attachments to the

region. Nevertheless, soon after arriving there was a very important opportunity to use the public health services in various medical specialties and confirm its high quality. Besides, having been leaving previously in Madrid and Valencia gives the opportunity of appreciating the differences, not only with regard to public hospitals but some other administrative services. Becoming acquainted with the Province, its people, the economy, tax system, school system, and cultural traditions required a certain time. If certainly being a foreigner gives certain fresh look to the local reality, it might also be a handicap since some assumptions may be wrong.

Key informants have provided a great deal of information, stories and reflections on the topic being researched, but also on the general appraisal of the region, traditions, mind-sets, paradoxs… Critical inquiry has helped to dig into the topics and relate to the systemic approach while the trust built through the relationship with some key informants has enable the participation in more activities and settings than intended; which provided further information and understanding.

The subsequent section would give account of the Theoretical Framework informing the research while the cases studied are exposed in Section 3. It has been considered important to give a brief introduction about Navarra, as the socio-ecological system where the experiences studied take place, including some facts relevant for the research.

3 THEORETICAL FRAMEWORK

The core concept informing this research is *Sustainable Development,* whilst at the meta-theoretical level the Institutional Analysis and Development (IAD) framework allows us to understand the complexities of sustainability, particularly taking into account its recent developments, the *social-ecological systems* (SES) framework (Ostrom, 2011). Building resilience to successfully meeting the challenges derived from having exceeded critical biophysical boundaries and achieving the Sustainable Development Goals (SDGs) requires such an understanding.

In the following section an intermingling of conceptual analysis and institutional narrative aims at giving insights into the making of sustainable development, which nowadays not only represents a concept but a societal aspiration. To start with, the distinction between development and growth would be addressed, to get later into its main elements, and the evolution of some of the strategical and instrumental approaches to sustainability, as they interact in shaping the current understanding of the concept as well as the landscape of challenges and opportunities.

3.1 Development vs Growth

Understanding development has been a matter of attention and debate for a long time now. According to Harris (2000) prior to the second half of the twentieth century the main subject of interest for imperial and colonial powers was economic growth. Adam Smith´s fundamental work, published in 1776 (*An inquiry into the nature and causes of the wealth of nations*) has been considered one of the most influential contributions in the area and a corner stone for liberal

economists. The transformation of nation states has been accompanied by an increased attention on socio-economic aspects of prosperity, while the gap between the so called developing or structurally impoverished countries and the rich ones have spawned a wide range of theories and strategies. Liberal views, Marxist claims, the dependency theory, the Gandhian civil rights movements, institutionalism, the Delhi school of development, the Japanese perspective, among others enrich the broad range of views (Brett, 2009).

Nobel Prize Laureate Amartya Sen explains that it is understandable that the close link between development and growth has led to confusion in early writings about development, since it emerged as a subject after the Second World War when growth was a main concern. But growth is just an instrumental dimension of development (Tomas Carpi, 2008). It refers to the increase in an economy´s production of goods and services (even those services that imply health treatments for diseases, the cleaning of contaminated waters or the transportation of huge quantities of waste generated by production processes and consumerism). ´Ecological economics´ defines growth as an increase in throughput, which is the flow of natural resources from the environment, through the economy and back to the environment as waste (Daly & Farley, 2004).

On the other hand, development implies much more. Sen explains that, given other conditions, an expansion of wealth must make a contribution to people standard of living; but the enhancement of living conditions is an integral part of the concept of development. “They must clearly be an essential –if not the essential- object of the entire economic exercise” (Sen, A. 1988:11). Therefore, development implies a structural change which involves the economy and the society; a dynamic process. This is what has been called `human development´.

In Sen´s opinion, rights and freedoms are basic constituents of development in itself and enabling keys to achieve other aspects of it. Freedoms, understood as economic facilities, social opportunities, political freedom, transparency, justice and security, all being interconnected. In this regard,

education and health are considered drivers of development as well as part of its expression. Sen argues that these freedoms are not only pivotal in inducing social responses to economic needs, but are also central to the very concept of needs. People´s capabilities to choose doing or being what they value are a relevant part of development, and thus capability deprivation is a better measure of poverty than low income (Sen, 1999).

Another Nobel Laureate, Douglas North, has also pointed out that economic, political and social factors must be taken into account if we are to understand development (North, 1990). In his opinion institutional structures made a considerable difference in a society´s well-being. Institutions include formal systems such as constitutions, laws, taxation, insurance and market regulations, as well as informal norms of behaviour, such as habits, customs, and ideologies. While applying modern technologies to realize the productivity potential of an economy has resulted in better standards of living, taking advantage of the potential of technology has entailed a fundamental restructuring of the economic activity and even the entire society.

However, a tendency to use growth and development as interchangeable concepts continues to exist. In doing so, means and aims are confused (Stiglitz, 1998), using the same instrument to measure both: the Gross Domestic Product (GDP). In fact GDP is a measure of the level of the economic activity in a country, and therefore fails to reflect all aspects involved in the development process. This has been recurrently questioned for a long time now (Anderson, 1991; Fleurbaey, 2008; Henderson, 1981; Laun, 2003; Seers, 1969; Sen, 1988, Stiglitz, Sen & Fitoussi, 2009). One of the aspects highlighted is that GDP overlooks entirely all productive activities outside the market (Durán 2012; ILO, 2013) and do not distinguishes between money and wealth (Henderson, 1981). Besides, the increase in GDP does not automatically translate into development and tells nothing about its distribution (Sen, 1988; UNDP, 2010).

The widespread concern about the way to measure development has led to interesting debates and alternative proposals, such as the Human Development Indicators (UNDP 1990-2015), the Index on Sustainable Economic Welfare (Cobb and Daly, 1989), and more recently the Social Progress Index (Porter, Stern and Green, 2014) and the Gender Development Index (UNDP, 2014) to name just a few. As stated by Mhabub Ul-haq (one of the founders of the Human Development Report) the way development is measured deserves great attention since it has implication for development planning and strategies. In his opinion, besides GDP, the human story must also be brought out in annual assessments in terms of how people experienced growth rates or how poverty levels changed. It might actually be the case in some countries that no increase in GDP has been registered, but a lot of human capital may have been built, so that potential growth may be more favourable than and actual growth (Ul Haq, 1988).

3.2 The incessant pursuit of growth and its consequences

However, the prevalence of GDP as *the* fundamental indicator has led to an obsessive pursuit of growth instead of development (Goerner et al. 2009); this is what Daly (1974) has defined as ´*growthmania*´. Hence the capacity of economic outcome to be growing constantly becomes the primary subject of interest while the enabling factors of this growth as well as its consequences are undermined. But the economic activity involves the transformation of material (renewable and non-renewable resources) and energy, which then undergo a series of changes in energy and usefulness, with residual and useless materials returning to the environment as waste (Daly, 1990; Turner, Pearce and Bateman, 1993). Something which Boulding (1966) had already reflected upon, calling for a new economy in tune with the cyclical ecological system (the “spaceman” economy). Other voices even propose a society of de-growth (Latouche, 2012).

Many economists have shared their convictions that this approach reflects that mainstream economics undermines the very material base that serves as its support (Daly, 1996; Naredo, 2006, Webster & Johnson, 2008, Floro, 2012). They recognize that as a result of this separation an unusual form of economic growth has taken place, with complete disregard for the planet's carrying capacity.[6] This has been possible owing to a relatively abundant stock of natural resources, enormous amounts of cheap energy and the perception that science is capable of generating substitute materials and ensuring the adaptation to the changes brought about in ecosystems as a consequence of their exploitation (Boulding, 1966; Costanza, 2003; Heinberg, 2010).

Georgescu-Roegen´s in *The Entropy Law and the Economic Process* argues that endless growth is unattainable based on finite resources, while increasing production would have to match the needs of an also increasing world population, which causes environmental degradation and could lead the system to a collapse (Georgescu-Roegen, 1971). This view was reinforced by the findings of *The Limits to Growth*, a report commissioned by the Club of Rome also known as the Meadows Report. Published in 1972, it explored different scenarios taking into account the interactions among five variables: population growth, food production, industrialization, pollution and resource depletion. According to the authors, overshoot and collapse of the system was avoidable only if considerable change in social behaviour and technological progress was made early in advance of non-renewable resource depletion; which was estimated to occur in the 21st century (Meadows, 1972; Paul, 2008; Turner, 2008 & 2014).

Environmentalists, ecologists and ecofeminists had also raised awareness about the impact of industrial production on natural ecosystems, human health, safety and security (Agra Romero, 1998; Mellor, 1997; Merchant, 1995; Plumwood, 1993; Mies y Shiva. 1997; Moore, 2004; Puleo; 2002 & 2007). Rachel

[6] "Carrying capacity" refers to the availability of resources to satisfy a species' needs in order for it to survive, grow and reproduce itself, without having a negative impact on the stability of the system and its resilience.

Carson´s book, Silent Spring, published in 1962, is considered a warning cry concerning the terrible impact of agrochemicals on the health of people (Roderick Frazier Nash, 1989; O´Connor, 2010) which had a lot of impact on public opinion. Such an awareness became a social pressure on those days and resulted in the mobilization of national and intergovernmental institutions[7] to address the systemic dysfunctions, each with its own economic, ecological and social dimension (Mebratu, 1998).

It is worth mentioning that the emergence of the environmental agenda was influenced by the scientific development in biology and ecology, and its encounter with economics in the 1960s gave modern formulations to the basic ideas of the transdisciplinary fields of ´ecological economics´ (Ropke, 2004) and `environmental economics´ (Sandmo, 2014), while at the same time boosted a great deal of research in order to better understand and promote addressing those systemic dysfunctionalities effectively.

Notwithstanding the growing consensus in certain sectors about the impacts of the predominant economic model, criticism was levied against the Meadows Report as well as the Georgescu-Roegen book (Heinberg, 2010; Jorgensen, 2015; Mebratu, 1988; Paul, 2008; Turner, 2008 & 2014). On the one hand, technological advocates considered innovations would find substitutes to finite resources and solutions to thermodynamic laws, while, on the other hand, population growth was not perceived as the cause of the problem but the consumption patterns of wealthy societies.

Similar arguments had already been voiced against Thomas R. Malthus´s theories (1798), the first economist to foresee the limits to growth due to resource scarcity and population growth. In fact, the rapid increase of food

[7] A fundamental outcome of this momentum was, undoubtedly, the holding of the United Nations Conference on the Human Environment (Stockholm, 1972), which not only urged to preserve natural resources, but led to the creation of the United Nations Environment Programme. It also paved the way to build an international legal framework on environmental issues (Vig Norman & Regina Axelrod, 1999) The conference also boosted the increase in the number of civil society organizations promoting environmental concerns (UN General Assembly, 2000), an important element in the configuration the power of actors.

production, which was unimaginable when Malthus wrote his Essay on the Principle of Population, was one of the arguments to oppose his ideas (Mebratu, 1998; Paul, 2008). As very well stated by Heinberg (2010) in a society so prone to growth, it was clear that stating that growth would not continue beyond a certain point was profoundly upsetting.

Besides the rupture with regard to the material base that serves as its support, inequality, exclusion and discrimination have also been considered as problems which fall beyond the scope of economics (Costanza, 2003; Naredo, 2006). In María Sagrario Floro´s words (2012) mainstream economics has failed to address the critical dimensions of life, promoting economic policies and development strategies, which for the most part, have ignored the long–ranging effects on human maintenance, social reproduction and sustainability of ecosystems.

3.3 Sustainable Development in the making

Sustainable development emerges against this backdrop of rupture between the economic model and the material base that serves as its support, inequality, exclusion and discrimination; giving a long term and a systemic perspective to integrate social, environmental and economic concerns. It first appeared in *the World Conservation Strategy: Living resource conservation for Sustainable Development,* prepared by the International Union for the Conservation of Nature (IUCN-UNEP-WWF, 1980) which underlined the need to come to terms with resource limitation and the carrying capacities of ecosystems. It intended explaining the contribution of living resources to human sustainable development. Three basic objectives were outlined in this strategy: maintenance of essential biological processes and life-support systems, preservation of genetic diversity, and the sustainable utilization of species and ecosystems. Evidently its focus was ecological sustainability (Baker et al. 2002).

Nevertheless, it was by its inclusion in the Brundtland Report, published in 1987, that sustainable development concept gained popularity and a broader understanding (Baker et al., 2002; Drexhage and Murphy, 2010). The report had been commissioned by United Nations to an independent group of personalities, presided by former Prime Minister of Norway, Gro Harlem Brundtland. The aim was to analyse the interlinkages between environment and development and formulate recommendations from a global perspective. Considering that a world in which poverty and inequality prevail will always be inclined to social, ecological and all kind of crisis, the authors suggested opting for a development "that allows to satisfy present needs without compromising the capacities of future generations to satisfy their own needs" (United Nations General Assembly, 1987:54).

Furthermore, the Brundtland Report explains that sustainable development is a process of change in which the exploitation of resources, the direction of investments, the focus of technological research, and the institutional framework are consistent with present and future needs (WCED, 1987). Indeed the widening of the temporal and space dimensions reveals the scope of this vision, and the need to uncouple industrial processes and other economic activities from their environmental impact (Baker et al, 2002).

However, such a definition does not mean that all generations should leave the world as they found it. It does not represent a denial of evolution. In professor Emèrit Bono words, what must be preserved are the opportunities so that the future generations enjoy substantial freedoms, take decisions and enjoy life as they value it (Bono, 2008a). In fact, taking into account that part of the world population lives in depriving social and environmental conditions[8], the report underlines the need for a new era of economic growth. Due to the fact of

[8] Those depriving conditions are still a source of concern. According to income-based measures of poverty, 1.2 billion people live with $1.25 or less a day. However, UNDP Multidimensional Poverty Index indicates that almost 1.5 billion people in 91 developing countries are living in poverty with overlapping deprivations in health, education and living standards. And although poverty is declining overall, almost 800 million people are at risk of falling back into poverty if setbacks occur (UNDP, 2014).

not questioning drastically growth but its sustainability, this approach has been contested, considering it a fundamental contradiction or oxymoron (Daly, 1996; Naredo 2006; Redclift, 2009).

As argued by Baker et al. (2002) sustainable development needs to be understood not only as a concept by its own nature, but as a social and political construct. Anne Egelston (2013) states that it is a concept closer to the Northern viewpoint of science-oriented environmental protection over the Southern concern about development. Certainly, a difference in the approach to the problem has always emerged in international *fora*, which is absolutely understandable since their circumstances of each group of countries are quite different. As Blewitt (2008:2) says "sustainable development is the product of many stories, worldviews, values, actions and perspectives…" The effort to balance the interest of developed and developing countries certainly explains the vagueness as well as the geopolitical significance of the concept; while –at the same time-allows many self-interested or partial interpretations (Baker, et al. 2002; Blewitt, 2008; Mebratu, 1998).

In this regard it is good to recall that the South had already stated its vision about development in an unprecedented report commissioned by the Non-Aligned Movement to the South Commission, a group of outstanding personalities from developing countries presided by former President of Tanzania, Julius Nyerere. The authors of the report, launched in 1990, defined development as "a process which enables human beings to realize their potential, build self-confidence, and lead lives of dignity and fulfilment. It is a process which frees people from fear of want and exploitation. It is a movement away from political, economic, or social oppression. Through development, political independence acquires its true significance. And it is a process of growth, a movement essentially springing from within the society that is developing." (The South Commission, 1990:10).

As it is observed, environmental considerations were absent in that definition of development, although references to the need to take a comprehensive and long term view of environmental and energy issues were also included in the report. The South Commission acknowledged lack of adequate attention to common environmental challenges as a group, which has allowed the North to take the initiative in raising and defining issues, and in proposing actions. The environmental agenda was perceived as having political, economic and social implications for the future of developing countries. In fact, it was clearly stated that the North was demanding that the South should give priority to environmental protection over development objectives; but the real choice was "between environment-sensitive and environment-insensitive forms of development" (The South Commission, 1990:259). That makes evident some of the political and distributive issues involved in sustainable development and its underlying complexities (Redclift, 2005).

There are also differences in the meanings for the term `sustainable´, shifting according to the different disciplines involved. The origin of sustainability is linked to forestry and fish management (Baker et al., 2002) but it is applied to different context. From the point of view of neoclassical economics, sustainability can be defined in terms of maximization of welfare over time, endurance, long term, are some of the expressions associated with it. The social perspective emphasizes the capacity to satisfy basic needs and equity. Physical scientists and ecologists consider that natural systems must exist subject to the unyielding laws of thermodynamics and limits are set by time, space and energy. Thus, sustainability must involve limits on population and consumption; and maintenance of ecosystem resilience[9]. (Harris, 2000).

From an ecological point of view, some approaches fall into what has been called strong sustainability and others into weak or shallow sustainability.

[9] "Resilience" in ecology refers to the capacity of ecosystems to absorb disturbances and reorganize while undergoing change so as to retain —essentially— the same function, structure, identity, and feedbacks (Walker and others, 2004).

This derives from considering the limitations or assimilation capacity of nature as a system in a determinist, adaptive or innovative way; which in turn depends if natural environment is seen as cardinal, replaceable or not always replaceable (Robert Constance, 1994). From the perspective of `deep ecology´, in the long run, shallow sustainability increases the destruction of the natural environment and threatens the survival of humanity (Naess, 1973).

In short, there are numerous definitions and interpretations to sustainable development (Blewitt, 2008; Egelston, 2013; Connelly, 2007; Mebratu, 1998; Redclift 2005). Lozano, (2008) classifies them into five categories: conventional economists´ perspective, non-environmental degradation perspective, integrational perspective, inter-generational perspective and holistic perspective, and holistic perspective; although acknowledging that in some cases the boundaries between perspectives may be blurred. But as Baker et al. (2002) have clearly stated `sustainability´ and `development´ together becomes a form of societal change that in addition to traditional development objectives looks for maintaining ecological sustainability.

3.4 From theoretical understanding to strategy

The evolution of the understanding on the complexities that sustainable development entails have thus reframed the traditional debate on development and the consensus-building process to construct a development strategy which includes all the dimensions of sustainability. As Stiglitz (1998:18) expressed it, “If transformation of society is at the heart of development, the question becomes how to bring these changes about”. The process of strategy formulation may be able to elicit the commitment and long-term involvement of the society. This is a real challenge. The global vision has thus to permeate the whole system, and the global strategic vision nurture the construction of tailored made local strategies,

adapted to the particular characteristics of each context. In this process the understanding of the message is crucial.

In this endeavour, mapping thoughts and other visual representations are powerful tools to convey messages, concepts, ideas and even stories; something which has been studied at length (Joffe, 2008). They have also been used to explain sustainable development. Nowadays, there are several alternative visual representations (see for example Connelly, 2007 and Lozano, 2008; Mebratu, 1998). Some add a dynamic perspective; local, national and regional perspectives; envision it in a three dimensional way or even avoiding to use circles to delimitate the parts of a whole in order to reflect the complex interconnectedness that exists among them. Some are very simple forms while others look more like cognitive maps.

The most influential way of representing and introducing the concept of sustainable development has been the three inter-connected circles, where the resulting overlap represents sustainability, which has had a great relevance in outreach activities and educational programs. See figure 2, left side. It appears to have been developed by the International Centre for Local Environmental Initiatives (Connelly, 2007).

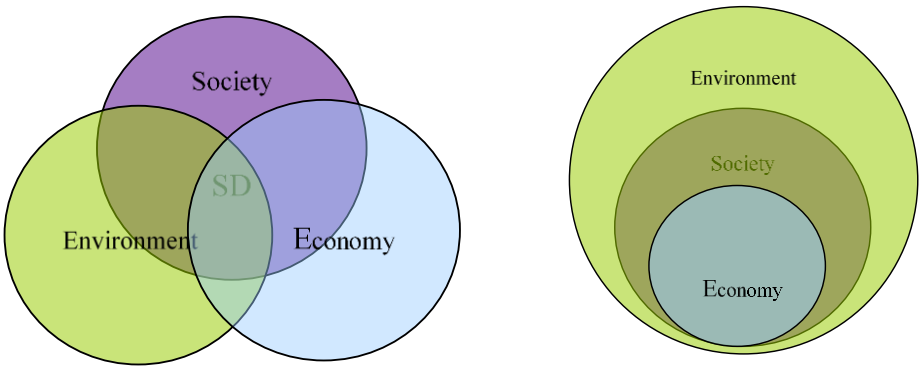


Figure 2. Representation of sustainable development commonly used (left) vs. integral representation adapted from Mebratu, 1998.

This popular visual image is associated with trying to give equal relevance to the three domains. It reflects clearly the idea of the win-win-win policies, conveying the message of a unitary concept which is located at the centre, in the intersection of the circles. But it is misleading, it fails to represent the relevance of the environment as a support system which provides all those resources and services previously mentioned.

As Rodrigo Lozano (2007) argues, it implies that sustainability is compartmentalised, static, and refers just to those aspects where there is convergence, represented by the overlapping area in the middle, while on the sides, the overlapping of just two circles would mean partial sustainability. Thus, it could lead to the conclusion that the rest of the society, the environment and the economy are areas of contradictions (Mebratu, 1998).

The integrational perspective, on the other hand, use non-concentric circles (to the right of figure 2) to convey the idea of prevalence of the outer circle- the natural environment- while society and economy are in fact subsystems embedded in it. Although, there are many possibilities of interaction, this representation has been questioned for not acknowledging the importance of economy in modern societies and the impossibility of differentiating between sustainable economic activities and those that are not.

Connelly (2007) proposed an adaptation of the planner´s triangle designed by Campbell (1996) which gives each corner of the triangle an individual meaning. They represent the standpoint for planners, while sustainable development would be in the centre as a potential of reconciliation (See Figure 3). In the author´s opinion this image reflects the tensions and complexities of implementing sustainable development and therefore the area in the middle would always have a different size, sometimes with more inclination to one or two of the extremes.

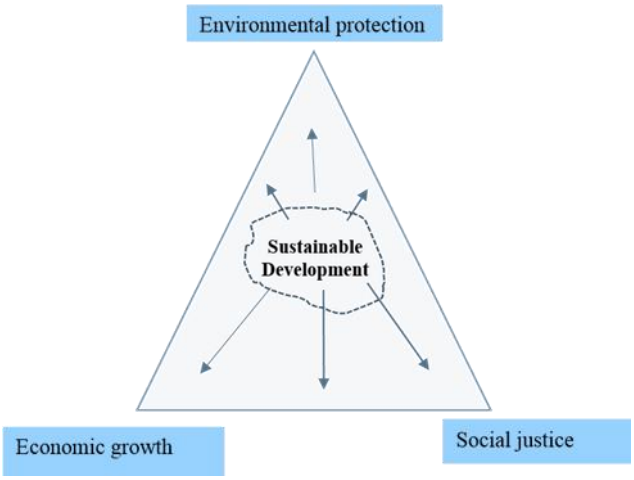


Figure 3. Sustainable development map in the field
Source: Connelly, 2007

Professor Tomas Carpi (2008) goes beyond the traditional representation of sustainable development to propose a five pillar model (presented in figure 4) which introduces key elements to development as technology and the institutions.

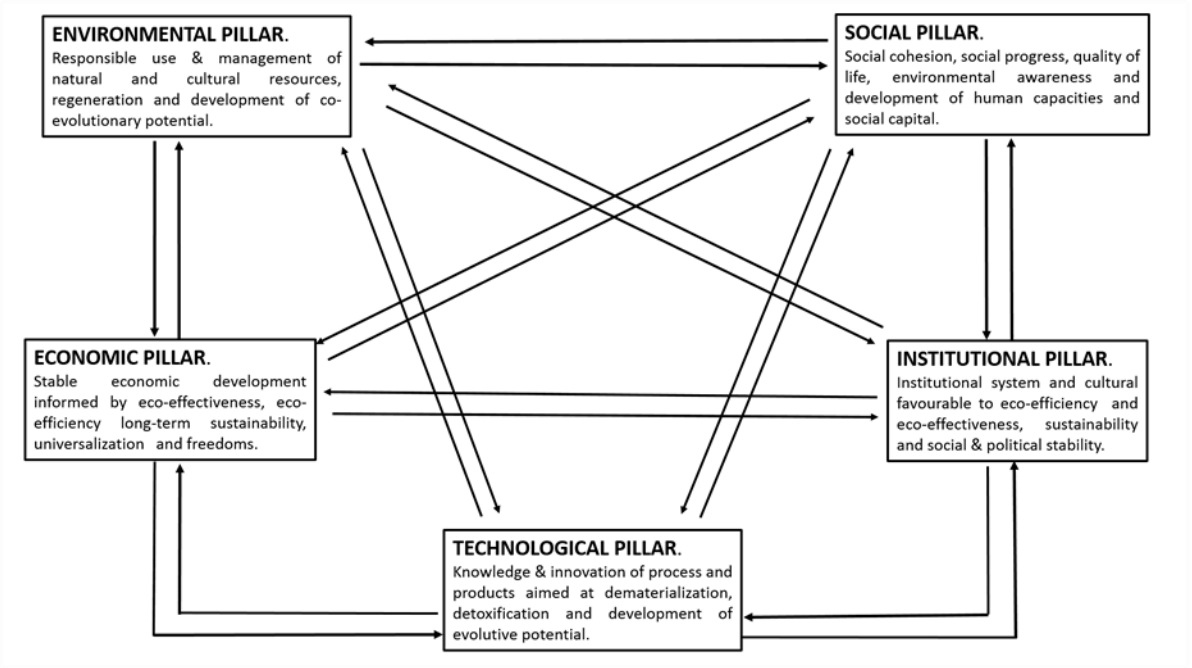


Figure 4. The process of sustainable development
Source: Adapted from Tomas Carpi, 2008

As it has been pointed out above, Tomas Carpi (2007& 2008) asserts that sustainable development refers to a complex process of structural change of global dimension, a transformation of society at the means as well as the aims levels. Through technological innovation, environmental management of production processes, institutional change, regulation mechanisms for the economic system, socio-cultural and power relations evolution. Sustainable development aspires to improve the quality of life of human beings and social development, democracy, distributional justice, while preserving natural ecosystems capacities for self-regulation to provide us with products and services.

In Tomas Carpi´s view the aim is not to continue an endless accumulation, for it places nature on a predominant level (environmental pillar) and takes into consideration the carrying capacity of the planet to satisfy human needs. The author considers nature as a fundamental base with strategic functions on which we all depend; highlighting the importance of a long term perspective which is fundamental to inter-generational solidarity while emphasizing the need to take into consideration the relation between the natural environment and human health. The model includes eco-efficiency[10] and eco-effectiveness[11] as well as human development as the main criteria for informing the economic activity. In his perspective, knowledge should be in the service of ecological limits to develop the co-evolutionary potential in order to attain the decoupling development/pollution-environmental degradation, instead of pretending an absolute control of nature. The aim should be to increase the value and productivity of the natural capital.

This leads to the need of rethinking the life cycle of products not in a linear way as the production system is organized at present but as loops. This approach is known as cradle to cradle, meaning that products do not generate

[10] Eco-efficiency, as defined by Ehrenfeld (2005) is fundamentally a ratio of some measure of economic value added to some measure of environmental impact.

[11] Eco-effectiveness suggests business solutions that are life sustaining, restorative and regenerative (Mc Donough and Braungart (1998).

waste since they serve as input for other production processes[12]. Therefore, innovation should be oriented towards sustainability and not to the increase of production and consumption. In the fourth place, the social pillar is considered the axes of the sustainability transformation counting on citizens' involvement and a change of values. All of this evidently requiring institutional support.

This conception of sustainable development also comprises aspects such as quality of life (taking into account diversity of points of view according to the context), social cohesion, sensibility, learning process, capabilities development, etc. Finally, the institutional frame (formal and informal) promotes the new values by assigning the appropriate resources to foster technological advancement, resource management, education and development of instrumental freedoms, among other many things. For this author sustainability requires distinctive institutional arrangements to adapt to those challenges and relationships guided by cooperation, proximity to the people, and conscious leadership (Tomas Carpi, 2008, 2010).

3.5 Governance for sustainability: setting the stage

Despite being contested as an elusive concept, the United Nations Conference on Environment and Development (UNCED) held in 1992, better known as the Río Summit or Earth Summit, served to install sustainable development as an integral part of the international development agenda. This event represents a turning point in the evolution of international development debate leading to a broad acceptance of the term (Mebratu, 1998). Its relevance has also been valued in relation to global `governance´ a term which -together

[12] The concept of cradle to cradle was developed by Michael Braungart and Bill Mc Docnough. It focuses on design, considering all material involved in the production and commercial for processes to be nutrients, as in nature. They distinguish two different kinds of processes, the biological metabolism (biodegradable) and the technical metabolism (industrial material). Their proposal is to design for effectiveness in in terms of products with a positive impact instead of focusing on reducing the negative impacts. Doing less bad is not the same as doing good.

with `human development´ and `sustainable development´- also became popular in the 1980s. It was coined by J.R. Holingsworth and L.N. Lindberg, in an article entitled “The Governance of the American Economy: the Role of Markets, Clans, Hierarchies and Associative Behaviour” (Calabuig, 2008).

According to Kemp and Gibson, (2005) governance is understood as a mode of social coordination, the type of interactions and the extent to which actors adhere to collective decisions. It involves the level and scope of political allocation, the dominant orientation of state and their institutions and its interactions. A key aspect is that of governance as the transformation of state power by the intricate relationship between states, markets and civil society.

But Nobel Laureate Elinor Ostrom also refers to governance from a different perspective. In her book *Governing the Commons*: *the evolution of institutions for collective action* (1990) Ostrom documented the flexible and adaptive institutional arrangements which have been emerging around the world to collectively manage and avoid over-exploitation of ´common pool resources´. Understanding by these natural resources which are not subject to private property but are used by many individuals, such as fisheries, groundwater basins, and irrigation systems.

The Río Summit evidenced the increasing power of non-state actors in environmental global governance. The unprecedented civil society participation not only during the conference itself but during the preparation process also -which started a few years earlier- constituted a relevant change.

Other aspect which has also been highlighted about the Río Summit is the reinvigoration of the Southern countries presence, especially the Group of 77[13], as well as the relatively cohesive negotiation strategy. This represented a major evolution from its initial sceptical position which has been previously mentioned, although the climate change negotiations made evident the different

[13] The Group of 77 is the collective voice of developing countries born within the United Nations in the 1960s. It has now grown into an ad hoc quasi-permanent negotiation caucus of 134 members plus China as associated member. (Najam, 2005)

agenda of oil producing members of the group. The fact that this was a UN conference on environment *and* development meant that the link between those two aspects had been formally accepted which was the concern of the South (Najam, 2005). Besides, the establishment of the Global Environmental Facility (a financial mechanism) have served as an incentive and became an important part of the decentralized network of governance (Speth and Haas, 2007).

In this regard it is important to bear in mind what Robert Putnam (1988) underlined in his article “Diplomacy and Domestic Policy: the logic of the two-level games”. The existence of two simultaneous decision making processes involved in international negotiations. A first level would be the international setting, with a diversity of actors, rules, agendas, interactions, etc., and the second level refers to the domestic policy where another set of actors, rules, interests, positions, and demands have to be reconciled. The new institutional arrangements that emerged from Río constitute a major shift from the principle of national sovereignty (Redclift, 2005).

The first outcomes of the process set off by the Río Summit encompass a Declaration of 27 Principles and an ambitious and comprehensive plan of action, known as Agenda 21, (UNCED, 1992) to be implemented by local and national administrations, governments, international organizations and civil society. It also resulted in the adoption of non-binding principles on forest, the conventions on climate change and biodiversity, and two international instrument of great relevance despite their shortcomings, among other outcomes. The outstanding outcome was thus the new consensus on the development agenda.

While sustainable development is intended to be an integrative concept, an analysis of the content of the Declaration of Principles, the Plan of Action and the agreements adopted, shows that the environmental aspects were certainly prevalent at Río. All this, however, departing from the underlying centrality of human beings as main concern of sustainable development. Furthermore, the Río Declaration includes principles such as equity and fairness which not only

derived from the priority given to eradicating poverty (Principle 5) and improving the conditions of the world´s poorest (Principle 6) but also from the fact that decisions should account for the rights of future generations (Principle 3).

It also makes reference to vital role of women, considering their participation essential to achieve sustainable development (Principle 20); in addition to the creativity, ideals and courage of the youth (Principle 21), knowledge and practices of indigenous people and other local communities (Principle 22). The importance of participation of all concerned citizens and access to information and justice is also emphasized (Principle 10) and plays a key role in the process set off at Río.

Other relevant principles which have been cardinal in the evolution of the environmental governance framework and give content to the sustainable development concept are: the precautionary principle[14] (Principle 15); the polluter pays principle (Principle 16); and the common but differentiated responsibilities of countries in view of their respective contributions to environmental degradation (Principle 7). Last, but not least, it is important to underline Principle 8, which stresses the need to reduce and eliminate unsustainable patterns of production and consumption in order to achieve sustainable development and a higher quality of life for people, a key aspect from an economic point of view which would be further discussed.

As it can be observed, certainly the majority of the instruments approved deal with environmental issues, leading to the establishment of a number of institutional mechanisms to ensure that environmental problems could be managed more effectively (Redclift, 2005). However, the set of principles included in the Río Declaration contributed to nurture the comprehensive scope of the sustainable development concept and established the legitimacy of global environmental governance in the Southern eyes, and thus allowed developing

[14] The precautionary principle refers to the need to take cost-effective measures to prevent environmental degradation -despite scientific uncertainty- if there are threats of serious or irreversible damage (UNCED, 1992).

countries to become more engaged in the process (Najam, 2005) framing the collective responses to environmental threats.

To ensure the effective follow up of the Río Summit outcomes, a Commission on Sustainable Development was established in December 1992 by the United Nations (UN) General Assembly. It has indeed contributed to the advancement of the sustainable development agenda, although lack of understanding and the complexities and slow pace of intergovernmental negotiations (due to the two-level play mentioned) have prevented profound transformations to take place.

Certainly, one of the most important instruments to drive the change towards sustainability has been the approval of Agenda 21 (A21). It constitutes a plan of action to be implemented mainly at a local level; the space of coexistence and greater implication of the local governments, the ones closer to the origin of the environmental problems and therefore the ones in a position to articulate the institutional arrangements to lever sustainable development (Tomas Carpi; 2008). Even if remaining non-legally binding, A21 has translated global goals into local policies, frameworks and concrete actions in many countries revealing a key aspect of governance for sustainability, as Bono (2008) has indicated.

One of the outstanding contributions of A21 is the notion of participation in decision making, the engagement of stakeholders in implementation and monitoring of actions, while giving shape to the social dimension of sustainability, including the mainstreaming of gender into sustainable development policies. Nonetheless, the format based on sectors may have contributed to the present difficulties in the enhancement of sustainable development, which seeks to promote not only multi-sectoral but also cross-sectoral solutions. Furthermore, the fact that energy and mining sectors were not included broke the all-encompassing nature of the document (UNDESA 2012) while signalling the resistance of the energy business and producing countries to make any real change to improve their environmental performance.

Even though, many aspects of the Río Declaration remain largely unaddressed. That is the case of Principle 8, despite being acknowledged as a key feature with a great potential to enable society to really advance towards sustainable development. Various scholars have underlined that changing unsustainable patters of consumption and production would have a great impact in the way economy functions and the lifestyle of wealthy and emerging countries (Floro, 2012; Schaper, 2012). In this regard, it is worth to recall that emerging countries are registering a rapid growth of their middle classes and those people are aspiring to enjoy the same standards of living of developed societies, which have a high CO_2 intensity (Jackson, 2009) or a higher ecological footprint[15] (Wackernagel and Rees, 1996). The population fighting to overcome poverty have also the right to better standards of living. This possess new challenges with regard to these patterns of production and consumption.

3.6 The evolving institutional process after Río: the social dimension

As Baker et al. pointed out (2002) considering sustainable development a social construct leads to the process and interplay of its implementation. Regular intergovernmental summits have taken place with the objective of assessing the progress but more importantly to recover the political momentum and boost the sustainable development agenda. But not all of them have had as much political impact as the first Río Summit had. Its strong influence is reflected in the language of agreements and documents adopted internationally after it was held: the Cairo Agenda on population (1994), the outcome of the World Summit on Social Development (1995), the World Fourth Conference on Women (1995), the

[15] The Ecological footprint is and accounting tool, developed by Wackernagel and Rees (1996), that enables to estimate the resource and energy consumption and waste assimilation requirements of an economy or individual, expressed in terms of corresponding productive land. The authors argue that if everyone on Earth lived like the average Canadian or American, we would need at least three such planets to live sustainably.

Habitat Agenda (1996) and the Rome Food Summit (1996). The Río summit has also been considered one of the most important examples of delivery of international law that UN has managed in its history (UNDESA, 2012).

But if Río was more important in terms of integrating the environmental dimension into the development agenda, the Millennium Development Goals (MDGs) raised the attention given to eradicating poverty, as well as promoting equity–across and within countries – which remained a glaring omission with great relevance for national as well global governance and prosperity. The fact is that sustainability could not be achieved in just parts of the world or in parts of the countries, while others remain in poverty. Sustainability has to be global or it won't be (Tomas Carpi, 2008).

In fact, the World Summit on Sustainable Development, held in Johannesburg in 2002 (known also as Rio+10) recognized the relevance of inclusiveness for democracy. Even if the results of this meeting were judged disappointing, positive contributions emerged from it, particularly with regard to balancing the three pillars of sustainability. Driven by the needs of developing countries and strongly influenced by the MDGs adopted in 2000, the Johannesburg Summit implied a shift (Drexhage and Murphy, 2010). Among the important advancements it is worth mentioning the fact of having acknowledged that sustainable development, at a global level, has to led to, and requires policies, procedures, and principles supporting intergovernmental cooperation and a global civil society that will check, monitor, promote and campaign for change in the face of official reluctance, indifference or denial, and some acute crises in the global economy (Blewitt, 2015).

The Johannesburg Summit (or Río +10) also contributed to address this last aspect, focusing on the need for more public-private cooperation to foster the implementation of sustainable development actions. It has taken the form of voluntary initiatives, such as corporate social responsibility and Global Reporting

Initiative, participation in the World Business Council on Sustainable Development, Global Compact, Equator Principles, etc.

Southern countries became more actively engaged in the conference, and less reluctant to talk about implementation and effectiveness of environmental measures. According to Najam (2005) it might have to do with the fact that the environmental professional at all levels had steadily grown in the three decades between the Stockholm Conference and the Johannesburg one, resulting in deeper sensibility to global discourse. Southern voices were more preoccupied to meaningfully participate in the new global environmental governance while implementation of areas of concern started to be in their agenda.

3.7 The evolving institutional process after Río: the economic dimension

Against the backdrop of a widespread concern on the financial, economic and food crises, the Río +20 Summit, was held, in 2012. It recognized that, while some progress had been made in sustainable development since the first Río Summit in 1992, implementation was still a challenge for many countries. Therefore the need to advance on previous commitments as well as conferring the highest priority to poverty in the UN development agenda was emphasized in the final declaration, “The Future We Want”. But far from the expectations generated by such an event, much of the debate was polarized around the meaning of the green economy, which for many seemed to coalesce around the desire for green-energy technologies rather than defining the need for a new economic paradigm that favoured social equity and quality of life above economic growth (Blewitt, 2015).

The UNEP prepared one of the key documents of the negotiation process, the Guide on Green Economy, advocating a series of policy

prescriptions on low carbon economy and eco-efficiency which the lack of political will among the participants in the conference diluted (Barbier, 2012). In fact, the final declaration reveals the absence of consensus. It states that each country could choose its own approach to green economy according with its own national plans, strategies and priorities.

A lot of attention was also given to the institutional coherence within the UN system and the need to strengthen the Sustainable Development Commission (SDC) and the UNEP in order to increase their effectiveness. It was decided to establish a High-Level Political Forum (HLPF) on Sustainable Development to replace the SDC. Its aim is to gain political leadership and guidance beyond the formal objectives (follow up on the implementation of sustainable development and to build on the experiences, resources and participation modalities carried out by the commission).

Nevertheless, the strengthening did not match the aspirations, as the HLPF (which has just had its first formal meeting) does not have legal force. Likewise, the governments agreed on strengthening the UNEP but not to the level of being an institution similar to WTO which could enforce environmental law; a long standing aspiration which the oil lobby have blocked (Barbier, 2012). That led to the unilateral decision of Brazil to create a World Centre for Sustainable Development (The Río + Centre) with the support of the UNDP and other UN agencies; although a year before a UN Sustainable Development Office had been stablished in Korea.

Again the outcomes of the Río+20 Summit have at least been judged as modest and even disappointing. Clear definitions on a regulatory framework for the financing of green policies and initiatives were expected (Rodriguez y Ulate, 2011), while a redefinition of our lifestyle was considered necessary in order to contribute to global equity (STWR, 2012). But, as previously mentioned, the

summit did not count on political strength, as revealed by the absence of the heads of States of the powerful G-20[16].

Nonetheless, one of the most important achievements of the Río+20 Summit was to begin a process leading to the definition of a set of concise, action oriented, aspirational and global sustainable development goals, which would replace the MDG in 2015. The elaboration process started in January 2013 and has involved an unprecedented global participatory process. Other relevant decisions were the working group on sustainable development indicators and the strategy for an effective financing for sustainable development.

The recent adoption of Sustainable Development Goals (SDGs) might serve to reframe the international commitment which requires sustainability to be achieved. See Annex 1. They reflect a more comprehensive and balanced understanding of the systemic issues that sustainable development involves, and include key aspects of how to reach them, namely the change in consumption and production patterns, addressing inequalities, empowering women, increasing financing, providing the adequate institutional structures and support, educating and strengthening capacities, enhancing the use of enabling technologies, and expanding cooperating among other issues. At the same time, each goal includes elements of the diverse components of sustainability which continues to be an aspiration. The current situation requires urgent attention, but overall, action.

3.8 New findings confirm the challenges ahead

Further updates from the authors of the Meadows Report have confirmed the trend indicated by the first publication, warning about the risks of ignoring natural limits to growth. Taking into account recent data, they stress that “we are

[16] The G-20 is a forum of dialogue and coordination which gathers the 20 major economies of the world: 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, South Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom and the United States) along with the European Union, represented by the European Commission.

drawing on the world´s resources faster than they can be restored, and we are releasing wastes and pollutants faster than the Earth can absorb them or render them harmless" (Meadows et al, 2014:3). In other words we are not taking into account the natural cycles, going beyond the bio-physical limits of the planet. Other authors have being voicing similar warnings (such as Crutzen and Stoermer, 2000; Heinberg, 2010; Reid et al, 2005; Rockstrom, J. et al, 2009, Stern, 2007, Turner, 2014). The Meadows authors have stressed the need to take appropriate measures to address those challenges redefining objectives in terms of development instead of growth (Meadows et al, 2006).

One of the sources reporting on the critical deterioration of the environment is a transdisciplinary research initiative hosted at the Stockholm Resilience Centre which has been named the Planetary Boundaries framework. It was first introduced in 2009 when a group of scientists identified and quantified nine planetary boundaries within which humanity can continue to develop: 1.- Climate change, 2.- Change in biosphere integrity (which comprises biodiversity loss and species extinction), 3.- Stratospheric ozone depletion, 4.- Ocean acidification, 5.-Biogeochemical flows (phosphorous and nitrogen cycles), 6.- Land-systems change, 7.-Fresh water use, 8.-Atmospheric aerosol loading (microscopic particles in the atmosphere that affect climate and living organisms) and 9.-Introduction of novel entities (such as organic pollutants, radioactive materials, nanomaterials, and micro-plastics.

The authors of the Planetary Boundaries Framework suggest the need for novel and adaptive governance approaches at the global, regional and local scales. They consider that crossing these non-linear thresholds could generate irreversible environmental changes and puts human society in risk (Rockstrom, J. et al, 2009). Yet, the accent of these warnings are in the opportunities that decision makers have to take action on the bases of the defined safe operating spaces.

The latest data published by the Planetary Boundaries (2015) shows that four out of nine boundaries have now been crossed as we can appreciate from

the following image (Figure 5). The yellow zone shows uncertainty while the red that we have crossed the limits. In two of the cases (Climate Change and Land-system change) it means an increasing risk for humanity, while in the case of Biosphere integrity and biogeochemical flows a level of high risk has been reached. Another area of concern is Ocean acidification, which is very close to the safety boundary.

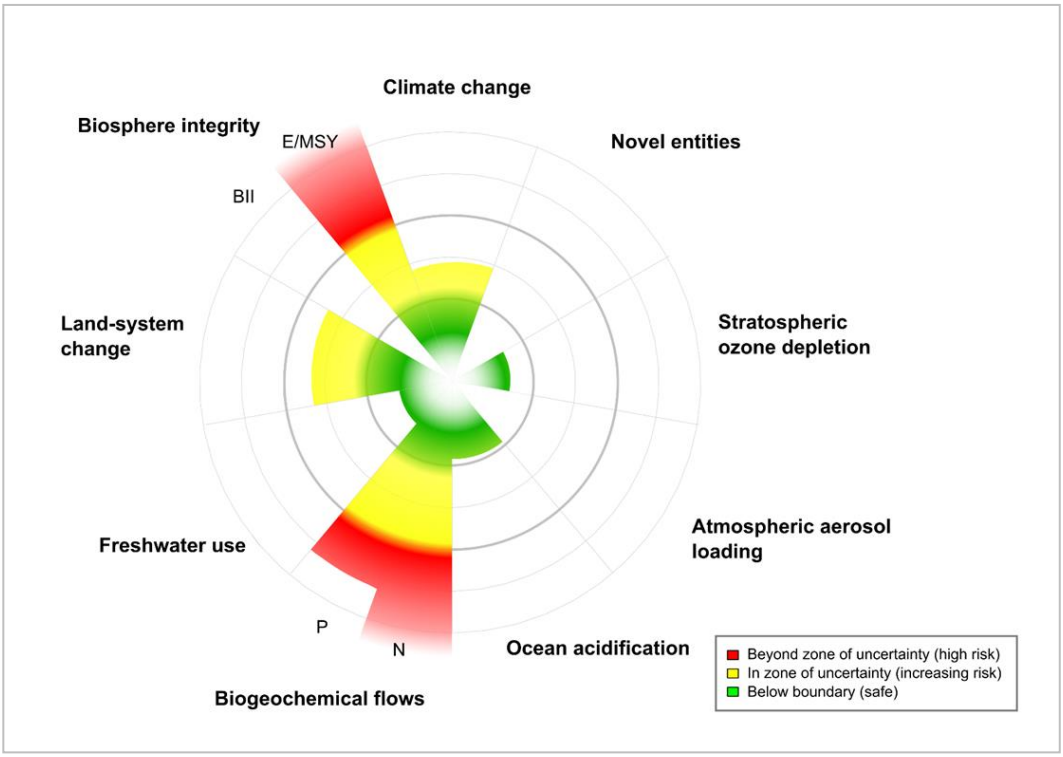


Fig. 5- Planetary Boundaries
Source: Steffen et al. 2015

These arguments seems to confirm Crutzen`s (2002) assertion that the Earth has entered a new epoch where humans constitute the dominant driver of change to the Earth System and that the author calls the Anthropocene. The Millennium Ecosystem Assessment carried out between 2001 and 2005 by more than 1300 international experts from different parts of the world confirmed that those changes being registered in the ecosystems have caused a considerable loss of biodiversity, to a great extent irreversible. This weakens their capacity to

provide us key services, and putting humanity at risk, particularly millions of people living in fragile and dry lands. The report underlines that progress toward sustainable development is dependent upon improving management of Earth´s ecosystem to ensure their conservation and sustainable use (Reid et al, 2005).

On its part, the IPCC –which has been gathering evidence on the causal relationship between weather changes and the increasing levels of Green House Gases (GHG) emissions[17] after the industrial revolution- also calls for timely action. Its 5th report (IPCC, 2012) underlines that the human or anthropogenic influence on the climate is clear and that the warming of the climate since the 1950s is unequivocal.

Sceptics, though, would attribute the warming to "El Niño" system which generates a huge stream of warm water in the Pacific that then circulates raising the sea surface temperatures and impacting on other weather events. (Carr, Anderson and Brash, 2010). Nevertheless, the IPCC affirms to count on more evidence and stresses that anthropogenic GHG emissions are extremely likely to have been the dominant cause of the observed warming since the mid-20th century. Human intervention have also likely affected the global water cycle, very likely contributed to the sea-ice loss since 1979 and to the ocean heat content, as well as been linked to extreme cold temperatures and heavy precipitations events.

In synthesis the IPCC clearly warns that climate change is a threat to sustainable development, while pointing out also that there are many opportunities to link mitigation, adaptation and the pursuit of other societal objectives through integrated responses, which relies on relevant tools, suitable governance structures and enhanced capacity to respond.

On the other hand, the 2011 Human Development Report underlined that continuing failure to slow the pace of global warming could jeopardize poverty

[17] The IPCC is an international body devoted to the assessment of climate change established by the United Nations Environment Programme (UNEP). Its reports are available at http://www.ipcc.ch

eradication, because the world´s poorest communities are the most vulnerable to rising temperatures and sea levels, among other consequences of climate change (UNDP, 2011).

The 2014 Human Development Report adverted that threats to human development come from many different directions. In addition to those related to the environment and natural disasters, it identified economic risks, inequality[18], food security, health risks and physical security. On the economic side, it states that "millions of households, live uncertain and insecure lives, facing a constant threat of shocks to their income and well –being. Lacking private savings, financial assets and sufficient protection through national policy, this households are exposed to financial crises and natural disasters. Economic insecurity can be high in developing countries, where a large proportion of employment is in the informal economy, lacking coverage for social insurance. But economic vulnerability is not a problem of developing countries only. Due to the slow recovery from the global economic crisis, many people in rich countries continues to face tremendous insecurity" (UNDP, 2014:21).

Inequality in all forms reflects the difference in opportunities. A very important aspect oftentimes underestimated is the fact beyond a certain threshold, inequality harms growth, poverty reduction and the quality of social and political engagement (Houle, 2009; Schäfer, A. (2012). It also impacts shared sense of purpose and facilitates rent-seeking by influential groups which weakens the economic and political system. A systematic approach is therefore needed to address these threats and contribute to the sharing of development progress, making it more equitable and sustainable. More than short term

[18] In absolute terms, the 85 richest people in the world have the same wealth as the 3.5 billion poorest people. Inequality in health and education has been declining but in terms of income it has registered an increase between 1990 and 2010 in developing countries. More than 40% of hospital patients either borrow money or sell assets and that lose to 35% fall into poverty because having to pay for their care. High volatility in the prices and availability of food are of particular concern given the large impact on poor people and poor countries. Physical security, on the other hand, is shocked by conflict and war, communal violence, terrorist acts, fights between streets gangs, etc. (UNDP, 2014).

humanitarian assistance, the reports calls for an international consensus for collective action and well-coordinated polices at different levels (UNDP, 2014).

3.9 Addressing the challenges: complexity at the core

As Berkes, Colding and Folke (2003) stress, complex system thinking is needed to approach the challenges posed by sustainability, considering it a process that requires adaptive capacity for societies to deal with change and maintain the functionalities of ecological ecosystems to support social and economic systems. Therefore it is important to understand the dynamics of those interrelations, where scale has a great relevance.

To start with let us recall what has been rightly pointed out by Blewitt (2015) “sustainable development is a process that requires as to view our lives as elements of a larger entity. It requires a holistic way of looking at the world and human life”. It is essential to acknowledge that we are in fact part of nature (Wackernagel and Rees, 1996) since ecosystems perform for us basic services without which our species could not survive. “The ozone layer screens out ultraviolet rays from the sun that harm people, animals and plants. Ecosystems help purify the air we breathe and the water we drink. They convert wastes into resources and reduce atmospheric carbon levels that would otherwise contribute to global warming. Biodiversity provides a bountiful store of medicines and food products, and it maintains genetic variety that reduces vulnerability to pests and diseases. But we are degrading, and in some cases destroying, the ability of the environment to continue providing these life-sustaining services for us” (UNGA, 2000: 43).

The Millennium Ecosystem Assessment (Reid et al., 2005) uses the following diagram (Figure 6) to synthesize the relationship between those

ecosystem services[19] and the constituents of human well-being. It shows the services provided by ecosystems which has been classified as supporting, provisioning, regulating and cultural. The constituents of wellbeing include: security, basic material for good life, health, good social relations and freedom of choice. The intensity of this relationship is indicated by thickness of the arrows while the colour reflects the potential for mediation by socio-economic factors.

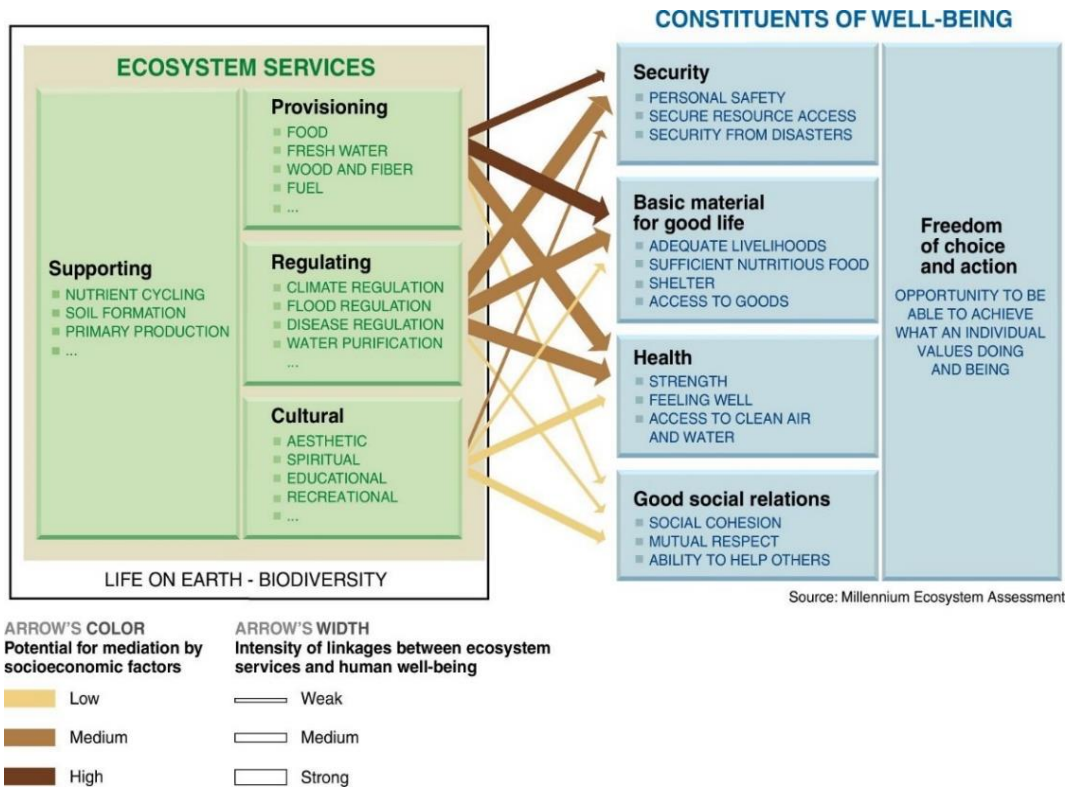


Figure 6 Ecosystems Services and Constituents of Well-being.
Source: Millennium Ecosystem Assessment, Reid et al. 2005.

[19] Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other nonmaterial benefits

The significance of transdisciplinarity to approach the task is therefore evident, which has already led to the emergence of integrative areas such as environmental ethics, political ecology, environmental history, ecological economics, common property and traditional ecological knowledge (Berkes, Colding and Folke 2003).

The study of Complex Adaptive Systems (CAS) has fascinated natural and social scientist. It is indeed relevant in sustainability, since ecosystems, and the global biosphere, are prototypical examples of complex adaptive systems and elucidating these interaction across scales is fundamental to resolving issues such as biodiversity loss or ecosystem functioning (Levin 1998, Levin et al., and 2015).

Bono (2008a) stresses the significance of interrelationships among the system parts considering them essential for the maintenance of the system as a whole. The author explains that system dynamic have fundamentally two feedback circuits: positive and negative. On the positive cycle, a change in a part would generate a non-linear effect (cascade impact) on the rest of the chain, which in turn would reinforce the initial change. The negative ones would mitigate the system behaviour based on the information received. The interplay between those two kinds of feed backs determines the dynamic equilibrium of the system. Nevertheless, there are scales of change which could alter the equilibrium or even led to total disruption.

Human beings and nature conform `socio-ecological systems´ which have to be managed as a whole (Oran Young et al, 2006). The term socio-ecological system was coined by Berkes & Folke (1998) as a way to illustrate the complex and adaptive systems formed by biophysical and social factors interacting continuously. The interactions originating from the natural system have been previously indicated (ecosystem services), but there are also interactions originating in the other sense, which include access to resources, property rights, knowledge about the dynamic of the natural system,

management etc. As explained by Young et al. (2006) those multiple interactions taking place within and outside a system have profound consequences for governance, global biophysical systems and resources; having introduced new relations of power into the world system.

Socio-ecological systems are indeed CAS with “macroscopic properties emerging from local actions that spread to higher scales due to agents´ collective behaviour; these properties then feedback, influencing individuals´ options and behaviours, but typically only do so diffusely and over much longer time scales.” In his opinion, economic policies that do not take into account that CAS approach and its characteristics (such as resilience or diversity) could lead to undesirable social and ecological outcomes (Levin et al., 2015:4).

Brian Arthur (1997 & 2013) assumes that the economy is an evolving complex system identifying six properties that characterize it: dispersed interaction, the absence of a global controller, cross-cutting hierarchical organization, continual adaptation, perpetual novelty, and far-from-equilibrium dynamics. Looking at the economy from this point of view would mean to embrace fundamental uncertainty whereby technological change call for further novel technologies, inducing further uncertainty. The presence of positive and negative feed backs acting together are very much a defining property of the complex system. Through interconnected behaviour change is propagated.

In this respect, ecological economics has helped re-conceptualize systems problems such as conservation by shifting attention from the elements of the system to the structures and processes that perpetuate that system (Costanza, Norton, and Haskell, 1992). Social, economic and ecological aspects are constantly interacting and generating change. Understanding the mechanisms that create these patterns and propagation of change are indeed relevant to sustainable development. In fact, efforts to resolve multi-scale environment-society dilemmas require innovative governance approaches (Berkes et al. 2003). As Nobel Laureate Elinor Ostrom (2005) argued, flexible

social arrangements are necessary to develop the rules, institutions and incentives for addressing the challenges faced by complex socio-ecological systems.

3.10 Multilevel governance

The systemic approach of interdependence implies that environmental protection must be executed at a multiple scales and it should be reflected in legal and institutional frameworks. The challenge is to integrate the different geographical scales as well as the timeframe, the institutions and sectors involved in each level (Hans Bressers and Walter Rosenbaum, 2003). It requires collaboration, dialogue and coordinated action among actors as well as among countries; based on an integrative and cooperative approach.

In tune with what has been mentioned above, sustainable development is a concept which represents a social construct and as such it has been nurtured by different perspectives and experiences. Visions and strategies have merged to carry on in the constant process of transformation towards sustainability which involve many actors.

In this pathway, the Río Principles have had and continue to have a great relevance, serving as a sort of compass to guide the advancement and integration of sustainability at different scales. As a result, those principles have been transposed into international laws, regional frameworks, or national legal instruments as well as inspiring frameworks and plans of actions among other initiatives.

The European Union and its Member countries have led the process of transferring those global principles into regional frameworks and national laws, principles or programs. In 1994, the first European Conference on Sustainable Cities and Towns in Aalborg, Denmark was convened and as a result of its deliberations a Charter -inspired in the Agenda 21 plan- was approved. The

Aalborg Charter recognizes the above mentioned relation between local and global sustainability (Glodstein, 2006). In 2004 many local authorities within the European Union reinforced their commitment by signing another instrument, the Aalborg Commitments, which is one of the main references on the need for urban sustainability and good governance for achieving sustainability.

One of the most prominent examples in this path is the case of access to information (Principle 10) which has been enshrined in the Aarhus Convention signed a few years after Río (1998). It covers most European Union Member States and other parties and represents a ground-braking contribution to the development of environmental law and democracy. It is the first legally binding instrument at the supranational level guarantying access to information, public participation in decision making and justice in environmental matters (Morgera, 2005).

Local governments have also engaged in defining their own Local Agenda 21, grappling with the crucial aspect of having global perspective but acting locally (Bono, 2008). Sustainable development implies changes of great significance regarding local development, broadening the range of criteria to inform their strategies and revealing new opportunities of transformation; which require fostering the local innovation system.

Tomas Carpi (2008) highlights the new approach to relationships among variables, the actors involved, the decision making process as well as the objectives, means and public policy mechanisms and instruments. This directly relates to the need of enhancing economic competitiveness, flexibility and creativity, as well as habitability of the space and freedoms which have a prominent role in the planning process, as shown by the Aalborg Commitments and the Aarhus Chart. The task of mobilizing and technically supporting Local A21 planning has been led by the International Council for Local Environmental Initiatives (ICLEI, 2006).

The Global Environmental Outlook (UNEP, 2012) acknowledges the crucial role of local governments in supporting the implementation of multilateral

environmental agreements (MEAs) and facilitating the transition of cities´ economies. Their actions need to be complemented by regional, national and local responsibilities and synergies in order to enhance their achievements. Organizational, institutional, legal and political structures and processes that promote planning and implementation are therefore needed.

Another aspect which has been pointed out is the capacity of local government's decisions to influence the ability of communities to move towards sustainability. In this regard it is important to recall that institutions as the prescriptions that human societies use to organize all forms of repetitive and structured interactions including those within families, neighbourhoods, markets, firms, sports leagues, churches, private associations and governments at all scales E. Ostrom (2005).

3.11 Corporate Governance and sustainability

With the increasing power of corporations at all scales and the impact of this activities on the environment and society, corporate governance has been gaining attention from a sustainability perspective.

According to the OCDE (2004) ´corporate governance´ involves a set of relationships between a company management, its boards, shareholders and other `stakeholders´[20]. An effective system of corporate governance in place within an individual company would contribute to create trust necessary for the existence of market economy. The OCDE principles of Corporate Governance were developed in conjunction with national governments of member countries; first agreed in 1999, and then reviewed in 2002. A great deal of attention has

[20] Stakeholder is a term that refers to the groups to whom management need to be responsible, which E. Merrick Dodd identified as shareholders, employees, customers and the general public. Robert Wood Johnson includes in this list managers too. However, most literature points to Edward R. Freeman as having coined the term in 1984 (Mackey, 2006).

been put in establishing public-private partnerships to get business commitments in improving the environmental performance of enterprises.

Sustainability has entailed assessing the environmental and social impact of the activities performed by a firm on all stakeholders instead of just considering the shareholder interests. Strategies have intended to promote responsible business models, ensuring not only competitiveness and economic growth but also social development and environmental respect. This has been linked to the concept of social responsibility which has a long history but has evolved significantly[21] after the Río Summit. Whilst many continue to equate CSR with philanthropy (as social responsibility was previously interpreted) some take it to mean legal responsibility or social responsiveness (Carroll, 1999). Actually, the interpretation of the term also varies depending on the understanding of sustainability and the context.

Garriga and Melé (2012) classify the main CSR theories in a) instrumental, in which corporation is seen as only an instrument for wealth creation, therefore its CSR activities are a means to attain better economic results; b) political, which concern with power and the capacity to use it; c) integrative theories, focused on the satisfaction of social demands, and d) the ethical theories based on the ethical responsibility. They suggest the necessity to integrate all four dimensions.

The International Multi-Stakeholder Network has been very active in promoting CSR. In collaboration with UNEP it has developed the most widely used framework for reporting on the economic, social and environmental performance of the firm, the Global Reporting Initiative. It is understood that the commitment with social responsibility generates a more innovative corporate culture which facilitates adaptability to the global market challenges and good reputation. This framework sets out principles and indicators that organizations can use to measure and report their economic, environmental and social

[21] In 1953 Bowen wrote a seminal book entitled Social Responsibilities of Businessman representing the beginning of a debate subject which continuous to evolve.

performance; which have been evolving influenced by advancements in environmental management, labour legislation, and gender equality among other issues, updating the guidelines for reporting accordingly (GRI, 2014).

In 1999 former Secretary General to the United Nations, Kofi Annan, urged all companies to align their strategies and operations with universal principles of human rights, labour, environment and anticorruption[22]. By voluntary committing to sustainability, business could become a force for good, contributing to societal goals. This initiative is known as Global Compact. It presents Corporate Sustainability through five defining features: principled business, strengthening society, leadership commitment, reporting progress and local action.

However, CSR has been questioned on the grounds of its voluntary character and the lack of external monitoring[23] (Corporate Watch Report, 2006) accuracy and completeness of data reported, or its relevance to financial performance (Hohnen 2012). Montiel (2008) observes further evolution in the conceptualization of CSR. Procter and Kramer (2006) have insisted in the strategic character of CSR and its positive impact on their competitive advantage.

More recently, Porter and Kramer (2011) have introduced `Creating Shared Value´ (CSV) as the new competitive advantage. It goes beyond CSR, creating addressing societal needs and challenges with new business models; caring for the wellbeing of their customers and the communities in which they

[22] Business should support and respect the protection of internationally proclaimed human rights; make sure that they are not complicit in human right abuses, uphold the freedom of association and effective recognition to collective bargaining, the elimination of all forms of forced and compulsory labor, the elimination of discrimination in respect of employment and occupation; to support a precautionary approach to environmental challenges, undertake initiatives to promote greater environmental responsibility; encourage the development and diffusion of environmentally friendly technologies and work against corruption in all its forms, including extortion and bribery (UN Global Compact website)

[23] The recent Volks Wagen scandal due to the fraudulent system to hide real CO2 emissions on some motor models has demonstrated that companies can give a green appearance to their sustainability reports even if their performance is quite different. But on the other hand, the fact that in a few hours the company lost 30% in its shares value while generating a wave of indignation and concern, reflects the terrible impact that unfair behavior can have on the image of a company.

produce, the depletion of natural resources vital to their business, the viability of integrating suppliers in their strategy, etc. The authors argue that CSV will lead the new wave of innovation and productivity in the global economy, since it creates value by: reconceiving needs, products, and customers; meeting societal needs through products; serving unserved or underserved customers; redefining productivity in the value chain; improving the local and regional business environment; improving skills, the supplier base, the regulatory environment, and the supporting institutions that affect the business and strengthening the cluster on which the company depends.

It is worth noting that, connected to this CSV concept, a new legal form of businesses has emerged fundamentally in the United States (2010) called Benefit Corporation or Sustainable Business Corporations, a variant of the Community Interest Companies in the UK (2004). The distinctive futures are a) that public benefit is established as the supreme interest of the corporation, which pursues to create a positive impact on the society and the environment; b)duties of directors include not only tacking care of the interests of its shareholder but also its stakeholders; and c) it is required to report each year on its overall social and environmental performance using a comprehensive, credible, independent, and transparent third-party standard (Clark and Babson; 2012). Therefore benefit corporations have become an important reference in strategic sustainability.

Another strategy related to the business sector has to do with the particular efforts to deal with environmental “externalities.” This approach corresponds to what is known as `ecological modernization´ (Hajer, 1995; Mol et al, among others). According to Maarten A. Hajer (1995) the European Union have replaced the contentious debates about what sustainable development really is for a more practical approach: `ecological modernization.´ A term defined as an attempt to integrate environment and economy, giving environmental issues a permanent and central position in the decision-making processes of private firms and consumers, and creating a space for dialogue and negotiation

among all `stakeholders´[24]. Ecological modernization recognizes the ecological crisis as an evidence of fundamental omissions in the workings of institutions, and looks for win-win institutional arrangements to address it; anchoring environmental concerns in the market as conceived by mainstream economics. The notion of ecological modernization can be seen as the social scientific interpretation of environmental reform processes at multiple scales in the contemporary world (Mol et al., 2009).

It reflects a number of ongoing tendencies since at least the releasing of the Brundtland report[25] (Baker, 1997 & Baker et al., 2002). These practices have been taken in general by environmentally leading countries of Northern Europe, the Obama Administration in the USA, or Japan and China (Mol et al, 2009). Ecological modernization has focused on developing technological solutions to achieve decoupling and new management systems and certifications to help companies deal with their environmental `externalities.´ This includes a series of assessments, procedures, technical fits, practices and management systems allowing companies to better measure, manage and communicate their environmental performance.

Pressure from stakeholders and environmental legislation has had a great influence in the use of those tools by the companies (Ormazabal, 2013). In addition, Cramer (1998) suggests that the coincidence of increased eco-efficiency and market opportunities as well as the internal structure and culture of the company also influence the environmental performance of the firm. Ormazabal (2013) affirms that companies go through similar patterns of environmental behaviour that appear to evolve from within the firm and proposes an environmental maturity model that comprehends six stages, from the fulfilment

[24] Stakeholder is a term that refers to the groups to whom management need to be responsible, which E. Merrick Dodd identified as shareholders, employees, customers and the general public. Robert Wood Johnson includes in this list managers too. However, most literature points to Edward R. Freeman as having coined the term in 1984 (Mackey, 2006).

[25] Forth Environmental Action Program 1987-1992 of the European Union (Baker et al. 2002)

of legal requirements, until becoming leading Green Company. In this evolution eco-innovation plays a key role.

The OCDE (2009) defines eco-innovation as the implementation of new or significantly improved products (goods, services) processes, marketing methods, organizational structures and institutional arrangements which or without intent, lead to environmental improvements compared to relevant alternatives. Some other authors consider that eco-innovation can take place by either an incremental manner (Carrillo-Hermosilla, del Río and Konnola, 2010; ma, 2008) or a radical or discontinuous one. Eco-Innovation plays indeed a key role in achieving the technological change needed for sustainability but it would not be sufficient to focus it on improving efficiency. A new techno-economic paradigm centred in eco-efficacy is much needed, focusing it on the minimization and detoxification of the material and energetic flow (Tomas Carpi, 2010).

3.12 In pursuit of a new kind of growth and employment generation

Ecological modernization is also predominant in the UNEP approach to `green economy´ (Blewitt, 2008). This agency defines a green economy as one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" (UNEP 2010). But as in the case of sustainable development, there are several definitions of green economy, some closer to ecological modernization others more transformative, like the one given by Kennet and Heinemann (2006) who consider ecology, social equity and environmental justice as driving forces of the green economy. They actually incorporate the long term and holistic approach of sustainable development and refer to the precautionary principle and the carrying capacity of the planet as fundamental guiding principles. At the same time diversity, equity and inclusion are key aspects of their conception of society and community and therefore embedded in their economic proposal.

Actually, green economy is a term coined by Pearce, Markandya and Barbier in 1989, in their Blue print for a Green Economy. The document, was commissioned by the UK government, with the intention of clarifying the definition of sustainable development and its implications for the measurement of economic progress. It was therefore intended for the UK economy, and included recommendations to internalize environmental externalities by using prices, taxes, and valuation tools. The report was followed by a second one in 1991 and another one in 1994 which further developed the concept on the bases of research and experiences in environmental economics. They were also the authors of a Global Green New Deal commissioned by UNEP, in the context of the discussions on policy response to multiple global crises and concern about global recession, which was released in April 2009. It proposed a mix of policy actions that would stimulate economic recovery and at the same time improve sustainability and contribute to poverty eradication.

The business sector has been increasingly embracing green economy as it resonates with the need to overcome the constrains faced in terms of limited resources, volatility of prices and raw materials supply security (Cato, 2009) while it offers opportunities for growth. Notwithstanding, ecological modernization and green economy fixes have been insufficient to address the scope and dimension of the challenges faced (Jackson, 2009). They reflect the perception of unavoidability of most environmental impacts, not involving a real change in the patterns of production which could lead to reducing the pressure on the self-regulating capacity and resilience[26] of ecosystems or maintaining the provision of resources in the short-medium and long term. Reductions of impacts through improved technological innovations have not been able to counterbalance increases linked with those factors[27].

[27] To support his argument on the limits to decoupling the author compares the increase in CO2 emissions, production of coal, gas and oil with the World GDP data since 1990 till 2007 which shows a parallel behavior, although it has reduced per unit of global economic output. Furthermore, he also reviews data on iron ore, bauxite, copper, nickel, and zinc production for the

As shown in his book *Prosperity without Growth,* Jackson recalls that carbon intensity[28] of the world population would need to be reduced if we are to meet the levels of GHG emissions which has been considered desirable for ecosystem resilience by the IPCC. Likewise, he points to the need for a low carbon and resource efficient and service based economic activity which would provide employment, support communities and contribute to human flourishing. Jackson considers that prosperity consists in our ability to flourish as human beings, within the ecological limits of a finite planet (Jackson, 2009). Yet, those are proposals which are welcomed among ecologist but not in business circles.

Tomas Carpi (2010) also stresses the fact that the material and energetic content of the production has to be very different from the prevalent one. In his opinion eco-efficiency does not necessarily grant sustainability, particularly if resource consumption continues to increase. Therefore a clear strategy on sustainable development is needed to pursue the satisfaction of needs at the same time as the reduction of the resource exploitation and environmental impact. For that to occur a fundamental shift in the techno-economic paradigm should take place. In other words a set of new radical innovations with real power to generate a transformation across the board.

Carlota Pérez recalls that technologies tend to appear in the neighbourhood of other innovations and indicates that "each new technology system not only modifies the business space but also the institutional context and even the culture" (Pérez, 2009:7). Nevertheless, new rules and regulations, as well as specialized training and other institutional facilitators to boost such a change in the techno-economic paradigm are needed.

Institutional change becomes thus indispensable for such innovations to occur and disseminate throughout the system; while at the same time a

same period, revealing that, except for zinc, the extraction of those metals has surpassed world GDP.

[28] The growth tendency in the production of iron ore has dramatically increased since 2000, while in the case of copper production outgrowing world GDP has a longer history, particularly since 1995.

sustainability strategy should ensure that these sets of technological changes be based on the one hand, on the centrality of nature to articulate the productive system and a way of living; and on the other hand, on the ecological, economic, social and cultural sustainability as strategic guidance of the societal evolution. Furthermore, this new economic paradigm of eco-efficacy could stimulate the economy as a whole, generating a long wave of growth in developing as well as in developed countries. (Tomas Carpi, 2010). Such a growth will be more stable as it won't be based on the consumption of resources but in its use and stewardship.

It is interesting to note the current convergence of many other voices calling for a profound change of the patterns of production, underlining the potential benefits not only for the environment and society but also in terms of economic growth, which has resulted in a positive reaction of the corporate sector. Gunter Puli (2010) for instance, puts emphasis on the economic opportunities derived from applying the basic principles of physics, to replicate natures´ efficiency where there is no waste. Sustainability in his opinion results from a productive process which is as integrated as a natural ecosystem; being at the same time social, looking for innovations that generate employment while producing in cascades. He has coined the term `blue economy´ and has been gathering experiences illustrating the opportunities for business, the environment and society.

The suggestion of replicating the functioning of natural ecosystems is not new. The main principles of such an approach emerged from Kenneth E. Boulding's idea of circular material flows as a model for an evolutionary economy in a paper published in 1966, mentioned above. For Boulding, know-how, materials and energy are the factor of production. In his view, it is a must to place industrial processes in the frame of cyclical ecological system, being stock maintenance and adaptation to unpredictable changes key concerns. Thus, technological change should result in maintenance of stock, which in itself would be a gain for the economy.

Industrial Ecology has made important contributions by analysing the flaws of materials and energy throughout of production processes (industrial metabolism) with the aim of shifting from a linear system to a closed loop system, suggesting to follow the functioning of ecological systems. The work of Robert Frosch and Nicholas Gallopoulos published in 1989 is considered the first article of this evolving and multi-disciplinary field. This approach is the base of industrial symbiosis, where the residual product of one enterprise is used as a resource by another enterprise, in a closed cycle which a cooperative management renders possible to optimize resource flows (Lifset, and Graedel, 2002). The systemic approach of industrial symbiosis has attracted interesting research in the area and have the small city of Kallunborg, in Denmark, as its epitome; although new interesting experiences are flourishing throughout the world (Chertow et al, 2004).

Deepening further on the material and energy flows, Michael Braungart and Bill McDonough pointed out the difference between the two categories of materials: technical and biological. They take nature´s safe and productive metabolism as a model for developing a technical metabolism, which translated in their concept and certification process of Cradle to Cradle, as opposed to the cradle to grave approach of the traditional industrial processes. Walter Stahel and Genevieve (1976), had also envisioned an economy in loops which could have a positive impact on job creation, economic competitiveness, resource consumption and waste prevention. Stahel had been studying not only the life cycle of the products but also their functionality, the satisfaction a consumer gets from a good or service, which has led to the proposal of a performance economy.

On the bases of these approaches, a new concept is gaining increasing attention by businesses, governments, academics and other entities: `circular economy´. It refers to a new restorative and regenerative economy by design where industrial processes are conceived in loops. Ken Webster & Craig Johnson (2011) underline that the linear take-make-dispose resource model that generates significant waste is no longer viable; and thus, nature is taken as a

teacher of system thinking to make sense of sustainability. The emphasis is put in the fact of using resources as long as possible through a series of close loops of materials, technical and biological, as it is shown in Figure 7, which will help reducing resource extraction and designing out waste. This is the visual representation that the Ellen Mac Arthur Foundation (EMF) is promoting all over the world.

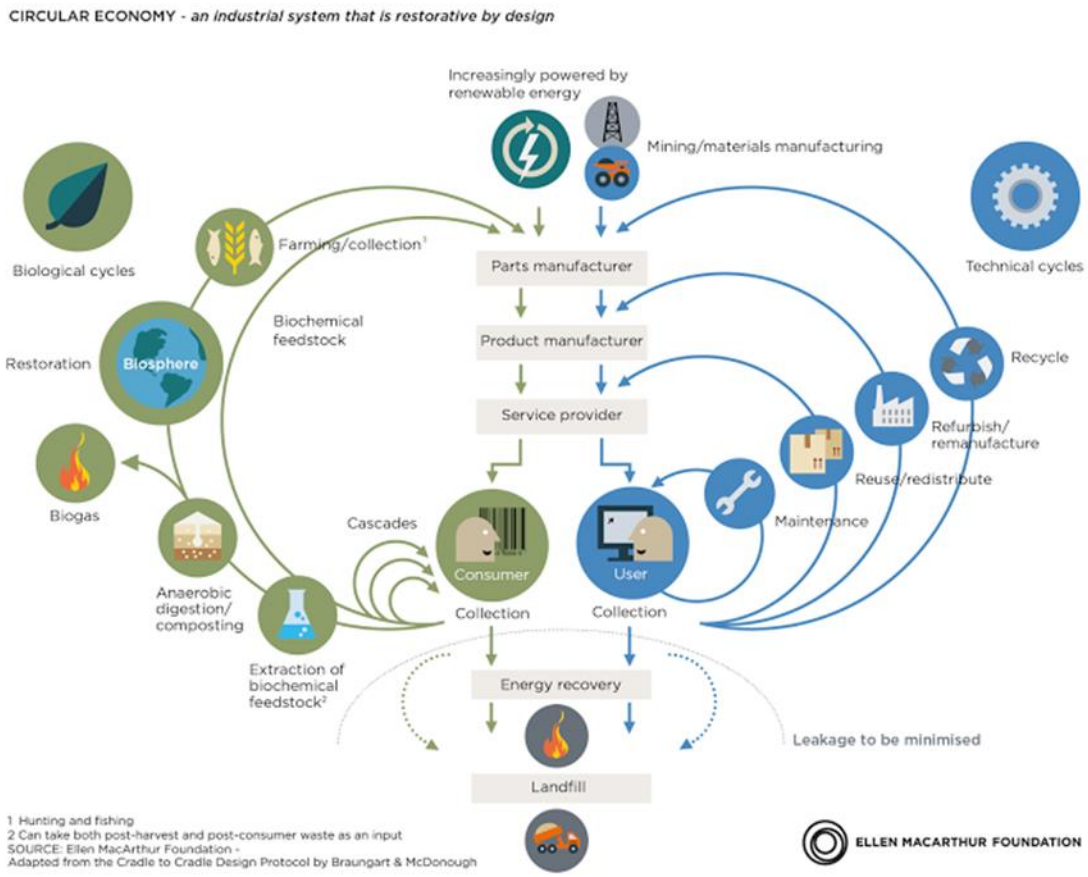


Fig. 7 Circular Economy

Source: Ellen MacArthur Foundation (2014).

These kind of industrial processes look very much like John T. Lyle have suggested (1996) in his book Regenerative Design for Sustainable Development. This author considers regenerative systems as enmeshed in natural and social

processes, which should allow renewal or regeneration of the sources of energy and materials they consume. Lyle had also underlined that technology remains the means for augmenting nature, but ideally becoming a factor within the larger social and ecological context; being necessary to integrate the communities where those regenerative processes take place, in their design and operation.

Against the backdrop of the crises, scarcity of some raw materials and volatility of prices, the EMF and McKinsey & Company assert that circular economy is an opportunity to make better use of resources, keeping products circulating through the system as long as possible, which could also generate immense economic benefits (EMF, 2013). These arguments have elicited a great deal of interest as they have been accompanied by estimations of GDP growth and employment generation [29]

The Word Economic Forum (WEF) have also engaged in a global collaboration with the EMF to accelerate the transition towards a circular economy, considering it as a practical approach which recognizes the interconnectedness of economy and environment and claims to be more in line with nature cycles. It aims at making industrial processes reduce resource extraction and design out waste by assuming the stewardship of resources and collaboration with all stakeholders involved. It has generated great expectation, catching up the interest of small and big enterprises in particular.

The European Commission is expected to publish a circular economy package by the end of 2015 and has commissioned a scoping study to identify potential circular economy actions, priority sectors, material flows and value chains. The study, published in August 2014, enumerates a range of policies and measures already in place at different levels at the EU. But the most important aspect for the arguments hereby exposed in the affirmation that “the transition to a circular economy requires systemic change and more holistic, integrated

[29] It has been estimated that the CE could generate 0.6 trillion euros per year by 2030 to Europe´s economies and therefore increase in GDP of as much as 7%, while at a global level it could mean an annual turnover of USD 1 trillion in 2025 (EMF, 2013).

approach which takes into account the myriad of inter-linkages within and between sectors, within and across value chains and between sectors (European Commission, 2014: vii).

Other countries have already been taken steps in this pathway. China was the first country to have a Circular Economy Law (2009) focused on reducing, reusing and recycling along with eco-industrial initiatives (Mathews and Tan, 2011). Japan is also considered a front-runner with its emphasis in eco-conception a much more systemic approach (EC, 2014). France also have introduced the concept in its legal frameworks and has published a guide for developing regional strategies to boost the transition towards Circular Economy (ADEME, 2014).

As it can be appreciated, the Circular Economy represents a positive look at the current situation and future perspective, in terms of opportunities despite constrains, as opposed to other proposals less popular, but outlining also the need for systemic change. Daly and Fairly (2004) for instance, state that sustainable development is development without growth; that is, qualitative improvement in the ability to satisfy wants (needs and desires) without a quantitative increase in throughput beyond the environmental carrying capacity of nature. Huckle (2012) considers that there are certain positive aspects in the arguments of Webster and Johnson but finds that it undermines aspects related to the patterns of consumption and other interconnections and interdependences within the bio-physical and social worlds.

Certainly circular economy is a concept which is in the process of being developed and has transcendental implications in terms of social change, but so far the social dimension is absent in the most widespread representations of the industrial processes (the EMF one) except for the consumer. Working conditions, for instance, are part of the concerns addressed in cradle to cradle certification but not directly reflected in figure 6. Though, the definition of circular economy given by Green Alliance (2013) includes both, information and labour as part of

the flow through the industrial process, highlighting that it would generate only employment while reducing costs and risks.

Circular economy would certainly entail a new mind-set, in order to assume the stewardship of resources, embark on innovation with a new perspective, take advantage of the potentialities for optimizing the system with new materials and renewable energy and be open to explore new business models and incentivize reverse logistic. In consequence relationships with clients and suppliers would be closer and it is expected that international trade would reflect the change. This new model would have a particular expression in each context.

3.13 Gender and Sustainability

As it has been stated at the beginning of this argumentation, not only the environmental dimension of development but the social dimension too has been underestimated by mainstream economics. In this regard, ecofeminists and feminist economists consider that the root cause of the dual crises of environment and care lies on the invisibility of vital cycles, those of nature as well as households, where most of the social reproductive work is carried out. Those cycles do not become visible until they are interrupted (María Mies & Vandana Shiva, 2007).

The problem resides in considering productive just paid work performed under market conditions, which in turns influences policies and programs with inadequate results (Carrasco & Mayordomo, Duran, 2001 & 20012; Floro, 2012). Households play an important role in the economy, not only as consumers but also as producers (Ferri and Molto, 2005).

Antonella Picchio (2001, 2005) explains that domestic activities and care carried out within the sphere of family, allow those who work to continue doing it. Picchio distinguishes three key economic functions to human development taking

place at the household level: first, the extension of real wages (a package of merchandises, meals, clean clothes, etc.); second, the expansion of wellbeing by fostering human capabilities and effective functioning in the social sphere; and third, the support lent by the family unit to the selective process in terms of the skills to be used in the production process of goods and services taking place in the market economy.

Therefore Picchio suggests reformulating the cycle of production and distribution to re-create the conditions of merchandise production as well as the ones to reproduce labour force (See Figure 8).

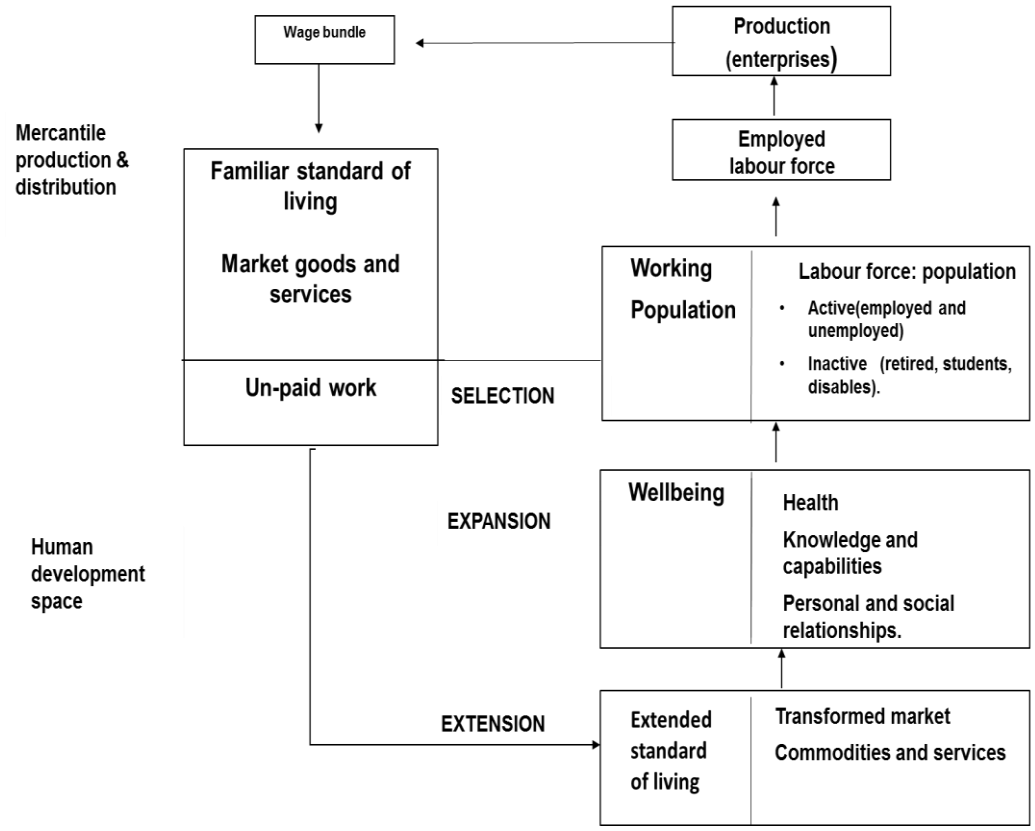


Figure 8. The production and distribution process/Extended standard of living
Source: Picchio, 2005

The invisibility of unpaid work and inequality is not limited to the households but permeates the whole system, and therefore, an adequate recognition of the political, economic and social contribution to the overall production and wellbeing of society becomes absolutely important for policy design (Duran, 2001 and 2012; Carrasco and Mayordomo; 2009, Bosch, Carrasco and Grau, 2003; and Novo, 2007). “This is indeed a crucial aspect of development as freedom” (Sen, 1999:203).

Pla & Guevara (2013) have envisioned combining the essence of sustainable development and the ethic of care in the framework of the concept of socio-ecological systems. See Figure 9. This integrative vision draws from contributions by feminist economics as well as ecological and new institutional economics.

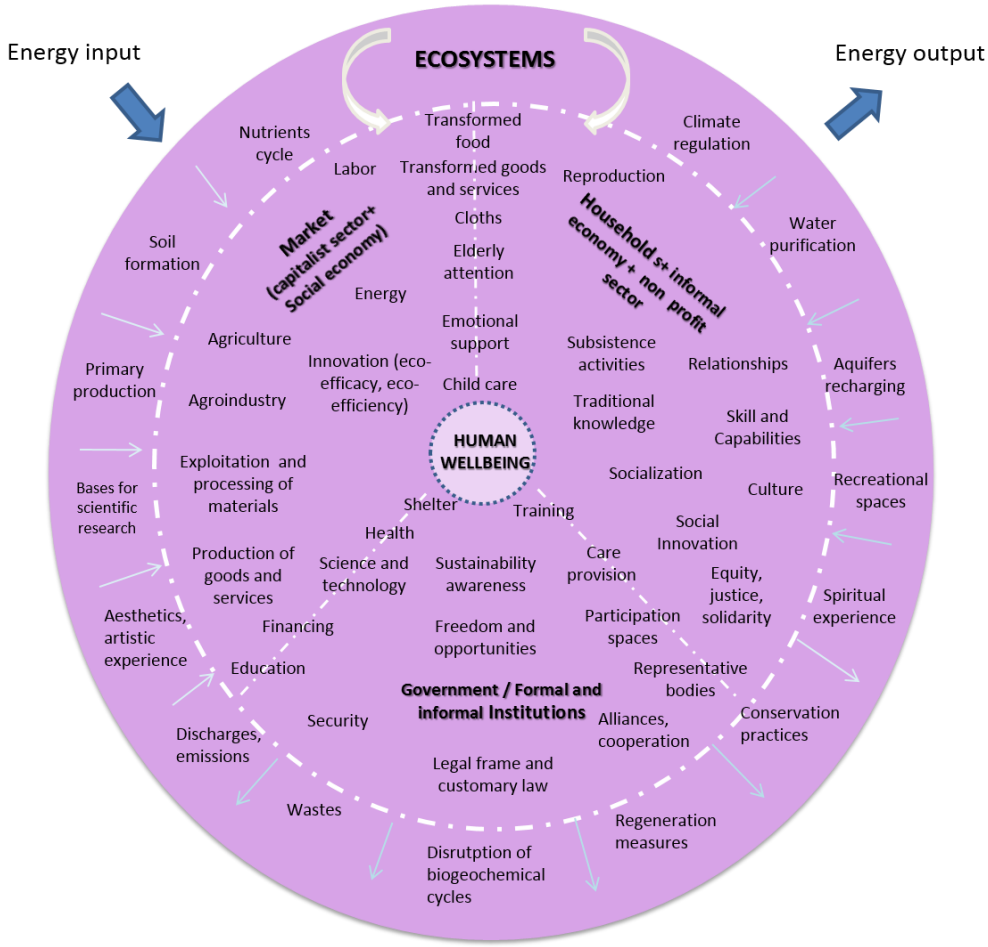


Figure 9. An integrative view of human wellbeing in socioecological systems
Source: Adaptation from Pla & Guevara (2013)

Various characteristics of this representation are worth underlining. First of all, it is open system in terms of energy in the form of sunlight and existing radiant heat we receive and the heat emanating from the Earth. Lines are discontinuous indicating that the parts of the system flow, their interactions are not limited to restrictive competences, but could present diverse combinations and liquid trajectory. In fact some of the content of a subsystem could be located in different parts of the circle, as actors in those areas play diverse roles and enter in joint activities with actors in other areas. The mercantile dimension is as important as the non-monetized one, and it also contemplates the institutional structures (being them formal as well as informal) in an evolved form of governance.

It relates then to a human wellbeing conception nurtured by both the material dimension (food, shelter, health, financial resources) and the non-material one (emotional support, freedom of choice, active participation, capabilities, spiritual experiences and the right to receive and provide care). All of this requires the components of the socio-ecological system to function harmoniously, without sacrificing any of the suppliers of these elements (Pla & Guevara, 2013).

Beside these proposals which call for modifying the conceptual framework, other feminist economists have also stressed the need to an ethical and monetary revaluation of the contribution of women to society and our right to equal opportunities (Pla, 2012). It is a complex task, as it has been acknowledged by Duran (2011) for instance, who has proposed to use household satellite accounts that attribute a monetary value to domestic and care work. Nevertheless, the author acknowledges the difficulties it entails as care has many physical aspects, including curing and cleaning functions, and surveillance (to avoid incidents or sicknesses), but it also involves management components, family representation and communication. These elements are difficult to separate conceptually, and even more, to quantify in terms of time and value.

Other proposals in the same lines such as the estimation of an extended Social Accounting Matrix (Ferri, Uriel and Moltó, 2005) have been advanced. It aims at providing coherence to the different flows taking place in an economic system. The Statistical Office of the European Communities (EUROSTAT) and ECLAC have carried out time-use surveys, which for the time being are considered the best available tool (Durán, 2012). Carrasco (Carrasco and Mayordomo 2000; Carrasco and Serrano 2011) created a new methodology (a non-androcentric survey of the active population) that captures information on both household and market activities, overcoming some of the limitations of the databases currently used to calculate household satellite accounts.

But besides overcoming invisibility and reflecting in the national accounts the contributions of households to the economic output, it is important to acknowledge the gender disparities that restrain sustainable development. Universal equality allows everyone to enjoy the same spaces, time, resources, political and social representation (Pla, 2012). This is an issue certainly associated to the longstanding debate on women in development and gender in development which was pioneered by Ester Boserup in her book Women´s role in economic development (Benería,1999; Bifani, P. 2003).

"The term gender refers to a social and cultural construct involving the different functions assigned to both sexes, as well as the characteristics, opportunities and expectations that social groups assign to people according to their sex, and that they assume as their own (Olmeda V. and Frutos F., 2001). ”The relevant point here is not gender by itself but the interactions that are established between both genders. It is essential to refer a gender to the other in order to comprehend any of them” (Izquierdo 1998: 50). Introducing a gender perspective in the social dimension of sustainability requires to focus on the analysis of gender inequalities that persist in society.

Gender disparities are based on unequal power attributions between women and men which, depending on the countries and cultures involved, translate in inequalities in terms of resources, tasks, occupations, education, professional opportunities, and political participation. This has led to an important advocacy movement and theoretical elaborations not only with regard to the need of eradicating social and political discrimination but also in terms of the relationship between gender and environmental issues (Pla & Guevara, 2010).

The role of women in attaining sustainable development has been linked to their potential as agents of change, considering the impact that the improvement of their own conditions could have on the rest of the family and their relational and physical space. In this regard, empirical evidence suggests that money in the hands of mothers (as opposed to their husbands) benefits children

(Sen, 1988, Matthias Doepke and Michèle Tertilt, 2011). Even if it is not always the case, it is necessary to take into account the need to address inequalities not as instrumental to other ends[30], but as their own right.

That is why `gender equality´ denotes equal rights, responsibilities and opportunities of women and men, girls and boys. It implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing diversity. Gender is not a women's issue but should concern and fully engage men as well as women (Aboud, 2011).

The UN system has been working on multiple mechanisms to address gender equality and the advancement of women, leading to an increased international recognition that there are important gender aspects related to development strategies to be addressed. In that context, the United Nations Economic and Social Council (ECOSOC) introduced gender mainstreaming as a fundamental strategy.

Gender mainstreaming has been defined as the process of assessing the implication for women and men of any planned action, including legislation, policies or programmes in all areas and at all levels (ECOSOC, 1997). It is a strategy for making women´s as well as men´s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that both, women and men benefit equally. Therefore, mainstreaming is not an end in itself, pursue equality, and it has a great distributional impact, determining who gets what and that provide a rationale for the allocations of societal resources and opportunities (UNDP, 2000).

On the other hand, feminist philosophers have introduced `the ethic of care´ (Gilligan, 1982;, Nodding, 1984; Baier, 1987; Kittay, 1987 and Held, 1993 & 2006) which has relevance for sustainability. Care is considered here not as a

[30] For example, abilities needed to overcome complex global problems have been studied with a gender perspective (Katz and Thiem, 2010)

feminine duty but as defined by Fischer and Tronto (1990), who refer with it to activities that include everything we do to maintain, contain, and repair our world so that we can live in it as well as possible. Meaning by world, ourselves, our environment, bearing in mind the interconnectedness among.

The ethics of care does not ignore inequalities but underlines responsibility as a democratic principle, promoting responsiveness and attentiveness to difference of others, which Robinson (1999 & 2006) has pointed out as essential to address inequalities within the current international relations; which applies also to national and local contexts. Floro (2012) postulates that we are facing currently a dual crisis of care for people and care for the environment, which lead us to ponder on the serious choices that governments and society as a whole need to grapple with.

3.14 Institutional arrangements for sustainability

As it has been theorized before, the primary lever of the change needed to deal with the multidimensional challenges faced is institutional, understood in its reach diversity. Certainly governments have an essential role in providing the conditions for other changes to occur, but it is important to acknowledge other institutions, formal and informal ones, which interact in complex socio-ecological systems. Those interactions are shaping the current reality as well as giving raise to alternative thinking and opportunities for transiting towards sustainable development.

The Institutional Analysis and Development framework provides a very well suited approach to study experiences with this vision. It has evolved to integrate the concept of socio-ecological systems (Figure 10) aiming at understanding interactions and outcomes of a particular region or local community, which are embedded in more complex contexts that include social,

economic and political settings, the related ecosystems and the institutional arrangements that govern resource systems.

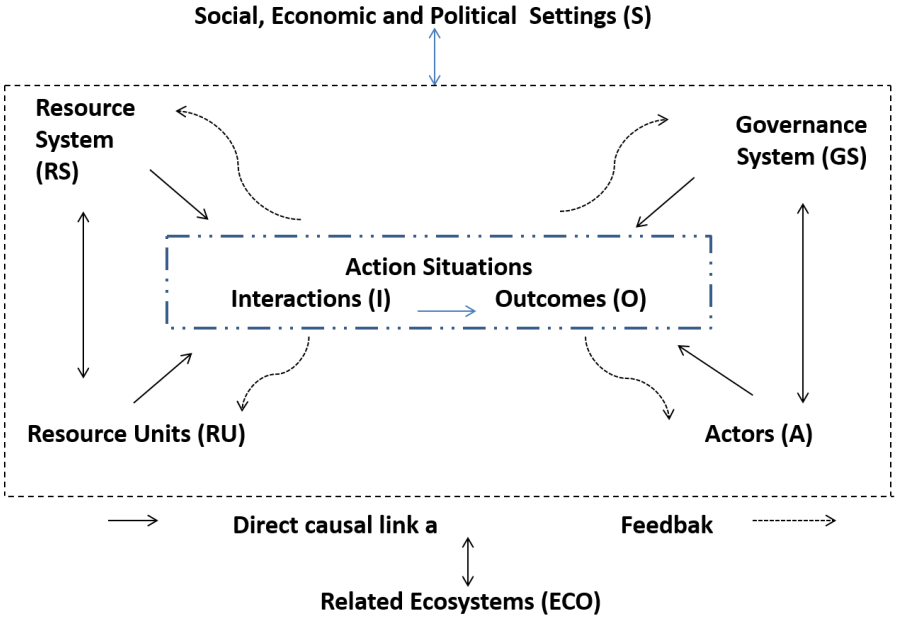


Figure 10- Action situations embedded in broader social-ecological systems
Source: Ostrom, 2011

The different actors[31] intervening in action situations, their positions, patterns of interactions are to be taken into account to understand outcomes, which affect and are affected by the larger systems. Such an understanding is not intended to lead to blueprint solutions but to draw lessons from those experiences which could be useful in other contexts, bearing in mind the differences involved. This allows also to reflect in terms of the resilience of a particular community with regard to the abrupt changes that might be registered in the system.

[31] Actors are single individuals or a group functioning as a corporate actor while actions refers to those behaviors to which actors attach instrumental or subjective meaning (Ostrom, 2011).

Fostering sustainable development has to bridge the global vision and the local conditions and culture. Global governance have thus to be combined with and backed by flexible and adaptive institutional arrangements tailored accordingly at national, regional and local levels; taking into account the particularities of territories and cultures. The active participation of all actors in the community is essential to build a consensus on their societal aspirations, guided not only by rights but also responsibilities.

Strategies, also at a local level, should aim at creating the conditions to radically transform current patterns of consumption and production, fostering the transition towards sustainable development. In this regard, the economy has to ensure a good stewardship of natural resources and ecosystems with a low carbon content and conceived to regenerate the supporting socio-ecological system. Industrial processes should be designed taking into account the example of nature where all waste is food for other processes, but the effectiveness of such an approach should be present from the very beginning. An eco-conception of the products or services in order to allow for the longest use and the best impact possible.

As a dynamic process of transformation at the societal level, sustainable development is a much more than economic means, as we have argued before. Its aim is to unleash of the greatest potentials, talents and creativity of individuals, women and men, within a framework of effective democracy, peace and respect for human rights and freedoms. Providing the same opportunities to satisfy their needs and aspirations to enable them to progress as they wish. It is important to acknowledge that households provide support to the economy as well as receiving support from it as well as the need to care for all member of the system.

To condense all those elements in a simple and easy-to-grasp representation is a complex challenge, but the next figure (Figure 11) is an intent.

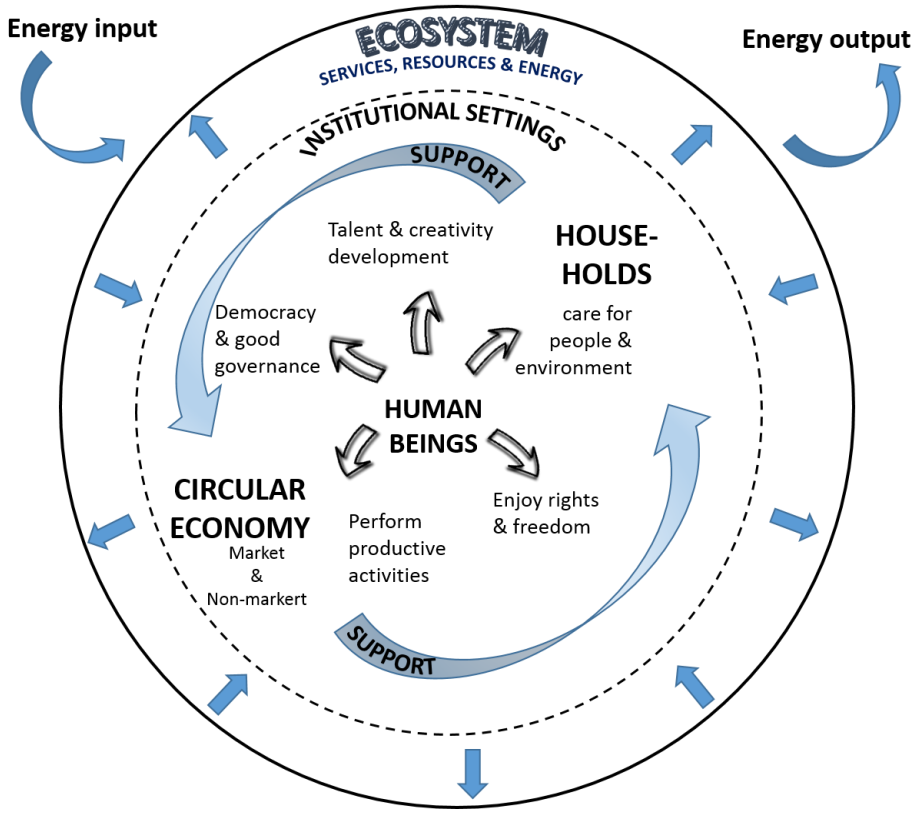


Figure 11- Vision of sustainability in socio-ecological systems
Source: own elaboration.

This multidimensional transformation has to be accompanied by a change in citizens´ values, believes and behaviours. The relational aspect is crucial. Cooperation and collaboration have to give way to integrative solutions where all actors concerned, even the future generations, are taken into account. Evidently, clarity of vision and understanding, political will and committed leadership are some of the characteristics required for an adequate governance for sustainability, favouring consensus, caring for people and the environment.

As very well stated by Benn, Dunphy and Griffiths (2014:3) “Never before in the history of the world has the viability of much of the life on this planet been under threat from humanity, never before have the world`s people experienced such a material wealth and so many others lived in abject poverty; never before have so many had such interesting and fulfilling work and so many them such degrading work or no work at all. If we are to live healthy, fulfilling lives on this

planet in the future, we must find new, life-affirming values and forge new patterns of living and working together".

4 AN INTRODUCTION TO THE CASE STUDIES: NAVARRA, A DISTINCTIVE SOCIO-ECOLOGICAL SYSTEM

4.1 Location

Navarra is an autonomous region of Spain with an extension of 10,391 km² (2.10% of the total Spanish territory) a varied landscape and a rich biological diversity. It is located at the Northeast of the country, at the western end of the Pyrenees, and on the border with France to the East, the Basque Community to the North-west, La Rioja province to the West and the Aragon province to the South East.

Fig 12. Navarra in Europe
Source: Navarra official site

Navarra is a mosaic of ecosystems where a diverse variety of species (animals and plants) live. Forests represent 64% of the region, having grown 24% over the past twenty years (Ministerio de Medio Ambiente, Medio Rural y Marino, 2007). Besides a network of protected natural areas and two wetlands, there is an abundance of water resources.

4.2 Socio-economic context

According to the latest data from the Navarra Institute of Statistics (IEN), it has a population of 640,154 inhabitants (317.727 men and 322.427 woman) which represents 1.37% of the total population of Spain (IEN, 2015). It has been administratively divided in seven areas and 272 municipalities, grouped in three bio-geographical regions: the mountains, the middle area and the Ribera or the Ebro River bank, which, in turn, are divided into districts.

The population is unevenly distributed in those areas (EC, 2013). Pamplona, the capital city located at the centre of Navarra, concentrates the largest population: 196,166 (2014). The average life expectancy is 83.5 but in the case of women it reaches 86.45 while in men is 80.72. As it can be observed in the following table, population aged 35 to 49 constitute the main aged group; whilst the population under 30 years, amounting 195.958, outnumbers the population aged 60 or over, which totals 156.109 (IEN, January 2015).

Table 2. Population indicators 2014

	Chartered Navarre Community			Percentages		
	TOTAL	Men	Women	TOTAL	Men	Women
Total	**640.154**	**317.727**	**322.427**	**100,0**	**49,6**	**50,4**
0-4	32.740	16.815	15.925	5,1	2,6	2,5
5-9	34.848	17.789	17.059	5,4	2,8	2,7
10-14	33.006	16.896	16.110	5,2	2,6	2,5
15-19	30.693	15.672	15.021	4,8	2,4	2,3
20-24	30.594	15.671	14.923	4,8	2,4	2,3
25-29	34.077	17.124	16.953	5,3	2,7	2,6
30-34	42.992	21.739	21.253	6,7	3,4	3,3
35-39	53.610	27.629	25.981	8,4	4,3	4,1
40-44	53.153	27.604	25.549	8,3	4,3	4,0
45-49	50.621	25.967	24.654	7,9	4,1	3,9
50-54	46.748	23.765	22.983	7,3	3,7	3,6
55-59	40.963	20.641	20.322	6,4	3,2	3,2
60-64	34.888	17.398	17.490	5,4	2,7	2,7
65-69	33.006	16.067	16.939	5,2	2,5	2,6
70-74	26.666	12.744	13.922	4,2	2,0	2,2
75-79	21.010	9.353	11.657	3,3	1,5	1,8
80-84	19.931	8.203	11.728	3,1	1,3	1,8
85 y +	20.608	6.650	13.958	3,2	1,0	2,2

Source: Navarre Institute of Statistics (IEN)

Navarra has undergone profound transformations between 1960 and 1975. From being an agriculture-based economy, it turned into a more industrial one thanks –fundamentally- to the 1964 Industrial Promotion Plan which attracted national and international capital (Fundación Moderna, 2010). Demographic changes followed as people migrated mainly to the outskirts of Pamplona where industrial parks were being developed. This process was accompanied by significant changes in the urbanization process and the socio-political spectrum (Pérez-Agote, 1985).

Nowadays, Navarra has a dynamic economy, where the industrial and services sectors account for the greatest shares of Gross Value Added (GVA). The Gross Domestic Product (GDP) for 2014 has been estimated in 18,284

million euros, and the per capita income in 28,124€, which is significantly higher than the per capita income of Spain. (22,780 €) as well as the European average (EC, 2013). Its Human Development Index has been estimated in 0.972 (Fundación Moderna, 2010)

As it can be observed in the following graphic, the service sector is the one generating most of the employment (68%) followed by the industrial sector (26%), leaving agriculture in the last place (IEN, 2014).

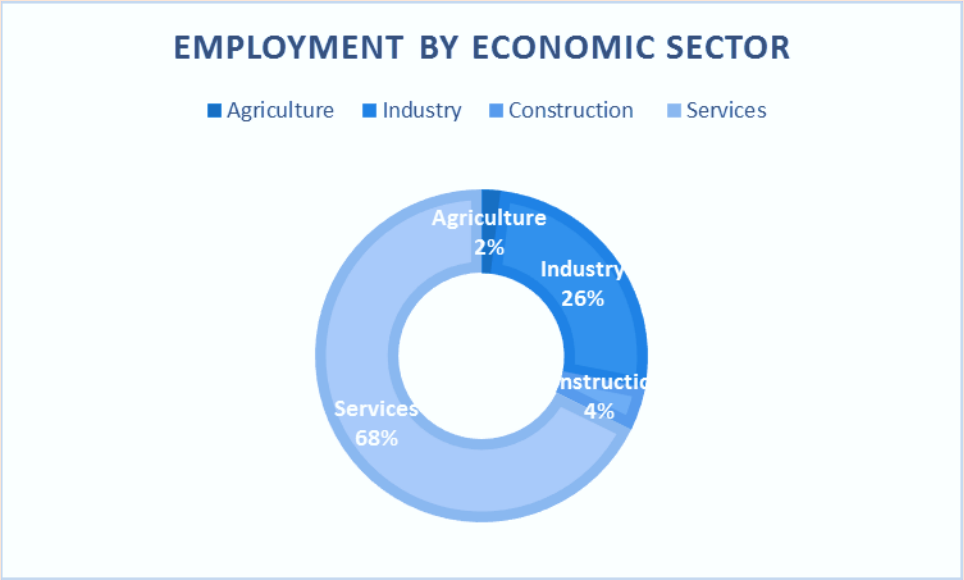


Figure 13. Graphic on Employment by economic sector.
Source: own elaboration with data from the Navarre Institute of Statistics (IEN, 2014)

The industrial activity represents 25.7% of the GDP. Two of the most important sub-sectors in Navarre's industry are car manufacturing and machinery and equipment. These two sub-sectors along with the third one, agro-food industry, provide over half of Navarre's industrial GVA. The region is the home of major companies in the renewable energies sector, auto-motion and food processing, renowned for its high quality.

Nevertheless, it is important to underline that out of the 41,466 Navarre enterprises 41,392 are small and medium enterprises (SME) which have

between 0 and 249 employees, among other characteristics. This represents, 99.82%. Further, 94.57% are microenterprises (0-9 employees). However, the number of large enterprises is above the Spanish average, scoring 0.18% against 0.12% for Spain. In terms of sectors, most companies exert their activities in the ´other services´ sector, while trade occupies the second place, as it can be appreciated in the following table. (Ministry of Industries, Energy, and Tourism, 2014).

Table 3. Enterprises by economic sector

Total number of Navarre enterprises 41,466	
Industrial sector: 3,852	Construction: 6,150
Trade: 9,643	Other services: 21,821

Own elaboration, data from the Ministry of Industries, Energy and Tourism, 2014

There is also a significant presence of multinational corporations characterized by their cutting-edge technology (EU 2013) and the export sector has shown a significant growth, reaching a 9.1% in the first six months of 2015 against the same period in 2014 and amounting €4,516 million (Spanish Statistics Institute/INE, 2015). Main export sectors are automotive, capital goods and semi process products.

Navarra is a region with an outstanding renewable energy sector which covers around 80% of its demand, generates 5% of the regional PIB and employs more than 5.000 people. The strategy adopted since the 90s have made possible that today 65% of the electricity consumed is from renewable resources (Fundación Moderna, 2011). The European Commission (2013) considers this achievement a result of the right mix of government support, territorial assets, and availability of stakeholders (industry, academia, and government).

Despite having reduced its investments in research and development, estimated in -8.5% between 2012 and 2013, Navarra continues to be placed

among the top investors in R&D in Spain; 1.79 % in 2013, the second place after the Basque Country (INE, 2015). In fact, it is one of the most innovative regions in Spain, scoring as a follower innovator (strong innovator) among European regions (EC, 2014). The main policies regarding innovation are implemented by the General Directorate of Economy, Industry, Employment and Public Finance, via the Directorate of Industry, Energy and Innovation.

The Navarra economy has reaffirmed its positive 2014 tendency after eight quarters of contraction. In the second quarter of 2015, a GDP growth of 2.8% has been registered (IEN, 2014) which represents the eighth positive quarter result after two years of contraction and a bit lower than the national variation (3.1%). A sectorial analysis of such a growth makes evident that the service sector is the one registering more dynamism (3.3%) while the industrial sector registers a 2.4% increase, and the construction sector its first positive variation (0.8%) after its contraction since the economic crises broke up in 2008. A severe contraction which had reached -5.8% in 2013 and -3.6% in 2014. (IEN, 2015).

It is worth noting that unemployment in Navarra is the lowest in Spain. The Navarre Employment Service informs that it has reached 12.6% in the first semester of 2015, down from a 17.2% registered in 2014 (SNE, 2015).

A new economic development plan was launched in 2010, the Moderna Plan, which promotes a new shift for the economy and the society: “to move from an industrial economy to a knowledge base economy” (Fundación Moderna, 2010: 5). It is the result of a wide strategic thinking process which started in 2008 with an agreement from the government with respective allocation of resources which led to the constitution of a public-private entity to boost this initiative. It has counted on the contributions from over 5,000 stakeholders (economic and social agents, public administration, educational and research institutions, among others).

The plan, which is under revision by the new regional government, establishes three areas of specialization: health economics, eco-friendly or green

economics, and talent economics. All this within the framework of Corporate Social Responsibility. The strategy follows the cluster approach, which are classified as basic, strategic, future lines of action, new opportunities and leverage clusters (Design and Creativity, Safety, Business Services and Education).

With regard to Green economics, the priorities are: Sustainable Construction, Sustainable Vehicles, Renewable Energies, Agro-food Industries, Sustainable Tourism and Environment and Waste. To achieve this a collaborative environment has been considered fundamental, having the public sector the leading role to act as a catalyst. The European Commission considers that Navarra presents a great potential for Green Economy (EC, 2013).

One of the assets that the region has to assume the challenge of the Moderna Plan is the high level of education of its population and the capacity to enhance it even further. Navarra has three universities and 15 technological centres grouped into Energy, Food Sector, Industry and Biotechnology, 29 professional training centres, 57 secondary education and more than 250 primary schools. 45,6% of the population aged between 30 and 34 years has completed tertiary education, which is higher than the average of Spain (42,3%) and the fourth after Basque Country (58%), Madrid (54%) and Asturias (51,3%). The education and knowledge cluster already employs 5.050 professors and trainers. (Fundación Moderna, 2014).

4.3 Tax Regime and formal institutions

Navarra enjoys a special condition as Chartered Community (Comunidad Foral) whose origins date back to the 9th century local custom laws governing the Kingdom of Pamplona. Later, when Navarra became part of the Spanish Crown, those laws continue to rule. The Spanish Constitution (1978), granted a high degree of flexibility and complexity based on two principles, solidarity and coordination (Toboso & Scorsone, 2010). It allowed nationalities and regions to

integrate the Spanish nation, to accede to self- government and be constituted as autonomous communities. The purpose of such scheme was to protect and respect the historical rights of the territories. This translates into a specific regimes or charters called *Fueros.* The Autonomous Statute refers to the Negotiated Law (Ley Paccionada) of 1841 as the legal base of the *Fueros*, granted by the 1982 Organic Law on the Reintegration and Betterment of the Navarra Charter (Government of Navarra, 2015).

The Fueros are considered a key element on the road to a future of progress, wellbeing and freedom of Navarra which constitute a far-reaching autonomy. They grant to the Navarra people the right to decide upon all matters that affect them directly, in the framework of the Spanish Constitution (education, social services, housing, urban development, and environment protection, among others). They also include the creation of its own treasury and the establishment of its fiscal autonomy based on the principle of solidarity with the rest of Spain.

This implies that Navarra (as well as the Basque provinces) follows an agreed system, collecting all taxes (except for the added value and import taxes) and then sending a fix contribution to the central government, as opposed to the regular system in which the central government levies the taxes and then redistribute them among autonomous communities for the sake of fiscal equalization. In practice, this system makes richer communities net contributors, while poorer ones become net recipients.

The Basque Provinces and Navarra, on the other hand, send but do not receive anything; although their contributions are smaller to those of other rich communities. Toboso and Scorsone (2010) explain that because there is only an ex-ante fixed amount of revenue to be transferred to the central government, all gains obtained from better management and efforts to reduce fraud remains in the hands of the regional government. They also receive higher tax revenues in relation to the regional GDP. As a consequence they dispose annually of a greater amount of resources to finance their policies. The contributions of Navarra and the Basque provinces are agreed every five years and updated

every year on the bases of an index (The current agreement is regulated by the Law 28/1990 and its successive modifications; 1997, 2003, 2007, 2011 and 2015).

The Spanish Constitution introduced a system to democratize Navarre´s institutions which gave way to the election of the first autonomous parliament in 1979 or "Cortes" of Navarra. The Law enacted in 1982 establishes that the Community consists of municipalities constituted in historical Merindades, nowadays *´Mancomunidades´*: Pamplona, Estella, Tudela, Sanguesa and Olite, completing in that way the three level administration (EC, 2013).

The last parliamentary elections were held in May 2015. The results constitute a significant change in the political landscape, characterized now by the fragmentation of the parliamentary representation. The political party which have been in power for the last 19 years, Union del Pueblo Navarro (UPN), had already lost some seats, having to reach a coalition agreement with the socialists (PSN) in 2011. Nevertheless, budgetary tensions lead PSN to abandon the coalition, leaving the UPN governing in minority. Even if in 2015 UPN have also got a majority of seats (15), an alliance of various political forces with different tendencies have conformed the new regional government.

4.4 Sustainability and Agenda 21

The Chartered Community of Navarra has traditionally upheld a high degree of environmental awareness among local people, who respect and enjoy their ecosystems, considering conservation as a shared responsibility. The administration has pursued an active conservation policy, particularly through plans and strategies for the preservation and sustainable use of the biological diversity, forests, ecosystems, and natural spaces.

In 1998, the Directorate of Environment, Territorial Planning and Housing of the Navarra Government began to take steps towards the implementation of

Local Agenda 21 (LA21) in the region, in the framework of the Río Summit outcomes, the Aalborg Chart and the Fifth European Program for Sustainable Development. Considering LA21 as a strategic tool for sustainable development, the administration draw up a plan to promote them in municipalities and granted the funding for the first three sustainability audits and local action plans in Cintruénigo, Pamplona and Tafalla. On the other hand, an agreement with the Public University of Navarra was signed in order to elaborate a Navarre Strategy on Environmental Education which was launched in 1999.

In light of the positive results of these first experiences, the government decided to articulate all those plans and strategies, as well as progressively extend the LA21 across municipalities by providing technical and financial support (100% funding of environmental audits, training professionals consultants, technical support in the elaboration of action plans, assistance to get European funds, recognition of good practices). As a result, many town councils engaged in this path following the methodology designed by the administration and signed the Aalborg Chart. In 2002 the Network of Local Entities towards Sustainability was created to promote cooperation among Navarre local entities favouring sustainable development.

With the aim of counting on a homogeneous tool to monitor and measure the advancement towards sustainability, a process to build a sustainability indicator was initiated in 2003, and was released in November 2006. Out of the great deal of information it provides, it is interesting to outline some key aspects:

- Despite disparities, there is a high degree of citizens' satisfaction with health services (in some cases 90-98%), with public education (77%), public administrations (74%), women services (73%), services for elderly people (77%), immigration services 62%, cultural services (74%), sport services (75,%) drinking water service (82%), waste management (81%), public transportation 72%.

- Access to housing and employment are the main concerns of the population. Dissatisfaction with access to housing scores up to 80% in some municipalities, while dissatisfaction with regard to employment opportunities could reach 90%.
- Proportion of older people is typical of an advanced society representing a concern due to the smaller number of young people.
- No environmental management system in Public administration and low in private enterprises.
- Consumption patterns could be improved. In some municipalities the consumption of local and ecological products is increasing.
- Ecological or integrated agriculture is above the Spanish average.
- There is a reasonable balance between women and men, in general. Nevertheless, rural areas present a largest proportion of men.
- There is still a huge untapped potential in solar energy for public and private use.
- Waste generation continues to represent a challenge, even if bellow the European average.
- High level of recycling, particularly paper and glass, while plastics and metals is limited.

Evidently, if such questions were formulated today, the percentage of satisfaction with some public sectors would be inferior, since the fiscal measures implemented by the regional government recently has implied cuts in social expenditure and the privatization of some services.

In 2011 the II Plan of Action Agenda 21 of Pamplona, proposed by the Forum of Agenda 21 was unanimously approved by the Municipal Council. This plan is divided into six strategies:

- Sustainable mobility and urban design.

- Climate Change Mitigation and promotion of renewable energy, as well as energy efficiency.
- Responsible use of natural resources and the protection of public health.
- Continuous improvement of governance, equality and social justice.
- Fostering local economy and promoting trade and tourism
- Education, public awareness and outreach for sustainable development

Until February 2014, 168 municipalities had associated to REDNEL (78% of the Navarre population). A total of 185 LA21 processes involving 88.12% of the Navarre population are on their way.

4.5 Gender policies and the role of women

Carmen Bravo Sueskun (2012) argues that the most evident social change registered during the 60s was the gradual entry of women into the labour market (which caused legal reforms carried out from 1971 to 1977) and their training. Despite the legal, social and cultural restrictions still in place and their lack of experience, Navarre women played an important role in the debates and proposals for those reforms. Wage gap and difficult access to unions were some of the areas where they made most contributions. On the other hand, the growing presence of women in education, willing to get the skills and capabilities to enter the labour market, had a decisive influence on the educative public policy which allowed the creation of a network of public and private centres with public funding and incentives.

Notwithstanding its positive impact, it also defined a gendered model of education to support the economic transformation of Navarra, based on the automotive and the metallurgy industries, the extraction of potassium and the modernization of the agricultural sector. This resulted in employment

fundamentally for men, while women worked on the textile, commerce and service sector in general.

Women catholic movements achieved participation in debates and reforms such as the creation of popular culture centres where they taught working class women. The effective integration of women in the labour market had not been possible if care services had not been provided, thanks to the local association's advocacy. Nurseries, family planning, foster homes for battered women, training centres, social networks, etc. The diverse regional feminist movement played a very important role in building a society of freedom, justice, and solidarity with the participation of women and men (Bravo, 2012).

María Bustelo (2000, 2005) asserts that the starting point of the so called ´State feminism´ can be set at the end of 1983, when a national level entity (the Woman's Institute) was created. From that moment gender equality policies spread out to the regional governments until they started to set up their own gender equality agencies (between 1988 and 1994). The regional agencies devoted to promote and coordinate gender equality policies, using gender equality plans as the main policy instrument; which are a set of structured initiatives in different areas affecting women and addressing gender inequality. In the case of Navarra, the first equality plan was approved in 2006[32] although some regional laws had been enacted since 2002.

Zabala (2009) considers that Navarra is an advanced autonomous community in terms of equality policy, particularly in terms of policy action, which even includes men in conciliation measures. The author argues that for a long time regional policies were no so sensitive to equality, having experienced a transformation from a protective approach to equal rights and duties. The 2006 equality plan represents the integration of the equality of opportunities principle as a priority. In order to accomplish its objectives a training program for the administrative personnel was carried out.

[32] In fact 36 local municipalities of the Province had already implemented equality policies or had approved equality plans.

With regard to its legal base, the Equality Plan makes reference to international as well as national instruments; among others the Convention on the elimination of all forms of discrimination against women, UN Declaration on elimination of violence against women, World conferences on Women, and the Sixth European Conference on Equality between Women and Men; while at the national level it mentions the Equality law project which was being considered at that moment.

The plan acknowledges that despite the previous implementation of some regional equality policies there are challenges requiring public intervention. In education and employment significant advancement has been achieved, whereas political and labor-union participation as well as civic associations register a lower presence of women. Access to housing, conciliation practices and gender violence are considered causes of concern. The rural character of a large extension of the community requires taking into account the special needs of women in those regions of Navarra.

Against this backdrop, the plan aims at leading a process of change to grant equal opportunities to women and men in the Navarre province. The main strategies chosen have been gender mainstreaming and communication (information, awareness campaigns, etc.) in order to address specific equality aspects in education, health, culture, employment, rural areas, conciliation, violence, development cooperation and empowerment, social and political participation.

According to Paleo and Alonso (2015) the budget assigned to gender equality policies in Navarra registered an increase of 81.9% during the period 2002-2008, whereas the data shows that in the last few years it has experienced a setback of -13.5% during the period 2009-2014 due to austerity measures.

On the other hand, Zabala (2009) acknowledges the relevance of equality plans in enterprises, which have been implemented by small companies, thanks to the special procedure (known in Spanish as IGE) designed by the former

Navarre Institute for Equality. It is a methodology to assess and implement equality plans in enterprises which are not obliged by law (with less than 250 workers). Positive measures for women and men constitute an innovative aspect of the Navarre policy, positively valued by this author since it pursues co-responsibility. The goal is to grant effective equality in work-life balance which include maternity leaves and paid breastfeeding brakes, etc. The government has also changed the support to low income working women with small children for more incentives to working men in order to take care of their children.

5 MAINSTREAMING SUSTAINABILITY WITH A GENDER PERSPECTIVE ACROSS THE MUNICIPALITY: THE CASE OF ANSOÁIN.

5.1 Rationale

Even if most of the pressing environmental problems are global, they have a diffuse nature and relate to production processes, consumption, transportation or land use. Urban centres, big or small, constitute socio-ecological systems where interactions between all actors and the space, as well as among their different interests, needs and aspirations, determine coexistence and potentialities as well. Therefore, national, regional and local governments have a key role to play in making sustainable development happen.

This reflects the importance of Local Agenda 21 (LA21) as a plan of action with concrete steps to take, at different scales, in order to articulate the levers for the change needed. It is obviously a complex task but at the same time offers possibilities for transformation. Good local governance looks for a harmonious co-existence and wellbeing, shaping sustainable development at their scale, and therefore, translating the elusive concept into a daily practice.

It also entails a participatory process with systematic procedures to build a consensus on the specific priorities to be pursued. The very fact of embarking in such a process has resulted in a change in public decision making of cities and regions which have taken this path. Similarly, transparency and accountability practices have become a fundamental aspect for governments and citizens improving the performance and legitimacy of administrations. The international and national instruments developed on civil society´s participation and right of

information which entails LA21 have had an important impact on democratic functioning.

The integrative approach of LA21 allows local administrations to addresses not only environmental problems but also socio-economic constrains taking into account cross-sectoral aspects. The balance of these dimensions are crucial to ensure sustainable development. But, as exposed in the Theoretical Framework it also requires to overcome the fragmentation of areas and the invisibility of women in development planning. It requires working on their empowerment in order to unleash their agency capacities to transform their own conditions and those of their family members.

LA21 acknowledges the important role of women in attaining sustainable development, underlining the need to ensure their participation across all levels of the decision making process related to plans, programs, measures and interventions affecting them, as well as their execution. It is fundamental that those actions address the particular needs and experiences of spaces, resources, and opportunities of women and men.

In order to achieve that objective, an important strategy -related to the mandate emanating from the Beijing Declaration and Platform for Action, 1995- is *gender mainstreaming*[33] which has a great relevance in development planning and execution at a local level, as well as an impact at the distributional level. Gender mainstreaming requires an institutional, systemic policy commitment at the highest decision making levels, as well as the resources and tools to analyse, implement and monitor its outcomes and impact.

It is therefore interesting to study the case of a municipality which has not only approved a LA21 but has also been looking into the interconnections among certain sectoral areas, implementing a mainstreaming strategy -characterized by

[33] Gender mainstreaming is a key strategy to achieve equality. Beyond increasing women´s participation, gender mainstreaming also involves identifying the gender perspectives in the work of an organization as well as bringing in the contributions, needs and priorities of women and men to the agenda in order to enrich development (Hannan, 2001).

an integrative approach to sustainability- in all programs developed by the Town Council, with particular attention to the gender perspective. This project has been awarded the prize of Good Practices on Sustainable Development by the Government of Navarra in 2010. It was also chosen to participate in a similar contest held by United Nations Habitat (Contest on Sustainability Good Practices 2012) by the Spanish Habitat Committee as a replicable case, having been positively evaluated.

The interest in this experience emerged while attending a Conference at the Women´s Document Centre in Pamplona as part of the research strategy of participant observation. The Library officer new already about the candidate´s interest in exploring the synergies between gender and sustainability, and immediately established the contact with one of the participants, the Equality Agent of the Ansoáin Municipality. Soon after the first meeting, the final Master project on the gender mainstreaming strategy and its evolution done by the Equality Agent was analysed. It reaffirmed the perception that the case was worth to be studied in the framework of this research as the strategies to implement an integrative approach to sustainability could be public or private. Furthermore, it had already been systematically studied and presented internationally considering their replicability.

Therefore an interview with the Equality Agent took place some days later at the municipality, where the LA21 Officer was also present. Using qualitative techniques of research, a semi-structure interview method was applied and important data was collected. A literature review about the particularities of the town and the subject (using primary and secondary sources) set the stage for a nurturing encounter with many insights at the institutional level. The evolution of the process, the political framework, the interactions between and among actors, the advancements achieved, the financial support, and the challenges faced, particularly in times of economic adjustments, were part of the agenda.

Further visits to the different areas of the town and conversations with entrepreneurs and citizens living there favoured further understanding of the context and expanded the perspective. The case was also raised during the interviews with other key actors in Pamplona who have acknowledged their pioneering character.

It is worth clarifying that this case do not go in depth into evaluating the process of LA21. Although it makes reference to its origins and components, given the relevance of the institutional process and the interconnection with its main focus; it mainly explores the mainstreaming experience in order to understand how this strategy combined gender and sustainability and the lessons which could be derived from it in order to foster sustainable development from an integrative perspective.

5.2 The local context

Ansoáin is a municipality of the Autonomous Community of Navarra located at the northern outskirts of Pamplona. Geographically speaking, Ansoáin has two landscape units, a higher one to the North, at the Mountain Ezcaba foot (altitude: 750 m), and a flat area to the South, near the Arga River. Its climate is sub-Mediterranean with an average temperature of 12º C.

Towards the mountain the vegetation is dominated by shrubs or brush and pastures, while the animals are predominantly birds, although sometimes squirrels, foxes, and wild boars can also be found. The town is also structured in two main areas, the historic centre to the North and the new one two the South in less than 2 sq. km. Figure 14 shows such structure and the segmentation of the territory due to the construction of the highway (PA-30).

Figure 14. Ansoáin Plan
Source: Google maps.

The fact of being so close to the capital has been a determining factor in the considerable increase of the municipality population since 1965; causing its transformation from a rural town into an industrial and service municipality. The first wave of expansion gave rise to the South part of the city which started to be built during the 60s and 70s, thanks to the industrial development taking place in the Pamplona basin at that time. A second wave of expansion was registered since 1991 when the city town was constituted, paving the way for a better planned and integrated urban growth.

According to the latest data (IEN, 1/1/2014), Ansoáin has a population 10,861 inhabitants, -1% less than in 2013. The distribution by sex is almost equivalent (50.3% women and 49.7% men) as indicated in the following Table.

Table 4. Main population data. Ansoáin, 2014

ANSOÁIN	2014
Population	10,861
Annual growth	-1,05
Population Density	5,716.3
Percentage of men	49,7
Percentage of women	50,3
Age average	38,0
Dependency index	53,4
Population between 0-14 years	21,8
Population aged 80 years or more	2,3
Foreigners	7,6%

Source: Selected data from the Navarre Institute of Statistics

Evidently such an evolution has required adequate public policies to satisfy the needs and aspirations of its people, which represent mainly working class. As mentioned before, the municipal council was established in 1991, when a group of towns decided to separate from their previous institutional arrangement (Mancomunidad). In accordance with the Electoral Act, establishing the number of councillors depending on the population, Ansoáin has 17 councillors elected every four years by direct universal suffrage, since 2011. So far the municipal administration has been structured in 7 commissions: Culture and festivities; Sports and Youth; Finance; Human Resources, Patrimony, Services and Environment; Health, Social Services, Education and Equality,

Municipal Accounting, Linguistic Promotion, and the Board of Spokespersons. According to the official data, in 2014 its budget amounted 7,404,968.57 euros.

The economy of Ansoáin depends fundamentally on the service sector. Predominantly small shops, but recently it allowed a big supermarket to be stablished in its perimeter[34]. The agricultural activity only represents 7% of the total territory, producing mainly wheat, barley and oat on the plains and vineyards on the foot of the Mountain Ezcaba. The industrial sector is predominantly focused on metal transformation and mechanics, although manufacturing of wood, glass, liqueurs, and leather also takes place. The tertiary sector offers a wide range of services not only scattered throughout the town but also in the industrial park.

Ansoáin has a public infant school and a basic education one. High school children have to go to the neighbouring municipalities to attend school. It has a primary health care centre with a capacity to serve over ten thousand people. It also includes mental health and serves a larger population. For other specialties people attend the public hospitals in Pamplona. The town also has municipal music school, libraries, theatres and exhibition halls, a social and cultural centre, a youth centre, sports centre, swimming pool, and other public amenities. It is connected to the rest of the Pamplona basin and the heart of the city by public transportation.

5.3 Local Agenda 21

As defined by the International Council for Local Governments (ICLEI, 1994) founded in 1990, Local Agenda 21 is a participatory and multi-sectoral

[34] It is worth noting that Navarra had not encouraged big shops and shopping centers in the cities and towns until recently. In fact, the capital Pamplona has two shopping centers located at the outskirts of the city. Supermarkets were mainly from regional entrepreneurs and since a few years ago is allowing more investments from other regions and countries. Some of those companies have also established their shops in industrial parks.

process which is set in motion to achieve a long term strategical plan to lead towards sustainable development. Therefore, the action plan should not be equated to the LA21 process (Calabuig, 2008). The ICLEI (1996) stresses the need of a very well planned and proactive process in collaboration with all sectors involved, with the aim to translate the principles of sustainable development into practical plans and actions. Precisely the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters adopted on 25 June 1998 in Aarhus (known as Aarhus Convention) has developed this aspect.

As in the case of numerous local governments, Ansoáin has also been working on the implementation of sustainable development strategy, in accordance with the mandate of Agenda 21, Chapter 28. It is worth noting that in 1999, the Navarra Province had approved its Strategy for the Conservation and Sustainable use of the Biological Diversity; while Pamplona, the capital of the region, had also shown its commitment to sustainable development by signing the Aalborg Chart and Commitments in 1998 and initiating in 1999 the process of elaboration of its own Local Agenda 21.

The government had been working with municipalities to support their involvement by training them, facilitating resources, and financing specific actions such as environmental audit or the enhancement of institutional capabilities to ensure their effective implication in the process. As a result the Navarre Network of Entities towards Sustainability was created, integrating the municipalities which have signed the Aalborg Chart and are developing their LA21. On the other hand, an award for good practices on local sustainable development was established.

Nevertheless, participation became the focus of their activities quite soon, setting up mechanisms to promote it, such as focus groups, steering committees, workshops, etc. More than 80% of the population of the Province has now an LA21 (Aguado et al., 2007). Additionally, an indicator system to monitor sustainability in the region was created and the provincial administration joint

European Cross-border cooperation projects to promote cooperation of entities involved in LA21 processes. At the national level, Spain launched the process to elaborate the Spanish Strategy for Sustainable Development in 2002 (Amador, 2008).

However, it is important to underline that an important operational strategy approved in 1993 at the level of the regulatory framework of the European Union gave great support to the integration of sustainable development principles[35] and AG21 processes in at the European Community level as well as among Member Countries policies and actions (Calabuig, 2008). Additionally, Local Agenda 21 in particular was fostered by the First European Conference on Sustainable Cities and Towns, held in 1994, which approved the Aalborg Charter. (Llamas et al., 2005). Many Spanish local governments initiated their own Agenda 21 processes after signing the Aalborg Commitments. It represents a development from the Charter subscribed in the same city, 10 years earlier, aiming to guide the embeddedness of sustainability across all municipality sectors[36].

It is also worth mentioning the encouragement from the ICLEI campaigns and guide (ICLEI, 1996) which suggests to take into account various aspects:

- Equally factor economic, community and environmental conditions into the design of development projects and service strategies;
- Fully engage relevant interest groups and, in particular service users in the development strategies that meet their needs; and
- Create service strategies that can be sustained because they focus on underlying systemic problems rather that problem symptoms, and because they consider long-term trends and constraints.

[35] The principles of precaution, subsidiarity and co-responsibility (Calabuig, 2008).
[36] The Aalborg Commitments encompass a list of qualitative objectives and effective tools that the European local governments approved during the 4th European Conference on Sustainable Cities and Towns, held in 2004, in the City of Aalborg, Denmark.

According to this guide, the main task is to define a shared vision of future for the community which will frame the process. The next step should be the identification of action goals and objectives and create strategies to achieve these targets, which constitute the plan. In order to carry out the implementation and monitoring of the plan, the ICLEI suggests to create partnership structures for implementation and internal management systems for municipal compliance; as well as proceed to do performance evaluations periodically using target based indicators. The full ICLEI proposal of the Elements of Sustainable Development in Planning is represented in Annex 3.

5.4 The mainstreaming initiative

As part of this process an environmental audit was carried out in Ansoáin, in 2001, which counted on the support of the Navarra Government (covering 100% of the cost of such audit). Among the main outcomes of the audit, it is worth noting:

- The absence of a real forest and vegetation management in the municipality due to lack of administrative clarity on competences. This has great significance for the protection of a territory characterized by the scarcity and fragility of soils; being also important to take into account the differences in the typical vegetation for each landscape of the town.

- The segmentation of the territory due to the highway which divided the natural area from the urban one. As a consequence, people wanting to enjoy the natural areas have to use cars to access that side of the town.

- The main socio-economic problems identified at that moment were access to housing (67% of interviewees) and unemployment (62%

of the interviewees). In 2000 unemployment reached 8% (357 people)[37].

- Peoples´ willingness to cooperate in the solution of those problems as well as others key concerns such as women situation, poverty and older people care.

- People´s positive perception regarding the municipal sport infrastructure and cultural spaces. Nevertheless, youth spaces and health centres was deemed insufficient.

- Despite the small size of its territory, Ansoáin has 8.5 m² of green area per inhabitant.

- The main transportation mean used by citizens is the private car, particularly for professional reasons. Public transportation is meanly used by students.

- Water consumption has increased more than the population and has a high quality. Energetic consumption has also raised, being fossil fuels and gasolines the main sources used. The largest part of the public consumption goes to municipal sport infrastructures, public lighting, and education centres.

The participatory process led to the approval of the LA21 in 2001, but according to the findings of the documental research and the testimony of the key actors, the implementation was on hold until 2008, when the municipality embarked in the process of relaunching the Local Agenda 21 process. The objective was to introduce environmental, social, and ethical criteria in all programs and actions of the Town Council.

[37] According to the Employment Service of the Navarre Region, unemployment in Ansoáin has registered a constant growth in the last decade. In 2008 it has already doubled the 2000 rate, representing 16,42%; while in 2012 it has reached 24,6 and currently it is 27, 97%

Key actors have expressed that as a result of the approval of the LA21, local administrations shifted from being predominantly in charge of licenses, permits, levying taxes, and supporting unplanned urbanistic development to start designing and executing initiatives leading to sustainable development. That was the case of Ansoáin. “Citizens also started talking more about their shared aspirations; increasingly using terms such as equal opportunities, participation, respect for the environment, inter-culturalism, etc.” said one of the interviewees.

Besides, a study carried out by the University of Navarra between 2007 and 2008 to analyse the gender structure of this municipality showed, among other aspects, that:

- The percentage of women with lower educational levels and the group with the highest level reflected the differences between generations. Their main areas of specialization were education (basic school), health (nurses) or human relations (around 80% for all); while their presence in scientific and technical professions just reached a 20%.

- With regard to their economic activity, 59.3% of women were active while the percentage in men reaches 80.6%. The most precarious working conditions in labour contracts were those of women, who also have the highest proportion of temporary contracts (32.3% of women vs 17.5% of men). Only 3.5% of the women living in the municipality were entrepreneurs vs. 4.5% of men while 4.3% of women work as a freelancer vs 9% of men. Women worked predominantly in the service sector (81.6%) while men in the industrial sector (61%). A continuous decline in the economic activity of women over the age of 30 (age of the first child) was also observed, while in men a high percentage of activity continued up to the age of 55 years. Retirement was higher among men (10.1%) than women (2.4%).

- 25% of women were exclusively devoted to household chores while only 0.4% of men did the same. There was also a most prominent presence of women in social and educative associations against those dedicated to sports or gastronomy. Groups requiring special attention: Single-parent families, widows, and battered women.

- With regard to political participation, the number of women councillors was 4 in 2007, 30% of the municipality. The political, social and economic participation of women was usually articulated on lower levels of organizations and less at the decision making levels.

On the grounds of these findings an Equality Plan as well as an Equality Agent for the municipality were considered necessary. The Town Council hired a professional in 2008 for such a task. At the same time, a professional was appointed to start working on the Local Agenda 21. Both specialists reflected upon the fact that sustainability was been generally associated just to the environmental dimension, undermining the social, economic and ethical aspects. In their opinion, a sustainability strategy had to have an integrative approach which includes gender. There is an incompatibility of achieving a sustainable society while gender inequalities persist, since women represent more than half of the population. At the same time, they underlined additional discriminations affecting women on the bases of their nationality, culture, age, sexual orientation, ethnic group, religion, age, functional diversity, etc.

Consequently, they proposed to their respective departments **to set up a team which could work on mainstreaming social, environmental and ethic sustainability criteria in all areas of the municipal activity**, **particularly gender**. This motion was approved and both professionals started to develop a methodology to achieve the goal. In 2009 the team elaborated a Decalogue of sustainability introducing the gender perspective and designed a strategy to go ahead. A third person joint the team in 2010, the Employment and Local

Development Agent. According to their own words, the team reflected perfectly the social, environmental and economic dimensions of sustainability.

They received training by the Navarre Centre for Natural Resources, the Navarre Institute for Equality and Family, the Equality department of the Basque Province, and the Foundation for Training and Employment, promoted by the labour organization Worker Commissions.

According to their testimony the project was made possible by the personal commitment and team work not thanks to a big investment. The factors outlined were the smooth and constant communication within the team, sharing knowledge and exchanging ideas on how to translate those principles in actionable plans. That was a predominant aspect of their relationship. Special attention was placed in making the rest of the municipality personnel share this comprehensive understanding of sustainability and the gender perspective. Seminars, workshops, conferences were organized with political and technical officials to explain the concept of mainstreaming as a strategy which could help improve the organization performance.

This led to redefinition of working methodologies and objectives in order to make them effective; reflecting their understanding that sustainability and gender mainstreaming were not for ecologists or women but political strategies. The aim is to develop the potential of human beings in each area of their lives, according to their capacities, desires and individual decisions; without having gender, sex, class or other variables curtailing such a personal development. Those strategies should also take into account the social, environmental and economic implications of all human actions.

The crucial role of the public sectors in upholding the wholeness of this conception of development was also understood, leading to boost the specific programs on gender equality and the Local Agenda 21, as well as mainstreaming sustainability and gender at the operational level as an strategy and not only as a

bound objective. The interviewees affirmed that it also implied a change in the way the municipality had functioned, from a vertical approach to a horizontal one, being sustainability and gender the link.

The political commitment of the authorities was evident as brought out by their implication and political will to carry out the project. The Mayor not only had a strategic vision of the mainstreaming but also supported the move to develop it at an operational level in the municipality. He also intervened whenever necessary to support it outside the Town Council in order to get the technical or financial support from other entities. Likewise, the existence of Municipal Commissions on Equality and on Sustainability have been considered an important enabling factor as all political forces are represented there. The unanimous approval of all the proposals submitted to their consideration reflected the existing consensus on the relevance of acting towards the achievement of sustainable development at a local level with equal opportunities for all, women and men.

Evidence of this political support was shown by various actions, such as:

- Holding a Local Agenda 21 Forum, May 2008
- Unanimous approval of an Strategic Local Plan, May 2008
- Subscription of the Aalborg Commitments, Dec 2008
- Approval of the Sustainability Decalogue, June 2009 (implementing the Aalborg commitment)
- Hiring three professionals to carry out the LAG21 and the Equality Plan (2008) as well as a Local Development Agent (2010)
- Unanimous approval of the first Equality Plan in January 2010
- Municipal Plan for the Sustainable Development of Ansoáin Nov, 2010
- Unanimous approval of the Protocol on violence against women. March, 2011
- Local Pact on Conciliation between the Navarre Institute for Equality and Family and 16 municipalities (among them the Ansoáin administration)

- Unanimous approval of the Local Action Plan, 2012.

In accordance with the content of the Aalborg Commitments, the Town Council issued a Sustainability Decalogue granting:

- Sustainability: to develop and consolidate sustainable municipal projects.
- Participation: to facilitate a balanced participation of women and men in all areas of the municipal jurisdiction.
- Equality: to promote equal opportunities for women and men.
- Justice: to ensure an equal resource access to women and men.
- Fair Trade: To boost responsible consumption among citizens of the municipality.
- Ecology: To integrate environmental criteria in urban planning, actively contributing to fight against climate change.
- Sustainable transportation: To encourage sustainable transportation models.
- Future: To uphold a local economy which generates employment with sustainable criteria.
- Solidarity: to promote citizens wellbeing through common benefits.
- Peace: to assume our own responsibility in the construction of peace, justice, and sustainable development in the world.

With regard to gender equality, the jurisdictional framework of the municipality work on this issue was defined by the Constitutional Act (Organic Law) on Effective equality between women and men, enacted in 2007. Besides, the Chartered Navarre Community had already approved its First Plan for Equal Opportunities between women and men 2006-2007. The First Municipal Plan of Equal Opportunities between women and men 2010-2014 was approved in January 2010. Its main action-oriented principles are: non-structural discrimination, equality as a value in itself, and the articulation of relationships on the bases of respect, equality, parity, and inclusiveness. It was on the bases of

those principles that the Equality Service of Ansoáin gave shape to its own Equality plan.

The Equality Service´s main objectives were: to integrate equality as a social sustainability criteria in all municipal policies; to incorporate the gender perspective in all areas of action, and to advance towards real and effective equal opportunity. One of the strategies to achieve such objectives was precisely mainstreaming gender, besides issuing a common guideline on equal opportunities for women and men; developing positive actions or corrective measures against existing discrimination; promote participation and collaboration among the different social agents within the municipality as well as external ones; prevent violence through respecting difference and diversity; and balancing women presence in all dimensions of life.

According to the information gathered, the activities took into account the priority required by vulnerable groups such as widows, single-parent families and battered women, thus a special attention was assigned to working with them on empowerment and violence prevention. To tackle the unemployment affecting more women than men, positive discrimination was chosen, giving priority to women opting for the job-bank offers. At the same time it is worth mentioning that women who were devoted exclusively to domestic chores were encouraged to participate in all activities organized by the Equality Service as well as the Local Agenda 21.

By 2012 the team had managed to coordinate 15 sustainability projects with a gender perspective. The following table resumes all those projects which reflects the identification of specific areas of municipal work where sustainability and gender perspectives can be mainstreamed and generate synergies.

Table 5- Sustainability projects with a gender perspective

Sustainable public procurement: introduction of equality as well as economic and environmental sustainability criteria to prioritize supplying companies.

Gardening: promoting parity practices while hiring workers for the temporary jobs in public gardens, and a non-sexist use of images.

Education for Sustainability: special programs in the school (139 children between 11 and 12 years); training 60 people (30 women and 30 men benefitted from those seminars lasting 38 hours), while 475 people attended technical and popular seminars. Including the celebration of the international women´s day and the international day for the elimination of violence against women.

Council for Citizens' Participation: encourage participation in consensus building about the municipal strategies on sustainability.

Awareness campaigns: 10.603 people received information in their houses or in the streets about sustainable development, waste reduction, etc.

Recovery of traditional paths (Monte Ezcaba): 1,148 meters of traditional paths and 10.000sq.m of natural environment, non-sexist language or images in signals, the creation of a women group to be consulted on the different aspects of the project (access, security, equality practices carried out by the contracted enterprises.

Territorial Custody: a visibility project related to the women needs in the use and enjoyment of natural spaces as well as urban ones.

Fair Trade: promotion of fair trade in the municipality and encouragement to use those products in the municipality, giving visibility to equal opportunities derived from the production process.

Ethical banking: highlighting women presence, needs, and difficulties in achieving their projects.

Municipal subsidies and calls: introducing sustainability and gender equality criteria in the terms of references for public funding, the language, the subjects, and the kind of organizations participating.

Jobs bank: giving visibility to the feminization of unemployment, women obstacles and needs, giving priority to single-parent families, battered women, migrants, functional diversity, etc. in the selection process.

Alternative transportation and awareness: taking into account the particular needs of different collectives, particularly of women, bike lines.

Energy efficiency: Promoting energy saving and efficiency at home, underlining the role of women as managers and consumers, and contributing to reduce energy bills for the families. Energy saving practices in public lighting, use of solar energy in swimming pools.

Cultural patrimony: Protection of historical and traditional importance for the community with sustainability criteria as well as highlighting women contribution to the history of the town.

Sustainable Town´s Celebrations: caring for the environment and for people during the festivities of the town, with particular attention to avoid sexual images, language or violence against women.

Source: Elaborated with data from Isturiz, 2012

The Sustainable Town´s Celebrations initiative has been pointed out as a successful experience. It has evolved over the years involving gender mainstreaming. It started by introducing re-usable glasses in 2008. Next year it went on to encompass all initiatives oriented to prevent waste generation and improve related services. For that purpose an agreement with the Centre of Environmental Resources and the municipalities association was signed. The project also encouraged the use of ecological products, local and fresh products, using public transportation, sharing cars, reducing energy consumption, promote garbage separation, reducing hazardous chemicals for cleaning purposes, etc.

With regard to social criteria, the municipality upholds the participation of local social and economic agents, self-responsibility, no violence against women, no sexist language or images, acknowledges cultural diversity, and facilitates access for dysfunctional and handicapped people. On the economic side, it favours fair trade (since part of the benefits go to good salaries, avoid children exploitation, promotes participation, gender equality and environmental protection); ethical banking (for the kind of projects they support), respect to international labour laws, and support solidarity-based economy (as it upholds the community by prioritizing people and common gains).

Part of the success that the promoters assigned to this particular program relies on the fact that the team developed the process as a different way to manage festivities, with efficiency and efficacy, and in a way which could be replicated. In fact, these good practices have been merged with similar initiatives

by three more municipalities and published by the CRANA Foundation/ Government of Navarra in order to disseminate them (CRANA, 2014).

All these initiatives counted with the fundamental support of the Environment Directorate of the regional government of Navarra having designated the Urban Environment Department as administrative unit to deal with A21. It provided financial and technical resources for the environmental auditing and the participatory process. Instrumental for the mainstreaming strategy was also the political backing and the funding provided by the Navarre Institute for Equality Family. Their financing covered 75% of the salary of the Equality Agent during the first two years, and 60% the subsequent four years. A key collaboration came from the Centre of Environmental Resources (CRANA) which offered continuous technical assistance in environmental issues while disseminating the Ansoáin experience in other *fora*.

The Navarre Network of Entities towards Sustainability served to share experiences and the Navarre Federation of Municipalities and Councils directly supported the good practice of mainstreaming gender into sustainability, and published it in their newsletter *Concejo*, among others. The team established collaborations with health centres, schools, local non-governmental organizations (such as women association, Caritas, retired workers association, gastronomic association) as well as local enterprises and traders. The support of the Network for an alternative economy, the Basque University and the Public University of Navarra have also been acknowledged.

Nevertheless, while promoting the replicability of this strategy in other entities has been judged positive, interviewees have argued that political correctness goes against real transformations, acknowledging the relevance of equality only in speeches but not assigning the necessary funds and resources to make it real, as the case of Ansoáin proves.

5.5 Assessment

In general, **the Mainstreaming Strategy has been positively assessed** and found relevant in the frame of the Town Councils Commitments, as well as in terms of the synergies between gender and sustainability. Their execution has proved that it is possible to care for people and the environment in each program of the administration. As explained by the Institutional Analysis and Development Framework with regard to socio-ecological systems, it is necessary to value that the desired outcomes (the mainstreaming strategy) derived from interactions between the different actors of this situation. The analysis of this case has shown that:

- The **origin of the mainstreaming strategy comes from within the municipality**, it has not been imposed by any other authority or law. It has been inspired by the global instruments evolved from the Río Summit but emerged as an initiative from the Equality Agent and the AG21 Officer. **Both actors had deep knowledge about the intergovernmental framework on environment and women rights.**

- The mainstreaming strategy has had an **integrative character** from the very beginning as the social, environmental, ethic and economic dimensions of sustainability were underlined by the main actors. It denotes, therefore, a balanced approach of the sustainable development concept which was pointed out during the interview by stating that sustainability without equality was not viable. The strategy has implied both **mainstreaming of the gender perspective in sustainability and, at the same time, the mainstreaming of sustainability and gender in all municipal policies and programs, at all levels and stages**.

- The **vision held by the leading actors was shared** with the rest of the municipality personnel. Inspiring them and making them aware of the need to change procedures at the local administration and the benefits for

the municipality and the population of the town. Their conviction and commitment have been highlighted.

- It has promoted a **change in the perception and doing in the organization.** The traditional compartmentalized way of functioning had to be shifted to embrace that **integrative and long term perspective in the strategical planning of the municipality**. It has contributed to dilute the separateness of municipal jurisdictions, involving also different entities associations and groups in working towards the achievement of equality and sustainability. The verticality of decision making was influenced by the horizontality of the AG21 process with positive results despite the lack of previous experiences in Ansoáin.

- The interactions among actors of different levels and departments have taken into account the **linkages of gender with the different areas of municipal** work as well as the potential entry point to incorporate gender perspective into those areas. Same thing has happen with sustainability which is in general more equated to conservation practices. It has allowed the participants to **understand the operational aspects of the sustainable development concept.**

- **It has also pooled efforts from the political and technical areas** of the Municipal Council, public and private local entities, and the Ansoáin citizens. The fact of realizing how enriching the process of **sharing visions and contributions** is to implement the strategy.

- **The initiative got the attention of other governmental institutions at provincial scale**. Those institutions granted support, in different forms and degrees, which was essential to implement the strategy.

- The fact of having involved an **effective process of participation** for the definition of goals and plans has made aware the population of their options, enhanced their capacities to contribute to change the decision

making process and develop a real participatory democracy. It should be stressed that participation has been conceived with a broad perspective, encouraging not only women to participate but also youngsters, disadvantages, migrants, elderly population, etc.

- As a result of the mainstreaming strategy all statistics for sustainability projects have been disaggregated by sex, while gender impact assessments have also been carried out before and after the execution of sustainability projects **contributing to the visibility of women in the information relevant for policy planning** as well as taking into account the different needs and impacts that each program could have on them due to their particular conditions and traditional responsibilities.

On the other hand, **some challenges have been identified**, such as:

- The need to overcome cultural **resistances** with regard to gender issues in citizens, entities, associations and collectives even within the Local Council due to androcentric and patriarchal patterns deep-rooted in our societies.

- **Resistances have also been identified with regard to change** in the way the work has to be carried out at the municipality when a strategic vision is embraced.

- **The entrepreneurial sector has also been involved through public procurement, promotion of local shops, fair trade, etc.** but there is scope for further collaboration and partnerships which could result in win-win initiatives.

- The economic crisis resulted in a **reduction of funds available** to carry on with the municipal initiatives in the frame of this strategy and the respective programs. One of the sectors affected by the financial restrictions has been the youth, an impact not to be undermined.

In synthesis, this initiative has led to a **systematic and progressive integration of the sustainability criteria and the gender perspective in all structures, policies, programs and the capacity building processes of the human resources in charge of their design, execution and evaluation**. It has implied a change in contemplating and doing things to get the desired mind-set shift. The participation of men, in order to promote alternative masculinities that could contribute to build an equal society was underlined by the Equality Agent as a very positive sign.

Despite the difficulty in measuring the real impact on peoples´ wellbeing, the results of the mainstreaming strategy have been considered positive. The interest elicited by the initiative has derived in acknowledgements and support by regional institutions and entities which have granted financial resources, disseminated the experience throughout the Navarre Community and awarded prizes as a good practice to be replicated even in other regions or countries.

The process followed by the actors in this strategy is very similar to the one suggested by the ICLEI in its AG21 guide (1996), which has previously been summarized and can be appreciated in Annex 3.

5.6 Enabling factors

Mainstreaming sustainable development at a local administrative level is a process which implies integrating the concept into the strategies and programs carried out by an entity, but also embracing a set of core values and principles which should underpin policy vision and the operational development of goals into actions. In the words of the Equality Agent of Ansoáin, for gender mainstreaming to take place it is necessary to count on a theoretical framework, a legal framework and the equality structures and tools (Isturiz, 2012). Which is also valid for the local sustainability strategy.

This case shows **political commitment** and willingness to lead the transformational process which implied a pact among all political forces of the local municipality: It should be an indication of stability of the strategy in this times of governmental change. One of the most important prerequisites in achieving sustainability and gender equality is that decision-making at the top level uphold the strategic vision and assign the necessary means to implement it. **The strategic vision of the Municipal Council as well as the political and financial support** granted by the Mayor has been essential to promote sustainable development with a gender perspective, not only within the corporation but also with regard to other public and private entities and get more resources from the provincial government.

The fact that the Municipal Commissions on Equality and on Sustainability had also shown their commitment and willingness to advance on this path is a very important aspect as **all political forces** were represented there. It is of greater significance for the endurance of the strategy, in the light of recent political changes derived from the municipal elections[38]. All this has been facilitated by a **supportive policy framework** derived from the international political consensus reflected in the Río Summit and Beijing Conference outcomes.

[38] Similarly to the rest of Navarra, a major change has taken place in Ansoáin as a result of the latest municipal elections held in May 2015. The most voted list was EH Bildu, with 29.05% of the votes which represents 6 councilors, while the Socialist party got 27.49% and 5 councilors; the Left list/Ansoáin Puede, supported by Podemos got 18.11% of the votes and 3 councilors, Geroa Bai 14.11% of the votes and 2 councilors, Union of the Navarre People (UPN) 7.1% and one councilors, while The Popular Party just got 2.5% of the votes, not enough to be represented at the town council. This has constituted a rupture with the latest trend, as the Socialist party had been the prevailing political party in the municipality during the six previous elections. Ansoáin was considered a fiefdom of the Socialist Party (PSN). The current Mayor is Ander Andoni Oroz Casimiro (Bildu) who had counted on the support from the left list, Ansoáin Puede, and Geroa Bai councilors; however, a common program does not exit. The new Major has declared to the press that some changes are envisage in the number of commissions, responsibilities, etc. His party is proposing an open government even to discuss the budgets, which implies also open commissions with the participation of the Ansoáin citizenship. One of the key issues at hand is the reversal of service privatization (sports, spaces cleaning, youth center).

The criteria informing the strategy policies and programs carried out by the municipality changed for a more **comprehensive understanding of sustainability**. This has been essential to advance. It included the consideration of equality as a criteria of sustainability as well as the need to take into account all sustainable development aspects, besides environmental concerns. While, at the same time, introducing sustainability principles in the daily life of women and men living in the municipality[39]. The LA21 process and the mainstreaming strategy generated positive synergies which enriched the vision not only the decision-making levels but the rest of the organization.

Besides the deep knowledge that the leading actors of this strategy have on their respective subjects and the reality of the municipality (territory, history and culture, social, economic and environmental challenges, etc.), they both have a remarkable **disposition to broaden their perspectives and capacities** by sharing experiences, further education and training. They demonstrated **personal and professional commitment.** The fact that the team was complemented by the Employment and Development Agent, enriched even further their multidisciplinary view.

Sharing their vision was crucial to actively involve the rest of the Local Council´s member at all decision-making levels. While their willingness to cooperate with each other and **to innovate in the way things have been done at the Town Council**, denotes a **collaborative and open-minded spirit** which has been fundamental for successfully carrying out the initiative.

The **collaboration received from within the municipality as well as from other entities and local organizations** have been instrumental in

[39] It is worth noting that the interview with the Equality Agent turned into an interesting conversation on the relevance of widening the scope by including culture (knowledge, creativity, innovation, technology, etc.) as a forth pillar and the institutional aspects as a fifth one. In this regard, the relevance of start disseminating a more holistic representation of sustainability (beyond the traditional three circles discussed in the theoretical framework) was stressed, bearing in mind the power of images to convey messages and therefore make people aware of the scope of the challenge.

achieving goals. Within the corporation it has facilitated the complex coordination and involvement required by gender and sustainability mainstreaming at the operational level. It reveals that they must have pondered the benefits of introducing those changes for their own perspectives.

Tools and instruments to put the strategy into practice have been developed and people involved have been trained. Precisely, **counting on the support from regional entities have provided funds, training and advice** which have been essential. Such a training has not only improved the potential for a successful implementation of the strategy but also results in the enhancement of their human capacities to better perform in life.

Pooling those resources have multiplied the **effectiveness and efficiency** of their use since the actions carried out by each service of the municipality carries somehow the integrative concept of sustainability. Mainstreaming has allowed the actors to generate more impact with less resources.

In accordance with the A21 spirit, **the process has been participatory** which enriches democracy and allows the municipality officers to get inputs from their constituency in terms of their real needs and aspirations. The **receptivity and strong engagement with civil society** have made possible to turn goals into actions, while at the same time transferring to them new and diverse concepts and visions which results in an enrichment of the community.

Gender mainstreaming has included to work on **women empowerment** which aims at improving women's confidence and status in society, increasing their opportunities and facilitating greater control over lives. Unleashing their agency capacity is more effective than promoting their dependency on public assistance.

Education and communication have been key instruments to consolidate the strategy. Specific educational programs for the administration as

well as for the population have been carried out, as well as communication campaigns. The scope of these projects in terms of the population have been wide, which is favoured by the fact of its concentration in a small territory.

Finally, this case reinforces what has been exposed in the theoretical framework with regard to the components of the sustainable development concept; in particular the **relevance of the institutional pillar**, **as enabling factor as well as objective of the transformational process.** In this sense it is important to outline that the mainstreaming strategy has resulted in a **public innovation,** a better functioning of the organization, more collaboration and horizontality in decision making, a more efficient management of resources, a more effective policy planning (closer to the people reflecting their needs and also encouraging them to participate in fostering sustainable development with a gender perspective) and in a better image of the municipality, which has received recognition not only by the provincial government and related entities but also at international level. Nevertheless, organizations are made of human beings with their capacities, interests, concerns, talents and motivations which are cardinal in order to accomplish public innovation and achieving societal goals.

6 REGIONAL STRATEGY ON CORPORATE SOCIAL RESPONSIBILITY: AN UMBRELLA TO CARE FOR PEOPLE AND THE ENVIRONMENT?

6.1 Rationale

As discussed in the theoretical framework, translating sustainable development principles into a local strategy and then into actionable goals and practices takes a particular interest in terms of industrial activities; but this has certainly implied an emphasis on the environmental aspects of sustainability. Regulations and management tools applied to industrial processes represent most of the actions that European Union member countries have carried out in this sphere. Consequently, Spain and its autonomous communities have followed this trend.

More comprehensive strategies have also been articulated to integrate the environmental and the social impacts of the activities performed by a firm on all stakeholders, instead of just considering the shareholder interests. To promote responsible business models, ensuring not only competitiveness and economic growth but also social development and environmental respect are some of the fundamental aspects these strategies include.

Voluntary actions have been considered an important accompaniment to move beyond command-and-control policies to more proactive ones. With this aim, the longstanding concept of social responsibility has served as a framework enabling the wider perspective of sustainability to permeate industrial processes. It has derived in the emergence of concepts such as `Corporate Social

Responsibility´ (CSR), which has evolved significantly[40] after the Río Summit, `Corporate Sustainability´ (CS), and more recently `Creating Shared Value´.

But tools, methodologies, procedures, etc. are needed to translate those goals into practice. In 1997, the Coalition for Environmental Responsible Economies (CERES) and the Tellus Institute, in collaboration with the UNEP, founded the Global Reporting Initiative (GRI) as an accountability mechanism to ensure companies were following a responsible environmental conduct. In 1998 the multi-stakeholder committee in charge of developing the organization asked to do more than the environment, broadening the scope to include social, economic and governance issues. GRI launched its first version of its guidelines in 2000, a global framework for comprehensive sustainability reporting (GRI, 2014). This tendency was reinforced after the Río+10 Summit held in Johannesburg which underlined the social aspects of sustainability, influenced by the approval of the MDGs. More recently, GRI guidelines have included gender equality practices.

A public-partnership at global scale (Global Compact) has also been stablished following the calling of former Secretary General to the United Nations, Kofi Annan, to all companies to align their strategies and operations with universal principles of human rights, labour, environment and anticorruption[41]. Their emphasis is on Corporate Sustainability, defined by the following characteristics: principled business, strengthening society, leadership commitment, reporting progress and local action.

So CSR and CS are much more than just philanthropy. The GRI guidelines have helped to better understand what it entails but due to its

[40] In 1953 Bowen wrote a seminal book entitled Social Responsibilities of Businessman representing the beginning of a debate subject which continuous to evolve.

[41] Business should support and respect the protection of internationally proclaimed human rights; make sure that they are not complicit in human right abuses, uphold the freedom of association and effective recognition to collective bargaining, the elimination of all forms of forced and compulsory labor, the elimination of discrimination in respect of employment and occupation; to support a precautionary approach to environmental challenges, undertake initiatives to promote greater environmental responsibility; encourage the development and diffusion of environmentally friendly technologies and work against corruption in all its forms, including extortion and bribery (UN Global Compact website)

voluntary character companies select the areas which are applicable to their case. In general, beside regulations enacted to limit the impact of industrial activities as much as possible and setting standards; firms are encouraged to use modern tools for assessing the production process as a whole, to put in place measures and practices ensuring the reduction of pollutants, inefficiencies, etc. Management systems are suggested to improve the environmental performance which articulate in a way all those actions previously mentioned. It represents the internalization of a cost for the enterprise but could result also in a stimulus for innovation and a saving in the use of materials and energy. However, as explained above, the complexities of the socio-ecological system we conform require a real transformation of this approach which has proved insufficient to address the risks humanity faces.

6.2 The context

The European Union has been actively involved in the promotion of CSR since the early 1990s, though historical precedents exist related to social responsibility of investments or the guidelines for multinational corporations. In 2001 the EU proposed the Strategy for Sustainable Development to advance towards a more comprehensive approach of sustainability, including economic, social, environmental and global dimensions. A consultation paper was published introducing the principles of CSR which served as a key reference to the debate developed in the region at that time and the subsequent actions on the subject by the European Commission. This ´Green Book´ or green paper defines CSR as a voluntary practice to integrate social and environmental concerns in the entrepreneurial operations and in its relationships with stakeholders (EC, 2001).

In Spain, the Parliament approved the creation of a Commission conformed by representatives of the public administration, social and economic agents, civil society, academia, and media, among other stakeholders in 2004.

The objective was to promote and leverage the social responsibility of enterprises. The report of this commission, also approved by the Parliament in 2006, underlined the different interpretations of the CSR[42] concepts uphold by each sector, emphasizing that entrepreneurs were more interested in an active and practical approach. It stressed the fact that the European Commission work on the subject and the consensus reached in the European frame constituted an essential reference for Spain. This document argued that a new management model was emerging, a more human way of understanding the enterprise, but also more efficient, with a long term view concerning the impacts on the social and natural environment (Congreso de los Diputados, 2006).

Besides, the International Organization for Standardization also created a working group which concluded its work in 2010, elaborating ISO 26000. The approach of this new norm corresponds to what is known as social responsibility, which according to Forética (2006) is also the approach prevailing among Spanish entrepreneurs. The new norm supplements the ISO 14000 norms from a point of view of CSR.

In the case of the Chartered Community of Navarra, one of the first moves in that direction was a seminar held in 2002 presenting `Entrepreneurial Social Responsibility´ (ESR) as an innovative business strategy. It is interesting to note that the event was jointly organized by various entities: the Development Society of Navarra (a public financial mechanism to foster entrepreneurial projects contributing to the development of the region), the European Centre for Enterprises and Innovation (a public entity too) and a non-for profit foundation devoted to contribute to social insertion and the construction of a solidarity-based economy (Foundation Gaztelan).

[42] CSR is not a term commonly used in Spain, instead, Entrepreneurial Social Responsibility is extensively used as it corresponds to the structure of the national industrial sector, predominantly conformed by small and medium enterprises. According to the latest data, 99.88% of firms in Spain correspond to Small and Medium Enterprises. In Navarra such a proportion is 99.82% (Ministerio de Industria Energía y Turismo, 2014).

Outreach information initiatives (with the support of the regional government) were also carried out, being executed by public and private organizations (Chamber of Commerce, social economy association and academia, among others). All these initiatives paved the way to the creation of a plural Group in 2004 which was the seed for setting up a wider forum (2005) on the subject (37 entities which soon became 55) with representation from across the whole spectrum of Navarra: regional government, local governments, business associations, enterprises, academia, and civil society organizations). The interviews have confirmed this plural participatory process, promoted by the provincial government.

The activities carried out by this forum have been fundamental in the widespread understanding of the concept and resulted in the conformation of an Entrepreneurial Social Responsibility Network (ESR Network) that raised awareness and generated a groundswell of demand for a Public Strategy on the subject. Its purpose is to gather regional and local administrations, enterprises, social organizations and citizenship, on the lines of what was being done in several Autonomous Communities (Foro RSE Navarra, 2007).

In February 2005 the ESR Network reached an agreement to promote ESR stating that the Parliament should boost a regional ESR strategy, acknowledging the existence of some socially responsible practices in the productive sector which needed to be fostered and articulated in a more systematic way. This group decided to create an ESR Observatory, to conduct a diagnosis of the regional ESR praxis as well as the needs and expectations of the firms. The results of such study indicated that:

- more than 90% of enterprises had previous information about ESR via specialized magazines or conferences attended but lacked a good understanding on its scope and implications;
- the majority (86%) considered that ethical reasons were the main drivers to implement ESR, while 45% mentioned the improvement

of labour environment; and profits or financial outcomes were secondary reasons;

- only 33% of enterprises reported to have a social responsibility policy; being 36% of those actions related to philanthropy (donations to NGOs, charity) and 9% cultural and sportive sponsorship;
- 100% of the respondents affirmed that social responsibility would become part of the entrepreneurial culture and 75% considered that it could contribute to improve their competitive advantage;
- a large proportion of interviewees (64%) indicated that it was up to the public administration to promote ESR followed by entrepreneurial associations (55%) and other social agents (55%);
- fiscal benefits would help leverage ESR in the region (50%) while a regulation on this issue would positively contribute to its implementation (68%) although it should have a voluntary character (INAFRE, 2006).

In looking for experiences which could reflect not only a positive institutional arrangement for the convergence of sustainability and social concerns, particularly the gender perspective, the CSR was identified. A first revision of literature was carried out appreciating a great deal of public involvement in the promotion of this concept. The participant observance allowed to explore deeper the particularities of the program as well as the actors, interactions and outcomes.

6.3 The Program to Encourage, Promote and Leverage CSR/ESR in Navarra

Against this backdrop, a motion was presented to the Regional Parliament on November 22, 2007 underlining the need to promote ESR in the region. The approval of this motion led to the elaboration of a specific policy framework on the subject through a wide participatory process.

As a result, **the Government of Navarra approved the Program to Encourage, Promote and Leverage CSR in Navarra for the period 2008-2010** which was jointly prepared by the Directorate of Innovation, Enterprise and Labour (DGIET), and the Navarre Centre for Natural Resources (CRANA, an agency of the Directorate of Environment) also involving a multi-stakeholder consultation. The General Directorate of Innovation, Enterprise and Labour, through the Directorate of Employment was appointed by the government to lead the program. A Technical Secretariat ad hoc coordinated by the CRANA was in charge of executing the program, counting on the support of a group of experts (academia, environmental and socio-economic NGOs, Association of social economy, and the Navarre Employment Service).

A steering committee made up of 18 high ranking representatives of the regional administration[43] provided direction, supervision and control to the project; and a wide group of social agents constituted an interdisciplinary consulting group intervening in the participatory process.

The main goals of this program were:

1. To apply public policies favouring the integration of CSR in enterprises.
2. Development and implementation of CSR in public administrations
3. Promotion of CSR in other organizations,

[43] General Directorate of the Presidency, General Directorate of Civil Service, Navarre Institute for Public Administration, Navarre Tax Department, General Directorate of Budgets and Intervention, General Directorate of Heritage, Immigration Office, General Directorate for Local Administrations, General Directorate of Organization, Quality and Innovation, Navarre Institute of Occupational Health, General Directorate of Environment and Water, General Directorate of Rural Development, General Directorate of Social Affairs and Development Cooperation, General Directorate of Family and Children Affairs, Navarre Institute for Equality, General Directorate for Labor and Risk Prevention, General Directorate of Enterprises, and the Navarre Employment Service (RSC Navarra, 2009).

4. Coordination, leverage, follow up and evaluation of the Program (Gobierno de Navarra, 2008).

In the framework of the first goal, operational objectives were defined, articulated through the design of a management system for implementing ESR at the enterprise level: **InnovaRSE.** It is interesting to note that the name of the program immediately reflects the willingness to speak in a language attractive to the business sector and its linkages with the ongoing program Enterprise-Environment previously studied.

The management system InnovaRSE involved not only the development of a methodology adapted to the particular needs of the Navarre business landscape, (mostly small and medium enterprises), but also providing financial and technical support in order to enable the active participation of enterprises in the implementation phase.

It should be stressed that the program defines ESR as a culture of mutual demand between businesses and society, of co-responsibility. Even if not using the ADI framework language, some of the key actors have expressed during the interviews the conception of interconnection of all parts of society, including its enterprises. In other words, they seem to be aware of being part of a socio-ecological system with its distinctive characteristics, where ESR has been perceived as a practical tool to contribute to the sustainable development. On the other hand, there are also sceptics which do not perceive a connection between ESR and the performance of the firm or a real benefit for society. Furthermore, it has been observed that there is a great variety of meanings attributed to the concept, including the charity actions in certain sectors or the generation of employment as the fulfilment of the social responsibility.

The program also acknowledges the public sector duty as enabler of a conducive environment for the adoption of more socially responsible practices by business and society and it is precisely that role what it has played. The support provided by the public sector to encourage the integration of ESR in enterprises

has been essential to the implementation of the program, despite its limited extent. The fact of being predominantly SMEs was considered positive by most interviewees due to the proximity to and interaction with the natural and social environments, as well as the fact of traditionally being inclined to social responsibility.

An important part of the strategy has been the inclusion of ESR criteria in regional public procurement calls, while fiscal deductions and stimulus packages were identified and put in place to leverage concrete actions. The fiscal autonomy that Navarra enjoys have made possible this strategy which represents an incentive for SME.

The Management System InnovaRSE is based on a continuous improvement perspective, fostering a gradual integration of innovation, transparency, the multi-dimensionality of sustainability, social dialogue with stakeholders´[44] and ethical principles in business practices. It aims at a higher entailment enterprise-community. It embraces the GRI criteria and Global Compact principles, adapting them to the regional context with the aim of fostering the competitiveness of the business sector through efficiency and differentiation.

The methodology to apply the management system was elaborated by a plural group of professionals and conceived as an operational tool to systematically integrate sustainability into business but also as a support and assistance mechanism, bearing in mind that the productive landscape of Navarra is mostly made of SMEs.

It comprises three phases: the elaboration of an initial diagnosis of the enterprise in terms of ESR; the definition of a Plan of Action in order to advance in its integration into the daily activities of the firm; and the implementation phase.

[44] Stakeholder is a term that refers to the groups to whom management need to be responsible, which E. Merrick Dodd identified as shareholders, employees, customers and the general public. Robert Wood Johnson includes in this list managers too. However, most literature points to Edward R. Freeman as having coined the term in 1984 (Mackey, 2006).

A further aspect of the methodology has to do with transparency, the Sustainability Memoir that enterprises implementing the system commit to publish regularly.

The methodology highlights the importance of the business owners and top manager's commitment as a requirement for initiating the process, being as it is a strategic issue. The role of the stakeholders is also underlined and should be defined as the very beginning. Actions always should take into account the opinion and expectations of stakeholders, which include: clients and consumers, employees, suppliers, shareholders, community and future generations.

The **basic principles of ESR** established by the methodology are stated in the form of a Decalogue for each dimension of the sustainability. They are presented in the following table as it is considered important in order to appreciate the scope of the system. It lets the entrepreneur know that the level playing field in all three areas is established by the legislation but that there are further steps to be taken. Anyhow, these areas are just an orientation on what could be done and the firm selects the areas where it plans to improve. The methodology suggests to select a maximum of 21 areas among the 30 indicated, but the balance between areas is up to the top management to be decided.

Table 6. Decalogue of ESR principles as defined by the methodology InnovaRSE.

DE1	Compliance with legal and fiscal obligations
DE2	Establishing and applying good governance and transparency criteria
DE3	Salary remuneration policy
DE4	Control over the financial operations and responsible selection of banking institutions
DE5	Investment planning, evaluation and control on investment return
DE6	Benefit distribution policy which takes into account the enterprise future (reinvestment, R&D, etc.) as well as shareholders, workers, and social responsibility.
DE7	Management of production cost and implements improvement measures.
DE8	Type-approval system for suppliers which includes ESR.
DE9	Pre-established and up-dated payment conditions to providers.

DE10	Compliance with payment conditions to providers.
DA1	Environmental policy and declaration of intent on the environment known by all stakeholders
DA2	Existence of an environmental management system with objectives and goals.
DA3	Monitoring and control of energy, water, and fuel consumption with reduction objectives.
DA4	Compliance with waste legislation and improvement objectives.
DA5	Compliance with identification and control of industrial effluents and minimization strategies.
DA6	Compliance with emissions legislation, monitoring, control and reduction objectives.
DA7	Compliance with noise pollution legislation and evidences of improvement measures.
DA8	Compliance with packaging legislation and reduction measures.
DA9	Training activities on environmental issues across all employees and management levels.
DA10	National or International environmental certification
DS1	Occupational safety and health policy with preventive objectives and goals.
DS2	Risk Assessments carried out regularly
DS3	Definition of the strategic plan through a participatory system
DS4	Gender Equality Plan, including training, language, recruitment policies
DS5	Active recruitment policy for most disadvantaged groups and those at risk of social exclusion
DS6	Conciliation of working and family life
DS7	Managing system for complaints, grievances and suggestion
DS8	Code of professional practices or services, a matter of public domain
DS9	Systematic identification of entities to collaborate with on social projects
DS10	Giving priority to local suppliers

Adapted from Gobierno de Navarra/CRANA, 2011 and Gobierno de Navarra, 2012

According to what has been found in the documentation as well as what has been expressed during the interviews by actors involved in its design, the InnovaRSE system has been conceived not as another burden for enterprises but as a way of supporting their planning and management.

To encourage the integration of ESR principles the administration has allocated technical and financial resources to ensure their implementation. The execution of the program involved an assessment of the situation at the enterprise level, a plan to integrate the principles and monitoring and evaluation on the bases of continuous improvement. It has involved the acknowledgment of previous experiences and practices already in motion at enterprises as well as the promotion of ESR across all sectors of the society. The next level was to conform the Network InnovaRSE to exchange experiences and foster the implementation of ESR.

The program contemplated to train private consultants and accredit them to implement such a methodology in companies. These trainings have been offered annually, since the approval of the program in 2008. As part of the participant observation method used for this research, the candidate has attended the latest edition of the program thanks to the receptivity of the organizers (taking into account the academic purpose of the attendance). This has allowed to better understand the system as well as interact with the participating consultants. Such an opportunity allowed to confirm the satisfaction among consultants for the continuous support, particularly bearing in mind the budgetary restrictions.

The budget line allocated covered 100% of the cost of carrying out the audits or diagnosis, the plans of action and the Memoirs included in the InnovaRSE methodology. In order for a company to benefit from the public funding it has to have at least 5 employees and be both up-to- date with their social and fiscal obligations.

Besides, such a funding has also allowed for carrying out information and training activities, offered to employees and workers. The complete InnovaRSE system and its methodology have been published, as well as guidelines for each of the components, all available in print and online, plus a video on ESR for SME and other outreach materials.

In order to select the enterprises which will benefit from the financial support, a public call, focused on enterprises with more than 5 employees, is issued annually. It is conceived to provide technical assistance to implement the system step by step. Yet, enterprises not having been granted the financial support can also implement the methodology with the assistance of those credited consultants and get certified. In that case, they have to follow the procedure established by the administration.

Such a certification allows to use the InnovaRSE seal, which has been created for the administration to certify the implementation of the management system by the firm. The seal has different colours according to the phase completed: diagnosis, implementation of the action plan, or improvement cycle (CRANA, 2011).

Given the fact that the balance of the implementation of the management system relies on the choice made by the decision-making level of the firm, the candidate inquired on the motivation to include certain social aspects. The experience shows preference for occupational safety, risk assessment, and local suppliers. According to some interviewees, even if enterprises understand the general relevance of ESR, and are ready to implement environmental, economic and social criteria, they have not been so particularly keen in the gender aspect. A consideration which contrasts with the active public policy in gender equality of the Navarre government.

In this respect it is important to outline that the regional administration has been working on the subject for a long time now, acknowledging that even if women have been progressively accessing to different social spheres (educative, labour, participation) there are obstacles and difficulties to do it in equal conditions to men. Therefore addressing this situation has been part of the Navarre political agenda since in 1995, and actions have been systematized by the Equality Plan 2006-2010. It allocated a budget, structured an institutional arrangement to executed and established annual action plans which included interventions specifically for the labour market.

In 2007, the enactment of the Spanish Equality Law contributed to strengthen the initiatives carried out by the regional administration. Nevertheless, the Equality Plans (EP) established in the law are compulsory just for enterprises with more than 250 employees and not to SMEs. In other words just 0.18% of the enterprises in Navarra are obliged to adopt an Equality Plan.

Thereafter, the Navarre Institute for Equality (INI) embarked in a participatory process to design a specially tailored methodology to integrate equality principles in the Navarre enterprises on voluntary basis. It also involves a guidance and support system, looking for continuous improvement and counting on the collaboration of consultancies specially trained and accredited in the methodology to guide the implementation step by step. It starts by a preparatory phase, to continue with a diagnosis, the elaboration of a plan of action, the implementation and follow up, and, finally the evaluation. It is worth noting that the system acknowledges the existing resistances to fully integrate equality in enterprises (INI, 2010). As we can observe, the procedure is very similar to the InnovaRSE management system.

Some of the affirmations by interviewees reveal the difficulties in gender mainstreaming:

- Even if Equality Plans were voluntary, “they have been adopted while enterprises received the public funding” (initially 100% of the cost, then a reduced percentage). At the beginning 20-25 enterprises a year during 2007, 2008, 2009; then the quantity was reduced and now “it is very seldom that a Navarre company hires a consultant for an Equality Plan”.
- “There is no real interest in the gender issue”. At the beginning, besides the regional funding, the stimulus was to be better qualify for public procurement or European projects.
- “Not even women at enterprises would have interest in this issue”.
- “Many women in enterprises even reject to be associated with gender issues or positive discrimination” although in the case of

mothers “they are satisfied with the maternity leaves, paid breast-feeding brakes and life-balance practices”.

- Notwithstanding the satisfaction expressed by entrepreneurs for working with women in terms of commitment, they do not perceive the economic benefit for their enterprise of an equality policy.

On the other hand, it is important to recall, that -in 2005- a plural group (business, trade unions, public sector) has fostered a project for the enhancement of the management systems and management capacities in SMEs, which included as one of its actions the integration of safety concerns, environmental concerns and gender concerns in one “point” or responsible person: **Ecological, Safety, and Equality Points**. The unions were very much involved in this project financed jointly by the Government of Navarra and the Social European Fund. They developed further educational material and gave training to trade union´s delegate in enterprises to get acquainted with the three areas to contribute to their integration in the daily activities of the company. Unfortunately, the interviewees have confirmed that the activities in this regard have not been encouraged further since the crises broke up.

With regard to the appreciation of the integral management system, the CRANA carried out a perception study in 2010, collecting data among enterprises. Their finding have been encouraging for the actors involved in this program as expressed during the interviews. It confirms their high level of satisfaction with the methodology as well as a willingness to continue integrating ESR in their management.

It is worth noting that the perception study included some questions with the aim of knowing if entrepreneurs had internalized the multidimensional approach that ESR implies, and their convictions on the benefits derived from it. Environment was identified as the area where more work have been done and needs to be done, which requires external support due to the technicalities and investments implications. The replies shown particular interest in getting the financial support the Navarre government grants for carrying out those

investments. Respondents also considered they needed even more information regarding the mechanisms of the program (CRANA, 2010)

On these bases the program has been recurrently extended until 2014, when a new enhanced program was approved. The general conviction is that the program is needed to continue integrating ESR in the regional enterprises, while the fact that the budget remained the same for a number of years revealed the financial difficulties of the regional administration. Other opinions pointed to the need for a deeper understanding of ESR from a business strategy point of view.

The conception of the new official ESR program is similar to the previous one, though it stresses the need to enhance social responsibility not only in enterprises but public and nongovernmental organizations as well. Another aspect which is contemplated is the encouragement of voluntary commitments. Therefore the program has been entitled II General Program to incentivize, promote and leverage Social Responsibility in Navarra, Horizon 2020 (not ESR). It also takes into account the changes in the GRI guidelines, as the value chain, human rights, ethics, and labour practices (Gobierno de Navarra, 2014).

It is interesting to note that the key actors involved in this case (see Figure 15) have acknowledged the fact that the voluntary character of CSR has been questioned but there are different views with regard to making it compulsory or not. An issue that has gained renewed interest since public break of the Volkswagen (VW) scandal. In this regard, it is important to recall that the VW[45] productive plant has a very important knock-on effect on the rest of the Navarre economy. It has also influenced environmental standards of their providers,

[45] The Pamplona plant was founded in 1965 and started producing car 1966. It was in 1984 when the Polo started being manufactured. Currently the factory gives employment to over 4200 people. About 305.700 vehicles had been produced by the end of December 2014. In addition to passenger cars, engines are also produced at Pamplona. 93% of the production is exported.

which had been positively valued. The number of ISO14000 certified enterprises in Navarra has to do with the requirement to be a provider of VW.

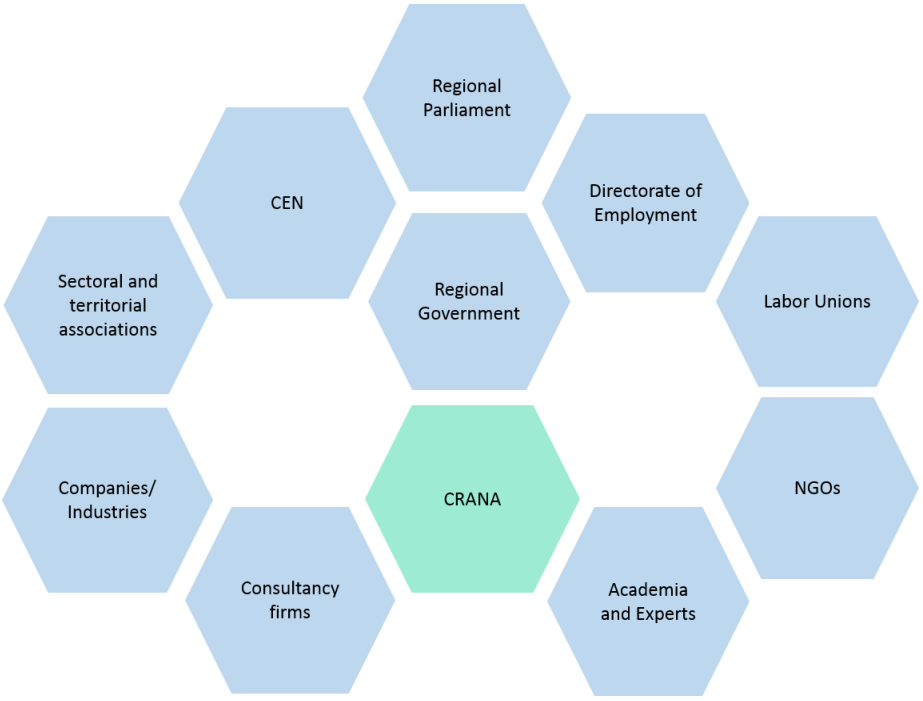


Figure15. Mapping of actors involved in the ESR strategy
Own elaboration

VW was one of the first companies to implement CSR practices in the region, concerned as they were with how the society perceived its activities. It built a traffic education park for the community and has been promoting its image as a sustainability committed corporation. In the frame of its "Think Blue Factory" initiative, the Volkswagen brand had announced that by 2018, the aim was to reduce the environmental impact of all Volkswagen plants by 25 percent. This means 25 percent lower energy and water consumption, waste volumes and emissions at all plants.

Since the revelation that the firm had been installing a complex software in some of its diesel cars, since 2009, to avoid a significant investment to comply

with the USA Clean Air Act[46], a great concern in the Navarre public opinion is tangible. The immediate plummeting of the VW shares due to the scandal and the fallout of its reputation has caused extended worries. The administration, workers and the society in general, aware of the economic impact of this plant in the region, keep on monitoring the situation for the consequences it could have in term of its planned investments, which are to be reviewed.

Beyond the justified concern, key actors in the field of ESR consider that the economic impact VW has suffered due to this scandal prove the relevance of a real mainstreaming of the ESR principles in the firm. Monitoring and control is also an issue of debate.

6.4 Assessment

The ESR Program **is the result of a participatory process** which built a consensus on the relevance of carrying out such a strategy. It has involved all sectors of the society counting on the **leading role of the government.**

The political commitment consecrated by the Parliament in 2007 was a point of departure which legitimizes the strategy to deploy **collective action** to design an ESR program adapted to the conditions of the Navarre business sector. Some interesting testimonies of people from outside the public administration indicate that the perception was that ESR was not only an issue relevant to enterprises, but to the whole society and its institutions, which gives strength to the program.

[46] The software allows the diesel engine of their vehicles to sense when being tested for emissions and then retain nitrogen oxide emissions (NOX), since the technology had not been updated to reduce those emissions to the levels marked by the USA Clean Air Act. (Diario de Navarra, September 2015)

The process **was influenced by the evolution of the ESR in the country as well as in the European and international framework,** as it has been acknowledged in the official documents of the system.

Thanks to the interviews and the participant observation, it has been possible to confirm the appreciation given by the documental review with regard to the great **relevance of the Directorate of Employment (General Directorate of Innovation, Enterprise and Labour) and the CRANA in leading** and coordinating not only the technical work but also contributing to the consensus building process.

Those two entities represented important aspects of the sustainable development concept, as CRANA is a division of the Environmental Directorate and the General Directorate of Innovation, Enterprise and Labour/ Directorate of Employment is concern socio-economic issues. Notwithstanding their **political relevance in terms of command and control power**, from an institutional point of view, it is also noticeable that beyond their roles, their personal capacities had a great influence in the evolution of the program. Participant observation has allowed to testify their **vision** and **conviction** as well as **professional commitment**. All of them with a comprehensive understanding of sustainability, some of them more sensible than others to the gender perspective though.

CRANA deserves a particular mention since it was a public institution which was born in 2003 with the main purpose of building up an environmental culture and contribute to achieve sustainable development for the Navarre society. This initiative demonstrate what is stated in their documents, their willingness to turn ideas into projects, and to carry out initiatives favouring the transformation sustainability implies. Therefore, assuming the responsibility of boosting this new initiative was perceived as a natural pathway, it represented continuity. Even if the CRANA has disappeared and that the government has changed, some of the executing actors continue to be the same in their personal capacities as freelancers.

- The program has derived in the **implementation** of a set of actions which have **increased the integration of ESR** by small and medium enterprises in the region, **encouraged by the incentives.** The main goal has been **to boost the competitiveness** of Navarre enterprises, assuming as a principle that the integration of social, environmental aspects in the strategic management of the enterprise contributes to better positioning them at a global markets. It has been inspired in the EFQM model, providing a framework which **encourages continuous improvement.** However, part of the business sector do not realize the connection between ESR and competitiveness or financial performance of the firm, which is the primary concern, particularly in the current context. Additionally, some people remain sceptics with regard to the real impact of the actions carried out in the framework of this strategy, and the willingness of the administration to decisively promote ESR in the region more than a talk once in a while.

With the introduction of the principles of Circular Economy in the region **the ESR program would have to adapt itself to the industrial and systemic transformation it implies**, **particularly in terms of the responsibility of the firm.** Creating Shared Value´ would be a concept better suited to circular economy as it points towards the need to address societal needs and challenges with new business models; caring for the wellbeing of their customers and the communities in which they produce, the depletion of natural resources vital to their business, the viability of integrating suppliers in their strategy, etc. Still, it would probably be better to keep the name ESR although the content varies in order not to generate more resistances.

6.5 Enablers

A crucial factor to boost this initiative was the **clear political mandate** by the political forces represented at the Parliament demanding the government to design an ESR strategy and allocate the necessary resources (financial, humans,

technical, administrative, etc.) to make it real, even if the scope of the actions carried out is limited.

The process of elaboration of this program was been based on a **participatory methodology** which proved to be highly valued and legitimated the initiative, which was the first program of its kind involving all stakeholders across the territory of the Charter Community of Navarra.

The leading role of the government which has deployed the necessary resources to carry out a **flexible program tailored to the particular needs of the productive sector** of the province. Those needs were identified during the participatory process, which fostered debate and participation as well as an enriching framework of learning. This has been favoured by the fact that CRANA, one of the key institutions involved in the execution of the program, had **previous experience in dealing with participatory processes** as it has been pointed out before.

By virtue of **meeting the coordination challenge** it involved, the program and the team which has executed it gain great respect. Coordinating multiple departments of the regional government, which used to work independently, was fundamental **to capture the ESR cross-sectoral character and translate it into a cross-sectoral plan; which -on the other hand- counted on an operational agency subject to a governmental and political control system.** These three aspects have been essential in this inter-organizational processes of change and innovation which has led to the achievement of the goals.

The coordination challenge has transcended the public sphere, considering it has to deal with different types of organizations (hierarchical and non-hierarchical), the diversity of interests, capacity and activity of a plural group intervening in the participatory process. Therefore, **to know and understand the functioning and institutional dynamics have been fundamental.**

Particular relevance has had **the public private partnership or collaboration**. The entrepreneurs have not just been receiving inputs from the

public sector but also developing their own skills. Obviously, according to the conditions of the company and the strategic view of its management.

The institutional arrangement set up to execute the program has counted on **highly qualify human resources.** They have gather a team of experts with comprehensive understanding of sustainable development as well as knowledge of their territory, society, culture, values, institutions and levers. Specific knowledge on ESR in addition to knowledge on a series of factors involved in the task of planning, education

Likewise, a deep **the knowledge of the society, its culture, core values and change levers** has been an essential fact for conducting the whole process and generating a broad consensus. This is something the leading institutions were well aware of and encouraged to generate positive synergies.

To build on previous actions which had not been identified as ESR before has been a good strategy. The coordinators were aware that ESR required a mind shift in terms of the key issue of integrated conception but valued those earlier steps as a way to demonstrate their capacity to face the challenge.

Financial rewards for compliance with ESR not only by directly covering the cost of a private consultant accredited by the administration but also valuing the integration of ESR by enterprises in public procurement conditions, for instance, has resulted in an incentive to participate.

Besides, the **involvement of private consultants has turned them into allies of the ESR strategy**. The marketing of this new service spreads information and awareness among entrepreneurs which might not have been reached or convinced otherwise. Additionally, it has resulted in an invigoration of the sector as the accreditation process allows not only the possibility of participating in the program but also adds a new service they can offer to other clients.

The **stability** provided by the renewal of the program as well as the team in charge of its execution until 2015, has been considered important to ensure

the allocation of financial and human resources needed. A fact particularly relevant to the Navarre society which is now uncertain due to the change of government.

Communication skills have been crucial to the achievement of objectives. They have help to convey the strategical importance of CSR with regard to the development in accordance to their social pact, while contributing to improve the competitive advantage of the companies.

Giving ESR a permanent and central position in the decision-making processes of private firms and its relations with all stakeholders, have created a space for dialogue and negotiation among all actors, which in turns improves the opportunities to enhance the managerial capacities to integrate social, environmental and social considerations into the daily activities of the firm. Nevertheless, there are contrasting visions, either with regard to the real social impact of the program or because it is perceived as a loss of resources which do not translate into tangible results for the firms.

Besides the uncertainty with regard to the change of government as well as the recent interest in the circular economy principles represent challenges for the redefinition of this strategy.

7 THE PROGRAM ENTERPRISE-ENVIRONMENT, A PUBLIC –PRIVATE PARTENERSHIP MOVING TOWARDS CIRCULAR ECONOMY

7.1 Rationale

The protection and regeneration of our environment constitutes nowadays a societal concern, as we have argued in the theoretical framework. The relevance of the services and resources provided by ecosystems is increasingly being acknowledged while the disturbances generated by the human activities are making evident the risks for humans and nature, as well as for the economy. Many voices have claimed that we need to embrace the principles of sustainable development in order to meet the challenges and build the resilience nature and society need to adapt to the changes being registered and the ones that may come.

International consensus building processes as well the national and local ones have allowed the approval of global strategies to implement the principles of sustainable development in all areas of our activities. Nevertheless, there is a long way to go in all dimensions of sustainability, but particularly in production and consumption patterns. The bridge that connects those global strategies to the origin of the problems is built by a wide variety of local strategies, rules, norms, and actions. Some more systematic and articulated than others.

In this case the focus is on the public-private partnership established to carry on such a task at a level of the autonomous province of Navarra. This strategy is framed by legal regulations (international, European, national and local) which have been enacted to reduce, monitor, and control the environmental impact of industrial activities. In this regard, it should be taken into

account that the Spanish environmental legal framework encompasses a series of laws addressing both, the industrial activities in general and certain contaminants agents in particular. Most of this framework has been developed since Spain joint the European Union. Autonomous regions have transposed those regulations to their own legal jurisdictions. Consequently, Navarra has been developing its environmental legal framework accordingly.

On the other hand, a set of management systems, techniques and tools have been developed and implemented in order to cope with environmental "externalities" as it has been assumed. This approach, known as `ecological modernization´ is the one that European Union Member Countries have chosen; deploying important efforts in terms of policies, programs, standards, training and financial support to favour the implementation of those mechanisms at national and local scales. It has also represented the core of its position at international environmental fora, as it has been mentioned in the Theoretical Framework.

Ecological modernization has favoured the reduction of environmental impacts, increased eco-efficiency, and promoted eco-innovation. Nonetheless, the challenge to uncouple the production process from environmental degradation reveals the need to go beyond and take advantage of technologies as well as traditional wisdom, management tools and the creative talent of innovators to drastically transform production processes.

Furthermore, the mounting scarcity of some raw materials, the volatility of energy prices and the expectation of further increases in the demand of resources and energy due to the growing middle class in emerging economies like China and India, are causing concern. The European Union has acknowledged that the growth that the region has enjoyed so far has been based on the intensive use of resources. In this context, it is essential to create a policy framework to ensure that natural resources are used efficiently and respect planetary boundaries. Therefore, the EC has approved a Resource Efficiency Flagship Initiative.

Besides, new approaches have been emerging in recent decades stressing the need to take into account the functioning of ecosystems in order to meet the challenge. As it has been exposed, Ecological Economics, some streams of Green Economy, Industrial Ecology, Blue Economy, Climate Economy, and Circular Economy among others, are introducing new considerations which change the way of conceiving industrial processes. The European Commission has approved a Roadmap to move towards Circular Economy (see Annex 4) which has generated great expectations regarding the growth opportunities for businesses, while creating shared value, as people and the environment would benefit from it.

Some autonomous regions of Spain have also been interested in this proposal, in particular, the Basque Provinces, Catalonia, and Navarra; and there is a private foundation promoting Circular Economy at the national level. Programs in the Basque Province and Catalonia are already being executed. The issue is now part of the agenda of a joint program that the provincial government and the Navarre Entrepreneurs Confederation (CEN) has been developing to improve the environmental performance of the industrial sector.

This case study focuses precisely on this program. It had already been identified as potentially interesting during the documentation review, even if it does not involve a holistic conception of sustainability. The official websites of the regional government allowed to get information with regard to the basics of the program and the actors involved, getting a first impression of the partnership established. Then, a progressive involvement in public activities related to the topic was carried out, along with interviews to key actors of the program. This gave the opportunity to establish not only a fluid communication with them but to develop further participant observation, thanks to their receptivity. It has allowed the candidate to be present at events, gathering, visits to Universities, informal conversations which have served to collect data, opinions, and impressions regarding the functioning and content of the program as well as complains and expectations from different actors.

7.2 The context

An important part of society continues to relate environmental performance and innovation with big enterprises or corporations with capacity to invest resources on these aspects of their business. On the contrary, Small and Medium Enterprises (SME) have, in general, an image of tradition and change aversion. This cliché is reinforced in the case of Navarra, not only because its entrepreneurial landscape is conformed mainly by this type of enterprises but its society is also considered very much attached to its traditions.

Nevertheless, as it has been pointed out before, the Navarre society has undergone a profound transformation very much linked to the change of its economy, positioning the region among the most innovative ones in the country, as it has been mentioned above. Notwithstanding, a sector of the society continues to be very attached to their traditions and resist change, preferring “the way things have always been done”. Most SME do have difficulties to access certain models and management tools that could help them improve their environmental performance. Aware of this reality and its role in promoting an enhancement of the productive capacity of the region, the government launched in 2004 a collaborative action with the private sector to support SME in their way towards sustainability.

Besides, the Technological Plan of Navarra 2004-2007 established sustainable development as one its strategic areas, including: clean energy, energy efficiency, clean processes, waste management and eco-design. The following plan structured a wide variety of interventions, involving -among other issues- eco-innovation, energy and climate change.

7.3 The Enterprise-Environment Program (EEP)

The Entrepreneurs Confederation Navarra (CEN) and the Directorate of Rural Development and Environment (DRDE) of the Navarra Government signed a collaboration agreement in 2005, whereby the Enterprise-Environment Program (EEP) was set up. The agreement was also signed by the labour unions. The presence of the administration, the business sector and the unions has been highlighted by the interviewees as being essential for the program which was part of the `social pact´ underlying all initiatives of this kind in Navarra. <according to their opinion, it is this consensus among social, economic entities and political forces which explains the prevalence of a balanced approach in most policies carried out in the Province and the quality of life and public services which the population enjoy and have been proud of. At the same time, they acknowledge a deterioration in the quality or quantity of those services.

Since the signature of the agreement, the Navarra Centre for Environmental Resources/CRANA (an agency of the Directorate of Rural Development and Environment/DRDE) was appointed to execute the program, involving also the Directorate of Innovation, Enterprise and Employment, the Foundation Biodiversity, sub-regional associations of entrepreneurs, sectoral associations and other public and private entities. Subsequent agreements between the CEN and the DRDE have been signed every year until 2015, contributing to strengthening the public-private collaboration. Financial resources have been allocated by the government to support the execution of the program, besides providing the technical support through their officers and external consultants and experts.

The objective of the PEE has been to improve the environmental performance of the Navarra enterprises, particularly SME. It has been developed around thematic and methodological axes, as explained by the CRANA. On the thematic axe, the key issue has been the integration of environmental aspects in

the enterprise strategic vision and management. On the methodological part, the program develops four streams:

1. Customized advice on environmental management through specific methodologies
2. Training activities to raise awareness and provide information on environmental aspects
3. Communication and outreach initiatives to disseminate the need of a shared responsibility assumption in environmental issues as well as the key role played by enterprises.
4. The articulation of participatory spaces and networking to allow those joint efforts to generate synergies and share information and learning experiences.

The program pursues, in the medium term, the enhancement of the Navarre entrepreneurial sector, enabling SME to become pioneers in eco-innovation and sustainable competitiveness, going beyond legal compliance to meet societal aspirations.

With this aim, CRANA has been developing activities such as environmental awareness, environmental audits, improvement plans, ad hoc methodologies adapted at the particular needs of the Navarre SME, consultant certification program, workers training, etc. The whole conception of the program was explained by one of the key actors interviewed as a sort of stairway that would lead to environmental excellence (see Figure 16). A vision that somehow relates to the Environmental Maturity Model later proposed by Ormazabal[47] which can be appreciated in Annex 5. The path followed by the companies in the framework of this program has been designed as one of constant improvement,

[47] The Environmental Management Model proposed by Ormazabal (2013) comprehends six maturity stages: Fulfilment of Legal Requirements, Responsibility Assignment and Training personnel, Systematization of environmental management, ECO2 or eco-efficiency, Eco-Innovative Products and Services and Leading Green Company.

inspired in the European Foundation of Quality Management (EFQM) excellence model.

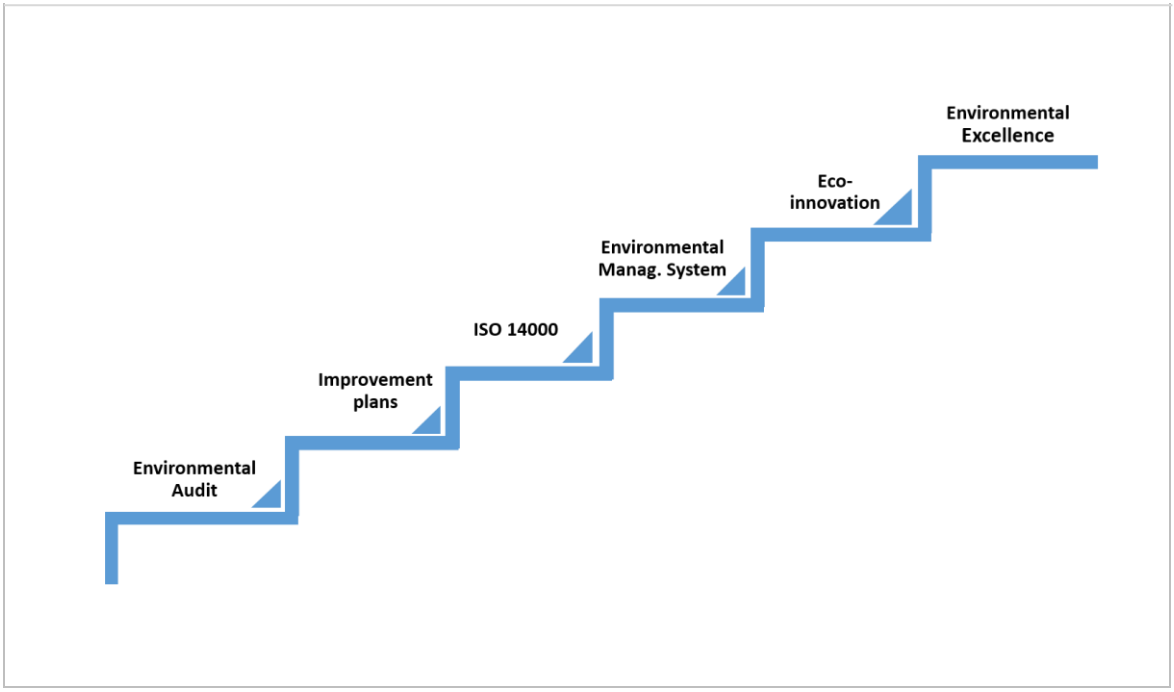


Figure16. Pathway to Environmental Excellence at its conception (2005
Own elaboration on the bases of the interview with former CRANA representative

The EEP starts by an environmental audit to assess the particular situation of the enterprise in terms of its environmental performance and the compliance with the corresponding environmental law and regulations. As a result of this audit areas of possible improvement are identified, leading to the next stage, the elaboration and implementation of an action plan to accomplish such improvement. Subsequent improvements would lead to the following stages, enhancing their performance, and finally to environmental excellence. Therefore, the program reflects the approach of ecological modernization previously mentioned.

The team in charge of the technical part of the program have put special care in the adaptation of specific methodologies for the integration of

environmental actions in SME, something which has been considered critical to favour the advancement of enterprises in this path. Thus, one of the first steps taken was to study the methodologies being used, counting on the advice of experts in the area, develop the adapted methodology and to publish it so it could be accessible by all interested actors.

Once the content was mastered, the next step was to train private consultants to implement the methodologies in all its phases at the enterprises getting the public funding as well as any other interested firm. Every year, this training is offered by the CRANA team to new consultancy companies, and those accredited consultants assist enterprises in the process of participating in the public call for getting the grants that will cover the cost of the implementation of one of the phases of the program. They could offer their services to other enterprises as well.

Therefore, the funding of the government has allowed to cover the cost of going through all stages, from developing the methodology, and training and accreditation of consultants, to implementation of the methodology through carrying out the audits and improvement plans. It has also paid for the execution of educational programs focused on workers and employees, the dissemination of information and advice on the benefits derived from embarking on this path towards environmental excellence, the technical assistance from the CRANA, the publication of outreach material, and the facilitation of experience sharing and networking.

Key actors have confirmed that since the inception of the EEP, it was clear that working on the continuous improvement of the enterprises environmental performance would imply a challenge. To go beyond legal compliance to the implementation of an environmental management system could help entrepreneurs deal with their environmental impacts in a systematized, effective and efficient way. Yet, it requires knowledge about those tools, while entailing a change in the organization, since it has to involve the

strategic vision of the firm. It means that the management and the employees should overcome resistances, and realize its potential benefits.

The execution of the program has proved what had also been envisaged, that to go beyond legal requirements would require further investments and incentives. The EEP encourages firms to continue with the constant improvement process, which in turn leads to realize that it is necessary to innovate in order to decouple the increase of production from the environmental impact. Eco-innovation[48] has thus become an area to which the program has devoted a lot of efforts and some consultancies have specialized in the funding opportunities for innovation, inside and outside the country.

Through its own communication channels as well as the magazines and outreach activities of the business sector, the CRANA has stressed that eco-innovation can help enterprises by:

- Improving their environmental performance and resource-use efficiency.
- Reducing cost related to pollution control and waste management.
- Reducing risks related to non-compliance with the environmental law.
- Introducing new products or services as a result of new design, planning or production processes.
- Enhancing differentiation and the relationship with stakeholders.

It is worth noting that, few years after the implementation of the EEP, the Government of Navarra approved the Program to Encourage, Promote and Leverage Corporate Social Responsibility (CSR) for the period 2008-2010 as a result of a Parliamentary motion. It involves the same key actors already taking part of the EEP (Directorate of Innovation, Enterprise and Labour, and the

[48] Eco-innovation as a wide concept which includes process and outcomes derived from introducing new elements to the planning, management, production and commercialization, which besides creating value, contribute to a more sustainable relation with the environment (Gobierno de Navarra/CRANA, 2011)

CRANA, in addition to others participating in the multi-stakeholder consultation) and obviously the compatibility and potential synergies between those two programs was realized (according to what interviewees have expressed) but the independency of the two programs was kept, conducting them in parallel. For the executors, this decision was considered particularly important in terms of accountability of the resources allocated to each program.

Nevertheless, in the framework of EEP assessments or in the work carried out by consultants (as some of them expressed during the interviews) ESR practices have been included considering them related to this path towards environmental excellence. Some of the interviewees even considered ESR as an intermediate stage in this path or at least generating synergies which revealed the importance of all stakeholders. One aspect that has been highlighted is the need to inspire and train employees in order to ensure taking some measures or executing certain practices. In any case, it has also been pointed out that the very fact that the EEP involves training activities has enhanced the management and workers technical capacities.

Notwithstanding the difficulties associated with evaluating the results of a program such as the EEP in the short term, the CRANA carried out an assessment in 2010. It showed that more than 500 SME had benefit from it, initiating an environmental commitment or implementing an ESR policy. Most of companies have completed the first stage only (the environmental audit or diagnosis), while over 100 enterprises have also designed action plans for improving their environmental or ESR performance. As we can appreciate, in practice the connection between the two initiatives has been established.

It was also outlined by the study, that the EEP has engaged enterprises from all over the province and across all subsectors. The analysis of the 45 enterprises that had undertaken the audit as well as the improvement plan evidenced further complexities with regard to comparability of data, due to the different sectors involved, size of enterprises, location, environmental impact, etc.

However, some interesting conclusions were drawn from this analysis, shedding some light on the results of the EEP:

- 31% of the enterprises has improved their hazardous waste management.
- 33% of the enterprises had improved their management of chemical products.
- 20% of the enterprises had got the ISO14001 certification or were in the process to acquire it.
- 20% of the enterprises had implemented different environmental procedures.
- The total investment that those actions have implied amounts to 325.000 euros (a good proportion targeting prevention and reduction of dumping or effluents).
- A significant advancement in training and capacity building of employees and workers in the different aspects of environmental management (waste, dumping, effluents, emissions, hazardous substances, noise, packaging, licenses, etc.).
- Adaptation to the emission control legal norms (CRANA, 2011).

The analysis revealed the need to continue supporting SME in their efforts to integrate environmental management, as it is a long term endeavour. Therefore, the financial and technical assistance was maintained to develop new methodologies, give visibility to enterprises committed to environmental excellence, improve training and capacity building activities, continue developing innovative initiatives and pilot projects, design new collaborative initiatives with other entities with similar goals, and exchange experiences. The educational and communicational aspects were also deemed essential, as the implementation involves a cultural change in addition to a clear commitment to promote eco-innovation. The parties agreed to uphold the agreement. A move which came with no surprise as the political setting had not changed.

On the other hand, a new work stream for this program was initiated in 2010. It took into account not only the individual environmental problems of enterprises but also the physical space they occupy and the opportunities derived from addressing those problems in the context of an industrial area as a whole. The same technical team has been in charge of this new initiative, with public support, designing a similar strategy.

A specific methodology to carry out environmental audits in industrial parks, was then designed, including:

- An environmental assessment of its enterprises
- An environmental assessment of the industrial park as a whole; and
- An analysis of the joint material and energy flows.

The implementation of this methodology would help identify synergies, so that enterprises could take advantage of joint services as well as establishing a global strategy to organize the park, favouring a more efficient use of resources and energy, while reducing environmental impacts. This initiative was funded by the government of Navarra and the European Union, in the framework of the cross-border **Eneco** project which is part of the EEP.

The environmental and energy management of SMEs and development of eco- economy for a sustainable cross-border economic development project (Eneco) was developed between 2005 and 2007. Funded fundamentally by European Regional Development Fund through the Territorial Cooperation Programme Spain -France- Andorra (POCTEFA) 2007-2013, it was executed between February 2009 and May 2011. The project was led by the CRANA and has five other co-financing partners with expertise in environmental matters as well as ability to mobilize its territory SMEs in the regions of Navarra (Laseme), La Rioja (ADER), Aragon (ECODES), as well as Aquitaine (APESA) and Midi – Pyrenees (ARPE) in France.

Through the Eneco project was possible to define a common methodology and implement it in 13 industrial parks in the territory of the

partners, which gather 740 enterprises. Among other outcomes it has been mentioned: a feasibility study on setting up an exchange stock of by-products, various knowledge products (good practices, methodology for CO_2 footprint, green procurement, etc.), seminars on eco-economy, climate change adaptation, implementation of environmental indicators, fair trade, among other activities etc.

It should be underlined that the closing conference of the project was devoted to eco-economy. It was presented as a new model based on a shared responsibility by all stakeholders wherein the enterprise -as part of a socio-economic fabric- should look for a balance in economic, social and environmental terms.

Key actors in this project were interviewed and have coincided that the results of the Eneco project confirmed their idea that networking among regions was a positive strategy to advance on this pathway, and -therefore- considered essential to continue generating stable dynamics of collaboration, even if aware of the challenging task ahead. This conviction lead the partners to embark in a second phase of the project, Eneco 2, with the aim of developing a set of tools for eco-innovation (`how to do´ and `how to improve´), especially tailored to the real needs of SME as well as enhancing the cross-border dynamics. At the same time it envisaged a process assisted technically as the previous ones, taking advantage of synergies between programs and regions. However, there are also critical voices considering that Eneco activities lack closer integration among members.

On the other hand, a second assessment of the EEP was carried out in 2012 through a survey submitted by CRANA to the enterprises having participated in any of the program activities (300) and to specific enterprises that had undertaken improvement plans (37 enterprises); which does not represent even 1% of the Navarre enterprises. Whilst, almost 10% of enterprises receive regular information on the program. It is also important to note that many enterprises follow environmental standards due to demands from their clients or in order to improve their image in national and international markets.

The results of this new assessment showed:

- a general improvement in the level of awareness of the companies regarding their environmental impact and an advancement from just legal compliance to systematization of their environmental management;
- most of the companies have stated that the program has had a medium impact on their environmental performance and would like to have further technical and financial support to improve more;
- besides, the implementation of Second Level Improvement Plans have allow to identify non-compliances with the environmental norms and reduce waste, chemical products, and effluents, among others; and
- the management of impacts have involved investments in the majority of cases.

On the other hand, the fact that the EEP has been developed as a project-based activity has enabled its insertion in European programs to get funding (such as those related to sustainability, environment, regional development, cross-border cooperation and eco-innovation).This has made possible to undertake pioneering initiatives worth more than 2.5 million euros (CRANA, 2011).

Unfortunately, the budgetary restrictions enforced during the last three years in Navarra have had a significant impact in all levels of the regional administration, being one of the consequences the disappearance of CRANA in 2013. The EEP has been preserved and continues its activities, though. This has been positively valued among entrepreneurs, consultancies, experts and NGOs, although dissenting voices do exist considering the program less relevant.

Communication and Outreach activities have been contributing to disseminate relevant information and methodologies. Besides the events

organized in the framework of the program, the technical team has been actively participating in the dissemination of the program, activities and approach not only among entrepreneurial organizations, but addressing all king of public.

An example of this are talks at the Universities, at the Museum of Environment, and even an eco-community where the candidate, thanks to the kindness of the technical team, has been present or participated. It has provided the opportunity to interact with the students and citizens attending those gatherings or events, even giving talks on related-subjects.

The political implications of the action that the technical team performs is clear. It has been observed that the skills developed by some members of the team during the participatory process of Agenda 21 are put into value holding the political balance by serving as a kind of bridge between the program, the different organizations involved and the citizens.

In terms of the private sector, the specific newsletter that the CEN had been issuing for SME has become CEN-Environment, allowing those small and medium enterprises access relevant information for their performance. More than 20 thematic guides have been published, focusing on particular good practices, best available technologies, successful cases in different sectors, etc. They also hold events thank to the technical assistance of the program.

The last one was devoted to Circular Economy, introducing its basic principles. Besides, a special seminar and a conference on the subject were held in the frame of the EEP, which have constituted “the first seed to start planting the idea” according to some of the interviewees. The fact that the European Union had already introduced the concept in the framework of its proposal on a Cero Waste Europe has been pointed out as one of the main incentives for enterprises to start looking at it as something worth at least a thought. The Confederation of entrepreneurs have been acquainted through various channels including the Spanish Confederation of Entrepreneurs.

In fact, the European Commission had published, in 2012, a document entitled Manifesto for a Resource Efficient Europe stating that in a world with growing pressures on resources and the environment, the EU has no choice but to go for a transition to resource efficient and ultimately regenerative circular economy. Furthermore, the document stressed the importance of a systemic change in the use and recovery of resource economy in ensuring future jobs and competitiveness, and outlined potential pathways to a circular economy, in innovation and investment, regulation, subsidies, opportunities for new business models, and setting clear targets.

The interest elicited by the subject has led to launching a pilot project in 2015 to identify the business opportunities that applying circular economy principles would entail for the Navarre enterprises. The EEP resources for this year are being devoted to train entrepreneurial associations in order to test a methodology developed by the University of Cambridge to identify those opportunities in 20 enterprises of different sectors. The initiative has been received with cautious interest. Some enterprises have already being identified as already applying circular economy principles, without knowing it was called that way, but due to the fact that they derive benefits from it. Nevertheless, there is still space for improvement. This is again other part of the program where the candidate has been allowed to participate as observant first and recently being more involved in the execution of the pilot project.

In addition, a symposium is being convened for the beginning of November 2015 with the participation of an Ellen MacArthur Foundation representative (the institution which has been promoting circular economy throughout the world during the last five years). The seminars would be part of the Disruptive Innovation Festival that this foundation is organizing during the first two weeks of the month (Information provided by key actors).

On the other hand, together with the partners of the Eneco project, which have been also involved in promoting circular economy in their own territories, the consortium is considering to present another joint project to get European

funding to advance on this path. Among the members of the consortium, Catalonia and the Basque provinces are already implementing circular economy actions, particularly focused on recycling though not exclusively. Aquitaine is already developing its regional strategy on circular economy launched in 2013, counting on a favourable context: political will at the highest decision making level (President of the Regional Council), enterprises working already in green growth, academic and technological research cluster already conform for eco-conception, and interest in eco-design among stakeholders.

7.4 Assessment

The documentation review as well as the interviews with key stakeholders and, above all, the participant observation strategy, have allowed to appreciate:

- The **positive perception that most actors approached** have regarding this initiative and its impact. Some of them have stressed the fact that the impact has not only been in terms of the environmental performance of the enterprises involved, but also as an example to other entrepreneurs. On the other hand, it has contributed to the invigoration of the consultancy sector, particularly during years of economic contraction. Nevertheless, the way the program has been conceived has resulted in a dependency on the consultants to select the enterprises which would be favoured by the funding the government grants. Furthermore, it is important to state that dissenting perceptions do also exist owing to the limited scope of the program and even with regard to the leading role government, questioning the real political will to boost environmental values in the region which might be boosted more efficiently by international competitiveness or procurement specific policies.

- **The EEP originates from an agreement signed by the government of Navarra, the private sector and the trade unions,** reflecting the

underlying `social pact´ which represents a corner stone in the public sector action. Nevertheless, in the design of its annual activities the trade unions have no practical involvement. **It functions as a public-private partnership, which respects labour rights.**

- The fact that this pact has been renewed annually since 2005 till today shows the **common interests**, and the level of priority given to the enhancement of the environmental performance of the regional enterprises as well as their competitiveness.

- **The role of the government and the relevance given to the initiative,** putting technical, financial and human resources in service of this program, despite its limited scope. But widening the perspective it has also been observed that there is a linkage between this small program to the more general policy of fostering innovation by supporting technological centres and universities, granting resources through other programs, as well as the modernization of the public sector and even public innovation as a process of generating new ideas and implementing them to create value for society. Various entrepreneurs have pointed out that **without financial support they could not make any further improvement** in terms of environmental performance or eco efficiency because it represented an unbearable cost for their business in these times.

- **Other actors involved have come from different sectors of society,** it can be appreciated in the following figure (Figure 17). Nevertheless their implication varies. Their participation has been observed in the first stages of the program while the impulse and execution lies fundamentally on the public sector, through the CRANA, although the Confederation of Entrepreneurs also have an active role. The steering committee which has been created to oversee the program and involves society actors has been stagnant in the last years. It is the technical team which has been keeping contact with the academia, the civil society, the unions, the media,

territorial and sectoral associations, etc. They regularly hold public events on topics related where those other actors are invited while at the same time participate in gatherings and conferences organized by those other actors, being aware of the political implication of these actions.

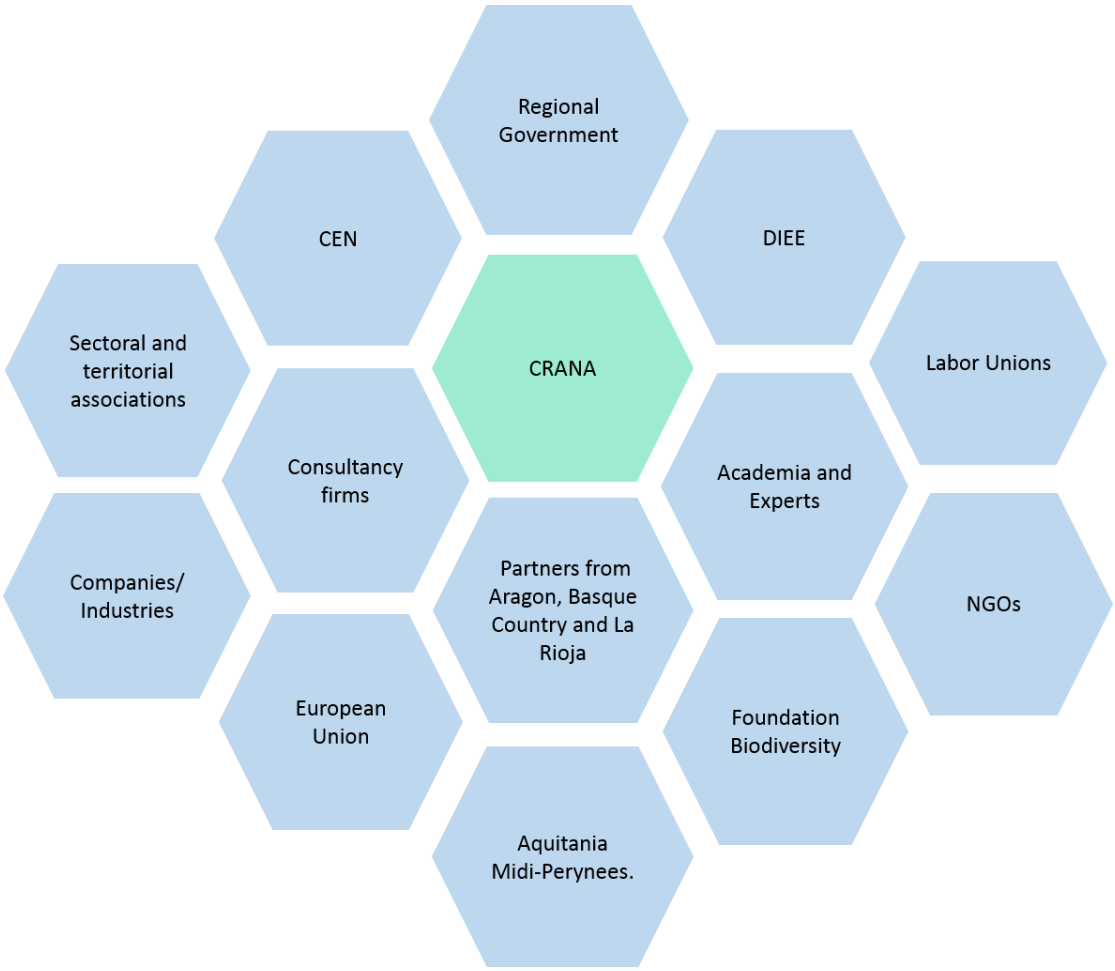


Figure17. Mapping of actors involved in the EEP
Own elaboration

- From the point of view of what has been exposed in the theoretical framework, the EEP represents an initiative that has registered an interesting evolution, as it emerged with an **ecological modernization**

character, having evolved to **explore other perspectives** such as the principles of circular economy.

- **The social character of sustainability is not part of objectives of the program but is considered to be implicit**. According to some of the people consulted, it is included in the sense that the environmental improvement of the firm would reduce **health risks for the workers**. Others consider that parallel programs, such as the CSR strategy, take care of that. Other perspective expressed mainly in the business sector was that **the State takes care of the people while companies generate employment and pay taxes and workers contribute to the welfare system through their fiscal obligations**. Some entrepreneurs expressed that "there is no better social policy that generating employment", so in their view the fact of improving the economic performance of the firm by increased competitiveness favours also society. Another group expresses that the social benefit derives from **the resulting enhancement of the environmental conditions** that benefits the population of the surrounding areas.

- The whole conception of the program has been characterized by the pursuit of **continuous improvement,** on the bases of the EFQM model, counting on the financial support of the administration as well as having access to European funding which by themselves would have been very difficult to obtain.

- The technical team which has executed the program has given great emphasis to design **tailored methodologies and tool packages**, making the task seem feasible, something reinforced with information about successful experiences to emulate. It has gone beyond general awareness on the environmental impact of economic activities to provide technical information, training and assistance to enable SMEs enhance their environmental performance as well as its competitiveness.

- As a result, **various eco-innovation projects** have been developed contributing to open up new markets for the production of those companies and enhancing the innovative character of the Province. As it has been indicated, Navarra is one of the most innovative regions of Spain. Some interviewees argued though that the innovation concept in the region was maybe too lax.
- **Some enterprises have even got encouraged to continue on this path further, without the direct support provided by the program**; exploring options and establishing contacts with technological institutions within and outside the region to look for alternative materials, processes, or solutions to reduce their environmental impact. Very active, open minded and pioneering entrepreneurs have been met, co-existing with more traditional ones attached to “the way things have always been done”.
- **The interaction with neighbouring institutions has resulted in a mutually reinforcing initiative,** allowing the members to access certain financial sources that otherwise would have been more difficult. The two joint Eneco projects have resulted in good investment flows. Currently they are in process of executing a new one to further apply circular economy principles, which denotes **interest in moving forward**. Nevertheless, there is scope for more real integration, which would need to go into technicalities as studies of value chain to identify opportunities for collaborations. Joint projects to research on new biomaterials relevant to their enterprises is just an example of synergies to be explored.
- The new pilot project to identify business opportunities introducing CE principles represents **a window towards the transformation needed** to achieve sustainable development and shows the effect of a small program which supports not even 1% of the enterprises but has contributed to disseminate an innovative culture and inspire some people to look beyond. Others considered it is the market imperative which has stimulated innovation.

- Actions related to **raising awareness, training and capacity building among entrepreneurs and workers** in order to boost the generation of a this new business culture have been considered critical by the key actors.
- With regards to **challenges**, the dependency on the team from the former CRANA is obvious. The fact that this entity has disappeared due to the financial restrictions have derived in some members of the team becoming freelancers and competing with other consultancies to continue supporting the program. It has reduced their capacity to execute some of the projects by themselves having to rely on external assistance. But **the CRANA achievements remain,** particularly the knowledge produced, the way of doing things which has been assumed by the actors involved, and the action networks established that are enriching the perspective.
- On the other hand, there are many **claims regarding the complication of the process** to select the enterprises willing to participate in the referred public call which the government issues annually for granting the funds.
- SMEs do not have to compulsory execute environmental management systems just to comply with the law so the dissemination of the practices promoted by **the program depend on the incentives granted by the government or the demands of bigger companies to their suppliers.**

7.5 Enabling factors

The key factor for this partnership is the **political commitment** expressed by the agreement signed in 2004, which has provided stability during more than 10 years and denotes commitment from the decision-making levels. This reflects the strategic vision of the actors involved to boost this **collective action initiative.**

Furthermore, the agreement between the government, the private sector and the union was signed few years after the launching of the **Local Agenda 21 process** in Navarra. Many municipalities, associations, representatives of the academia, and entrepreneurs were involved in their own participatory process to design their LA21. Therefore, there was a **high level of information regarding the links between anthropogenic activities and environmental degradation or the challenges ahead.**

In this respect, it is especially relevant to underline the involvement of **CRANA** which was also leading the LA21 process and the environmental education regional strategy, developing **important skills for consensus building processes**. On the other hand, the very creation of this agency of the Directorate of Rural Development, Environment and Local Administration has been linked to the demands of the population. The fact of having counted on a constant flow of financial resources to undertake its activity has allowed this entity to become an outstanding stakeholder in the region; which reveals the **political support sustainability has enjoyed.**

The **access to financial resources, from the government and in particular European funding** has been crucial to develop activities which foster eco-innovation making feasible for SMEs to embark in tasks which otherwise had been impossible to undertake. It has constituted the main incentive for entrepreneurs to participate in the program.

The design of the EEP has counted on **highly qualified human resources** from the CRANA, along with **the expertise and knowledge from collaborators consulted and the enriching perspective of the networks.** All this has contributed to the conception of the EEP as a progressive pathway of continuous improvement, where legal, technical and institutional aspects interact in order to achieve the desired uncoupling between economic growth and environmental degradation, from a perspective of ecological modernization. The open- mindedness of the technical team has allowed the program to evolve

towards more transformative approaches to sustainability which generate positive societal value.

The **appropriate knowledge management** have contributed to the dissemination of the information, practices, activities, and opportunities for funding which has represented an asset for SME. Furthermore, the EEP has open up doors to new economic approaches and alternative solutions to meet the challenges derived from the environmental impact of their production processes.

An aspect identified by the actors during the interviews with regard to the success of this types of initiatives in the region is the willingness of the people to participate due to the general **environmental awareness of the Navarre society.** Ecosystem services are appreciated by the population which for a long time depended on agriculture as its main source of income and endowed with a rich biodiversity. To count on green spaces, clean water, pure air, and mature forests, etc. is highly valued by the Navarre people. The appreciation for nature is passed from a generation to the other not just in the framework of formal and informal education, but also by the shared enjoyment of family activities in natural surroundings. This aspect constitutes **a fertile ground** to raise awareness on the relevance of reducing the environmental impact of human activities, and entrepreneurial ones in particular.

8 FINDINGS AND CONCLUDING REMARKS

2015 is the year of Sustainability and Climate Change. Both issues are at the heart of the current world agenda and will continue to be so in the years to come. The international community has approved the 2030 Agenda for Sustainable Development, entitled `Transforming Our Home´ conceived as a plan of action for people, planet and prosperity, but underlining that eradicating poverty and inequalities is an indispensable requirement for sustainable development. An ambitious global agenda which involves many of the aspects that have been addressed in the Theoretical Framework while insisting on the multidimensionality of the concept.

In accordance with the objectives of the research, the first aspect that has been addressed was the deconstruction of the sustainable development concept, starting by differentiating growth from development. Unfortunately there is a tendency not only to equate both concepts but also to use the same indicator to measure their evolution: the Gross Domestic Product. But development is much more than the increase in the production of goods and services. Amartya Sen´s contribution to the development debate has been fundamental to understand that it implies a transformation of the society, at human and institutional level, which involves the enhancement of living conditions as well as the exercise of rights and freedoms to develop human capacities. Therefore we need new instruments to measure the many dimensions involved in such a process.

Sustainable development emerges to add to that consensus and not to substitute or diminish the social dimension. It implies, on the one hand, the need to acknowledge nature as the life supporting system of all our activities and therefore the importance of taking proper care of its cycles and carrying capacity. On the other hand, it refers to the needs of present and future generations, meaning that we have to introduce a long-term perspective in the consideration

of the enhancement of those living conditions while intra-generational justice is also crucial to make sustainable development global, a prerequisite to achieve sustainability.

The Brundtland Report and some experts in the field define sustainable development as a process of change in which the exploitation of resources, the direction of investments, the focus of technological research, and the institutional framework are consistent with present and future needs. Therefore, it relates to a dynamic progression not a fixed state. It builds on the conviction shared by a number of voices to reconcile economics and the environment, which was until that moment absent of the considerations about development, assuming that its deterioration was something inevitable. Besides, abundance of materials and cheap energy contributed to the illusion of an endless growth.

Opposing warnings on the impossibility of such an infinite growth and the risk that ignoring the limits of the natural systems implied were considered exaggerated and pessimistic. A natural reaction from a society so fond of growing. Likewise, the urge from some other voices with regard to the need to rethink our industrial processes and address the impacts on human health and biogeochemical cycles that pollution causes has also been disregarded.

The concept of sustainable development has been contested on the grounds of its complexity and the fact of not questioning growth but its sustainability. As it has been argued, sustainable development is a social construct, including not only the perspective of those who realize the need to integrate environment in our considerations on development (associated with Northern countries) but also the needs for means to overcome poverty and deprivation in some countries (the Southern claim). This leads to reflect on the importance for sustainability to be global while also adaptive to each local community.

Hence, what is being discussed is a form of societal change that in addition to traditional development objectives looks for maintaining ecological sustainability, building resilience also in sociological terms. But how to bring

these changes about? This is precisely the question addressed by Stiglitz who emphasizes that we need to elicit the commitment and long-term involvement of the society. The global vision has thus to permeate the whole system, and nurture the construction of tailored made local strategies, adjusted to the particular characteristics of each context.

In this process the use of the right communicational tools, so that the meaning can be understood easily, has been a challenge. As it has been discussed, a diversity of visual representations of the concept have been developed. The most commonly used is the one which represents sustainable development as a space of convergence between the social, environmental and economic dimensions of development. Such an interpretation has been misleading as it suggests the idea that each dimension (circles) is clearly separated from the other and that despite the interconnection in the centre of the three circles (the space of sustainability), there could be a co-existence of activities which continue to be unsustainable.

Among other representations, the one given by Tomas Carpi has been analysed since it includes two other dimensions which are crucial for development, the institutional pillar (including formal and informal institutions, a culture favourable to eco-efficiency and eco-effectiveness, social and political stability, participation and democracy, and cooperation) and the technological pillar (which involves, knowledge and innovation of process and products aimed at the dematerialization and detoxification as well as the development of the co-evolutionary potential).

With this more accurate picture of the concept, the global governance aspect of the sustainable development was reviewed. First, to appreciate the political consensus which was reached at the first Rio Summit in 1992, which consecrated the term introducing it into the global development agenda as a goal to be achieved. The strong influence of this event on other international conventions and conferences convened in the following years has also been

highlighted, as well as the implication in terms of the development of a legal framework at national and regional scales.

A synthesis of the main events that have marked the further advancement of this international agenda on the topic has been outlined in order to appreciate the way that the notion itself has been evolving and being complemented with the development of the Río Principles while other issues of interest have emerged. In doing so the evolving position of some actors and its interactions have been pinpointed, as well as the challenges to deal with the two-level game that international negotiations entail, conditioning outcomes.

In this context, the progressive strengthening of the social dimension of sustainable development has been emphasized, in particular after the Millenium Development Goals were approved in 2000. Whereas, the economic dimension has been the main concern since the world economic crisis broke up (2008), which has been reflected in the Río+20 summit (2012). In this conference a great deal of attention was given to Green Economy and its potentiality to create growth and jobs. Another key issue emphasized at this event was the institutional dimension, highlighting the need to strengthen environmental global governance.

Despite the strategies and actions that governments and international organizations have implemented since the Earth Summit in order to achieve sustainable development, key issues such as the pattern of consumption and production have not been adequately addressed. As a result biodiversity loss, acidification of oceans, climate change, among other pressing problems, continue to worsen. As it has been demonstrated by the latest scientific data from different sources it is imperative to address those pending tasks.

The authors of the Planetary Boundaries Framework, for instance, suggest the need for novel and adaptive governance approaches at the global, regional and local scales as they consider that we have crossed some non-linear thresholds which could generate irreversible environmental changes placing human society at risk. Similar assertions from the International Panel on Climate

Change confirms the need for a change in the approach to the interlinkages ecosystems-anthropogenic activities.

Besides, there is also recent data from reliable sources such as the UNDP which points to the immense challenge humanity faces in terms of poverty, discrimination, insecurity, deprivation, inequality, etc. The Human Development Report 2014 underlined that economic vulnerability is not a problem of developing countries only. Due to the slow recovery from the global economic crisis, many people in rich countries continues to face tremendous insecurity. One of the striking problems is the gap in gender equality and its relation with development, taking into account the potentiality of women to be agents of change. Evidently, it is a multifaceted defy with different appearances depending on the perspective of the observer or the area of the world we refer to.

These global, structural and systemic challenges have led to important initiatives to convert the sustainable development concept into daily practice at local level; therefore requiring the adequate instruments and tools to do so. The first step was Agenda 21, an ambitious and comprehensive plan of action which has been and continues to be implemented throughout the world, boosting participatory process to build consensus on how to address the sustainability challenge at a local scale.

Another strategy which has great relevance to the European Union Member Countries has to do with ecological modernization, a term that has been interpreted as an attempt to integrate environment and economy, giving environmental issues a permanent and central position in the decision-making processes of private firms and consumers, and creating a space for dialogue and negotiation among all `stakeholders´. This approach has led to the development of a set of environmental management tools to cope with ´externalities´ of the production processes, leading to eco-innovation.

Other strategies like Corporate Social Responsibility used to address mainly the ecological-economic connection at the beginning, despite its name.

Yet, it has evolved to include many social aspects, such as labour rights, gender equality, occupational safety, and life-work balance, among others. Nevertheless, the approach of CSR practices have to evolve also, and adapt to the current context, not only in term of challenges but also new knowledge and realizations. Corporations have to redefine value creation, connecting social progress with company success and positive ecological impact.

A renewed interest on increasing economic growth due to the economic and financial crisis is now leading the way to new proposals that consider social and ecological aspects of the industrial process. Among them, green economy, blue economy, industrial ecology, circular economy or climate economy. They are all a reflection of the same interest in addressing the problem from a different perspective. An indeed, these approaches relate to long standing callings to take into consideration the ecosystem functioning and the conditions in which nature can continue to provide support to all human activities.

Evidently, technology plays an important role to transform the production process, but it has to go beyond eco-efficiency, the material and energetic content of the industrial activity has to be very different from the prevalent model. New radical innovations could change the paradigm and allow for this recoupling of ecology-economy. Institutional change becomes thus indispensable for such innovations to occur. It is also the factor which could boost their dissemination across the system, ensuring the integration of the ecosystem approach since the very beginning, acknowledging the prominence of life support systems.

Notwithstanding the crucial importance of this change of paradigm it is also important to address the social factor at the firm level, not only because knowledge, talent, creativity are at the core of innovation, but also because there are shortcomings on the prevailing working conditions and labour practices, particular gaps in the resources and opportunities for women to unlock their capacities, while the important contribution of households to the global economy and enterprises is not understood.

The arguments of Antonella Picchio with regard to the domestic activities and care carried out within the sphere of family has been pointed out, since it reveals that they allow those who work to continue doing so. Three key economic functions to human development taking place at the household level are mentioned by this author. First, the extension of real wages; second, the expansion of wellbeing by fostering human capabilities and effective functioning in the social sphere; and third, the support lent by the family unit to the market economy in terms of the skills to be used in the production process of goods and services.

Beside these proposals which call for modifying the conceptual framework, other feminist economists have also stressed the need to improve statistical tools to make unpaid work visible. It is a complex task, as it has been acknowledged by suggesting alternatives for a more economic adequate accounting (household satellite accounts, Social Accounting Matrix, Time-Use surveys, etc. A change of values uphold by society has been also argued, connecting the need to address the invisibility of women and the environment at the same time.

As mentioned earlier, the role of women in attaining sustainable development has been linked to their potential as agents of change, in terms of the impact that the improvement of their own conditions could have on the rest of the family and their relational and physical space. Nevertheless, it is also important to take into account the need to address inequalities not as instrumental to other ends, but as rights on their own.

As Maria Sagrario Floro states, we are facing a dual crisis of care for people an care for the environment which lead us to ponder on the serious choices that governments and society as a whole need to grapple with. Creating the conditions for radical transformation of the current patterns of consumption and production should be accompanied by a good stewardship of natural resources and ecosystems with a low carbon content and conceived to

regenerate the supporting life systems. But this is just part of problem, the social dimension of sustainability also demands urgent attention as it has been acknowledged by the international community with the recent approval of the Sustainable Development Goals, where social, economic and environmental aspects merge.

Even if there is a huge gap between the multilateral processes, with their broad goals and policies, and national action, it is certainly true that some progress have also been made. Nevertheless, it has been insufficient, as the current situations proves. That leads as to ponder on the drivers of sustainable development. Multifaceted and urgent defies require a response involving all areas of sustainability, no partial solutions are viable as they won´t allow us to achieve a sustainable development.

System thinking is therefore imperative to approach the complexity of sustainability. The concept of socio-ecological systems reflects precisely what has been exposed. It refers to the complex and adaptive systems formed by biophysical and social factors interacting continuously. Those dynamic interactions have multiple originating points and could have different trajectories and characteristics, which have to be taken into account when addressing the changes in one of the components of the systems in pursuing societal goals.

Society has the opportunity of crafting the right instruments to handle those multiple and complex defies and promote positive synergies among and between all components. This requires unleashing the greatest potentials, talents and creativity of individuals, women and men, within a framework of effective democracy, peace and respect for human rights and freedoms; providing the same opportunities to all human beings to satisfy their needs and aspirations, enabling them to progress as they wish.

In that path, taking care of life support systems seems to be essential, and all anthropogenic activities have to acknowledge this fact. In other words, the recoupling should comprehend economy, ecology and society, transforming not

only industrial processes but turning to a more caring economy and caring society. Merging all these elements in the simplest way possible a diagram was proposed: Figure 11- Vision of sustainability in socio-ecological systems.

This approach involves a radical transformation of the current patterns of consumption and production, where the economy ensure a good stewardship of natural resources and ecosystems with a low carbon content and pursues the regeneration of the supporting socio-ecological system. We cannot continue drawing on the world´s resources faster than they can be restored, nor releasing wastes and pollutants faster than the Earth can absorb them or render them harmless. Likewise, no sustainable development can be achieved ignoring discrimination, inequalities or overexploitation of human resources.

Such a multidimensional transformation involves a change in organizations as well as in citizens´ values, believes and behaviours. The relational aspect is crucial. Cooperation and collaboration have to be the base of integrative solutions where all actors, even the future generations, are taken into account. Evidently, clarity of vision and understanding, political will and committed leadership are some of the characteristics required for an adequate governance for sustainability, favouring consensus in caring for people and the environment at the same time.

Obviously, to translate these aspirations into reality also requires to integrate the different geographical scales as well as the timeframes, the institutions and sectors involved in each level, as well as the cross-sectoral social and environmental concerns. Governance for sustainability needs to take into account the diversity of actors and power interactions among them. The culture and particular needs of each context are the ground to plant the seeds and inspire a holistic and sustainable progress.

In order to better understand the institutional arrangements that could foster sustainability from this systemic perspective, an empirical part of the study has been carried out in the Province of Navarra (Spain). An innovative region

where the population enjoy a high quality of life and the protection of the environment is inherent to the Navarre culture. Particular attention was given to initiatives where sustainability and the gender perspective were present.

This part of the study was qualitative, guided by a constructivist approach which implied critical enquiry and the progressive unfolding of the research design according to the findings and learning experiences that participant observation has allowed to. This is what is called an emergent design research, requiring permanent adjustment and flexibility.

Two strategies combining sustainable development and the gender perspective have been identified in the public and the private sector, which have been exposed as case studies. One relates to a gender and sustainability mainstreaming initiative at the municipality of Ansoáin, close to the capital Pamplona, and the second one refers to the implementation of a Corporate Social Responsibility strategy, at the firm level, promoted by the government of Navarra. A third case, focused on the environmental aspect of sustainability, has also been discussed: the Enterprise-Environment Program agreed between the public and private sector. The reason for its inclusion lies on the fact that its recent evolution represents a step forward leading to the transformation of patterns of production and consumption with potentiality to introduce the ethic of care beyond the natural environment.

The Institutional Analysis and Development (IAD) framework has provided a general set of variables that were used to analyse the three experiences. The ISD framework highlights the relevance of looking into the action situations (which refer to the action arena or space where individuals or entities interact). So identifying actors, positions and valuing interactions allowed to understand outcomes.

The narrative of the studies has been structured aiming at reconstructing its evolution, giving background information, context, essentials regarding the case itself, an assessment and underlining the enabling factors.

Regarding the first case it is important to stress that the initiative has implied mainstreaming the gender perspective into the sustainability strategy and this into the policies, programs and actions carried out by the municipality. It has been positively assessed internally and externally, as the case has been exposed in other regional and international spaces.

The execution of this initiative has proved that it is possible to integrate care for people and the environment in each program of the local administration, adapting each policy to the particular needs of women and men in the municipality. Among the enabling factors of this experience, it is worth underlining the existence of a commitment by all political forces represented in this jurisdiction and a willingness to lead the transformational process with a strategic vision. The main actors involved in the design of the initiative hold an integrative approach to sustainable development which was crucial to guide the experience from the very definition of its objectives and the design of the strategy.

Certainly the impact is limited to this small municipality, and to the activities performed by the City hall. However, the good practices have been documented and could now be implemented in other municipalities; a multiplier effect worth noting. Due to the restrictive budgetary measures in the region the resources available to carry out activities have been reduced and it is uncertain if the recent political changes would have an impact on it.

The second case, related to the regional Entrepreneurial Social Responsibility Strategy, also emerged from a broad political agreement, this time at the Navarre Parliament. The program has derived in the implementation of an adapted methodology and a set of actions which have increased the integration of ESR by small and medium enterprises in the region, even if its scope is limited. The clear political mandate has been essential as it has allowed for the legitimacy of allocation of resources, in infrastructures, human resources and financial terms, where the regional government has had a leading role.

The financial rewards to the SME have been essential to incentivize the participation of entrepreneurs, although some resistance has been observed. The present context of change in the provincial government represents a challenge to the permanence of the program. On the other hand, there is a great difficulty in realizing the benefits of pursuing an ESR strategy for the financial performance of the firm, which is the primary concern of the business sector. This is particularly evident with regard to gender. In fact, equality plans and measures promoting equal opportunities are not prevalent among the actions entrepreneurs select while elaborating their ESR plans of actions, even if they are part of the framework. A great challenge particularly in times of financial restrictions and political change, when incentives to equality plans have been cut.

The third case study addressed the Enterprise Environment Program (EEP), agreed by the Navarra Entrepreneurs Confederation and the Directorate of Rural Development and Environment of the regional government, and the trade unions. It also reflects the relevance of the commitment at the top decision making level. The objective of the program has been to improve the environmental performance of the Navarra enterprises, particularly SME, as in the previous case. It includes an environmental management system with an adapted methodology developed by the executing team for its implementation.

The results of this program have been positive with regard to the promotion of eco-innovation and good environmental practices. Nevertheless, the quantity of the companies receiving support from the government in the framework of this program (less than 1% of the total number of enterprises) is too low to influence the general innovation index for the region. Other factors, such as the need to improve competitiveness, get new markets or adjust to the regulations and requirements of clients are some of the factors which have been pointed out as relevant for such regional performance by informants.

The relevance of the public support to carry out the EEP as well as the incentives to participate explain its outcomes. On the other hand, the capacity of

the leading team has been crucial, not only for their knowledge on the subject but also due to their consensus building skills. The culture of the region was also considered a positive influence as it represents a fertile ground to promote environmentally sound practices.

As in the case of ESR, the future of this program will depend on the decision of the new government to continue backing or not such initiatives. On the other hand, it seems that the recent evolution towards circular economy has elicited certain interest due to the business opportunities it implies. The fact that it is a systemic approach could be more propitious to introduce –at the level of the firm-the ethic of care, not only with regard to the environment but also for people. It would also favour positive synergies with a new ESR strategy focused on creating shared value.

All three cases confirm the relevance of the institutional pillar as main enabling factor of such initiatives. Nevertheless, their approaches differ. The mainstreaming initiative reflects a holistic vision of sustainable development, understanding that it could not be achieved if gender inequalities are not overcome. The second case reflects that corporate social responsibility has evolved to include the gender concern but since it is a voluntary scheme and not all entrepreneurs grasp the benefits of equality practices they are more inclined to take eco-efficiency or workplace safety measures. The third one represents a typical initiative of the ecological modernization approach, where the gender dimension is absent and the prevailing criteria is that the social function of the enterprise is generating employment.

The experiences studied show that public sector innovation has resulted in more collaboration and horizontality in public-private relations, and has the potential to lead change. The cases also provide insights into the way these different strategies followed by local and provincial governments have been tailored to the particular needs of the constituency, the current context, and the industrial fabric.

Those arrangements have relied on a broad consensus contributing to the stability and appropriation of the strategy by all stakeholders. It has made evident that the participatory process is well entrenched in this society, which has been associated to the AG21 processes fostered also from the regional government. At the same time, this fact allows us to deduct the potentiality to promote renewed collective action initiatives to boost the transformations sustainable development requires.

Additionally, the supportive policy framework, the capacity to share the vision and to build consensus and collaboration around them were also very important. The support expressed by the policy-making levels was reflected in the allocation of the necessary resources making possible to undertake a number of actions to foster the initiative. The three initiatives have been influenced by the evolution of the concepts in the international context, and their integration in the European legal framework, which indicates that the eventual approval of a directive on circular economy by the European Commission would have a direct effect on the region and the rest of the country.

Besides, some aspects of the ethics of care for the environment and for people has been observed at a general level in the region, which have a certain influence on the behaviour of the population in the framework of the initiatives studied. Nevertheless, most actors assume that the social responsibility is a duty of the government. Additionally, all three cases reveal the importance given to capacity building and the essential role played by the Navarre Centre for Environmental Resources, particularly in the last two. The high levels of education and wellbeing achieved by this province are a source of pride for the population and an asset contributing to achieving other development objectives.

It must be acknowledge that the scope of the research is very limited, just referred to the particular Navarre setting. Likewise, it has focused on the administrative level, though with correlation with enterprises at local and regional scales. Nevertheless the challenges in terms of social and technological

innovation require to encourage more creativity in education, a better realization of the interconnections among the different parts of the socio-ecological system beyond the physical or administrative boundaries of a province, as well as a continued and reinforced support to applied research. New alliances have to be forged to foster sustainability at local and global level, with a collaborative and cooperative spirit. In this regard, the interactions with other countries and realities are positive.

On the other hand, it is worth underlining the encouraging findings from the ongoing pilot project on circular economy which has been carried out as part of the Enterprise Environment program corresponding to 2015. It envisages further developments which could be a source of interesting information to learn more about the business sector. In particular to comprehend the main drivers to the implementation of the principles of circularity in industrial processes in a number of companies or how to more effectively boost the dissemination of such practices with the aim of benefiting the economy, environment, and society.

Likewise, it would be interesting to shed some light on the potentiality of introducing the ethic of care in circular economy, study the business case for gender, CSR, and circular economy too. It would also require the adaptation of tools to guide value propositions with the holistic sustainability approach discussed here. Navarra has a great opportunity to pioneer a regional strategy on circular economy with a social character, which could foster sustainable development with a holistic approach, preserving the socio-ecological assets of the province. In order to do that, an adequate institutional arrangement should be worked out.

On the other hand, Navarra is a particular socio-ecological systems and its conditions differ from those prevalent in the rest of the country and, even more, in some parts of the world. Therefore, there are not blue print solutions, but we could deduct from the study that a strategical and systemic view is essential to properly address the transformation required and the skills to forge the

consensus on the change to be pursued. Meeting the challenges derived from the multidimensional crises the humanity faces demand to go beyond partial strategies. Women and men have both a role to play in this endeavour, with their cultural backgrounds, needs, expectations, talents and rights. There is a great scope for advancing in this path, which evidently needs leadership and evolving wisdom, acknowledging the centrality of nature to articulate industrial processes, the economic system and a way of living oriented to societal evolution. Even if the public sector has a key role to play, other entities and citizens have to be involved in the crafting of those particular solutions.

In synthesis, what is required is a great flow of skills and willingness to deal with change and build resilience in the midst of uncertainty, guided by the highest values; overall respect for life in all forms. Further research is needed for perfecting the tools, incentives and mechanisms which would allow the different sectors to work for the progress and equilibrium of the socio-ecological system.

REFERENCES

Aboud Georgina (2011): "Gender and Climate Change. Supporting Resources Collection" in *Bridge*, Cutting Edge Pack, Institute of Development Studies.

ADEME (2014): *Guide Methodologique du developpement des strategies regionals d´économie circulaire en France*. Rapport Final. Paris.

Agra Romero, María Xosé (eds.) (1998), *Ecología y Feminismo*, Granada, Comares.

Aguado, Itziar; Barrutia Jose María, Echebarría Carmen (2007): "Agenda Local 21 en España" in *Ekonomiaz* Nº 64, 1er cuatrimestre. 174-213

Albareda, Laura (2008): "Corporate responsibility, governance and accountability: from self-regulation to co-regulation" in *Corporate Governance* nº 4: 430 – 439

Amador Hidalgo, Luis (2008): "La implantación de la Agenda 21 Local en las diferentes Comunidades Autónomas. Orígenes, evolución y valoración global del proceso" in *Revista de Fomento Social* nº 63 (2008), 233–274

Anderson, V. (1991). *Alternative Economic Indicators*, London: Routledge.

Arthur, Brian (2013): "Complexity Economics: A different framework for Economic Thought", *SFI working paper*. Available at http://tuvalu.santafe.edu/~wbarthur/Papers/Comp.Econ.SFI.pdf

Ayuntamiento de Ansoáin (2008): *Agenda Local 21 de Ansoáin: instrumento integral de gobernanza.*

_____ (2008b). *Plan Municipal de Desarrollo Sostenible de Ansoáin*
http://www.premioconama.org/bo/bancorecursos/banco_imagenes/premios10/inscripciones/245_Memoria%20A21L%20Ansoain.pdf

_____ (2012). "La agenda local 21 de Ansoáin: Género y Transversalidad" in *Entornos de Navarra*, Año 5, No 17 Abril, pp. 14-17

Baier, Annette (1987): "Hume: The Woman's Moral Theorist?" in Kittay, Eva Feder, and Meyers, Diana (ed.) *Women and Moral Theory*, U.S.A.: Rowman & Littlefield.

Baker, S. (1997). *The evolution of European Union environmental policy. The politics of sustainable development: theory, policy and practice within the European Union*, London: Routledge.

Baker, Susan; Kousis, María; Dick Richardson and Stephen Young (2002): *The politics of sustainable development. Theory, policy and practices within the European Union*. London: Routledge.

Barbier, Edward B. (2012): "The Green Economy challenge after Río+20", in *e-International Relations*, available at http://www.e-ir.info/2012/06/29/the-green-economy-challenge-after-rio20/

Benería, Lourdes (1999): The enduring debate over unpaid labour. *International labour review*, 138(3), 287-309.

Benn, Suzanne; Dunphy, Dexter and Griffiths, Andrew (2014): *Organizational Change for Corporate Sustainability,* New York: Routlage.

Berkes, Fikret, Colding, Johan and Folke, Carl (2003): *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*. Cambridge University Press.

Berkes, F., and Folke, C. (1998): *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. New York: Cambridge University Press.

Blewitt, John (2015): *Understanding Sustainable Development*. New York: Routledge.

Bifani, Patricia (2003) Genero y Medio Ambiente, Universidad de Guadalajara, Jalisco: Editorial Universitaria.

Bono Martínez, Emèrit (2008a): "Cambio Climático y sustentabilidad económica y social. Implicaciones sobre el bienestar social". *CIRIEC-España, Revista de Economía Pública Social y Cooperativa*, 61/2008, pp.51-72.

_____ (2008b): "Retos de la política medioambiental: un enfoque glocal" in Jordán Galduf & Andrés Sánchez (Coords.) *Desafíos actuales de la política económica: un enfoque estructural y social*, Navarra: Aranzadi.

Boulding, Kenneth E. (1966): *The Economics of the coming spaceship Eart*h. Available at (http://www.ub.edu/prometheus21/articulos/obsprometheus/BOULDING.pdf).

Braungart, M. and McDonough, W (2002). *Cradle to Cradle: Remaking the Way We Make Things*. New York North Point Press.

Bravo Suescun, Carmen (2012) *De la domesticidad a la emancipación. Las mujeres en la sociedad navarra* (1961–1991).

Bressers, Hans and Rosenbaum, Walter (2003): *Achieving Sustainable Development: The Challenge of Governance across Social Scales*. USA: Praeger Publishers.

Brett, E. A. (2009): *Reconstructing development theory: International inequality, institutional reform and social emancipation.* Palgrave Macmillan.

Bustelo, María (2000): *The Evaluation of gender equality public policies in Spain: a meta-evaluation on the use and utilization of the eleven evaluation,* available at http://evaluationcanada.ca/distribution/20001012_bustelo_maria.pdf

_____ (2005) "The evolution of Policy Discourse and policy instruments within the Spanish State Feminism". Unified or Fragmented Landscape. Paper to be presented at the Workshop *State Feminism and Women's Movements: Assessing change of the last decade in Europe* April, ECPR Workshops. Granada (Spain).

Calabuig, (2008). *Agenda 21 local y gobernanza democrática para el desarrollo humano sostenible: bases para una gestión orientada al proceso*. Tesis para optar el título de Doctora en Ingeniería, Universidad Politécnica de Valencia.

Campbell, S. (1996) "Green cities, growing cities, just cities? Urban planning and the contradictions of sustainable development" in *Journal of the American Planning Association*, 62(3), pp. 296–312.

Carney, Mark. 2014: *Inclusive capitalism: creating a sense of the systemic. Conference on Inclusive Capitalism*. Bank of England, London. (http://www.financialstabilityboard.org/wp-content/uploads/Carney-Inclusive-Capitalism-Creating-a-sense-of-the-systemic.pdf)

Carr, Mary-Elena, Anderson, Robert F. and Brash, Kate (2010): *Climate Change: Addressing the Major Sceptic Arguments, BD Climate Change Advisors* https://www.uea.ac.uk/documents/3154295/7847337/Deutsche-Bank-CRU-report.pdf

Carrasco, C. and Serrano, M. (2011), "Lights and Shadows of Household Satellite Accounts: The case of Catalonia, Spain" in *Feminist Economics* 17(2): 63-85, New York, Routledge.

Carrasco, Cristina y Mayordomo, Maribel (2000): "Los modelos y estadísticas de empleo como construcción social: la encuesta de población activa y el sesgo de género" en *Política y Sociedad*, núm.34, pp. 101-112, Madrid: Universidad Complutense de Madrid.

Carrillo Hermosilla, Javier, Pablo del Río, and Totti Könnölä. (2010): Diversity of eco - innovations: Reflections from selected case studies. *Journal of Cleaner Production* 18, no. 1011 (July): 1073-108.

Carroll, Archie B (1999): "Corporate Social Responsibility: Evolution of a definitional construct" *Business & Society*, Vol. 38 No. 3, September, pp. 268-295

Carson, R. (1962): *Silent Spring.* Boston: Houghton Mifflin.

Chertow, M. Ashton, and W. Kuppalli, R (2004): "The Industrial Symbiosis" *Research Symposium at Yale: Advancing the Study of Industry and Environment, Report number* 3.

Clark Jr, W. H.and Babson, E. K. (2011): "How benefit corporations are redefining the purpose of business corporations" in The *William Mitchell Law Review.* vol.38.

Cobb, C. W., & Daly, H. (1989). "The index for sustainable economic welfare" in Daly, HE, Cobb, JB (eds.) *The Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future*, Bacon Press.

Cohen, Nevin (Ed.) (2011): *Green Business. An A to Z guide*. USA: Sage publications.

Congreso de los Diputados (2006) Boletín Oficial de las Cortes Generales, Agosto, número 424.

Connelly, Steve (2007): "Mapping Sustainable development as a contested concept" in *Local Environment,* Vol 12.No 3, 259-278, June. (http://www.ftf.lth.se/fileadmin/ftf/Course_pages/Faff15/Filer/Connelly_2007.pdf)

Constanza, Robert (1994): "Three General policies to achieve sustainability" in Jansson, Ann Marie, M. Hammer, C. Folke and, R. Costanza (eds.). *Investing in Natural Capital: The Ecological Economics Approach to Sustainability.* Washington, DC: Island Press.

_____ (2003): "Ecological Economics is Post-Autistic" in *Post-autistic economics review*, No-20 (3) June. Available at http://www.paecon.net/PAEReview/issue20/Costanza20.htm

Constanza, R., Norton, B. G., & Haskell, B. D. (1992). *Ecosystem health: new goals for environmental management.* Island Press.

Corporate Watch Report (2006): *¿What is wrong Corporate Social Responsibility?* Available at www.corporatewatch.org

Cramer, J. (1998). "Environmental management: from 'fit' to 'stretch' "in Business *Strategy and the Environment*, 7(3), 162-172.

CRANA (2010) *Estudio de percepción*. Available at http://www.crana.org/themed/crana/files/docs/077/095/e1estudio_percepcion_rse_1.pdf

_____ (2012) *Presentación de la evaluación integral de impacto integral del Programa Empresa y Medio Ambiente*. Pamplona.

Crutzen, P. J. (2002). “Geology of mankind” in *Nature*, 415 (6867), 23-23.

Crutzen, P. J. and E.F. Stomermer (2000): "The Anthropocene" in *Global Change Newsletter*, number 41: p.p: 17-18.

Daly, H. E. (1990). “Toward some operational principles of sustainable development” in *Ecological economics*, 2(1), 1-6.

_____ (1974). “Steady-state economics versus growthmania: a critique of the orthodox conceptions of growth, wants, scarcity, and efficiency” in *Policy Sciences,* 5(2), 149-167.

_____ (1996): *Beyond Growth. The Economics of Sustainable Development.* Massachusetts: Beacon Press.

Daly, Herman E. and Farley, Joshua. (2004): *Ecological Economics, Principles and Applications.* Island Press, Washington, USA.

Doepke, M. and Tertilt, M. (2011) “Does female empowerment promote economic development?” in *WB policy research working paper* 5714, Washington.

Drexhage, J. and Murphy, D. (2010): *Sustainable Development: From Brundtland to Río 2012*. Background paper prepared for the consideration of the High Level Panel on Global Sustainability, at its first meeting, 19 September 2010.

Durán, María Angeles (2001): “El análisis de exhaustividad en la economía española” en Carrasco, C. (Ed.) *Tiempos, trabajos y género*, Publicaciones de la Universidad de Barcelona, pp. 41-55.

_____ (2011): “El trabajo de cuidado en el marco macroeconómico” in *El trabajo de cuidado en América Latina y España,* Documento de Trabajo Nº 54, 11-32, Madrid,

_____ (2012*): El trabajo no remunerado en la economía global. Bilbao*, Fundación BBVA.

Edquist, Charles (2006): “Systems of innovation; Perspectives and challenges”, in *The Oxford handbook of innovation*, ed. Jan Fagerberg, David C. Mowery, and Richard R. Nelson, 181-208. Oxford: Oxford University Press

Egelston, Anne E. (2013): *Sustainable Development, a History*. USA: Springer

Ehrenfeld, J. R. (2005). “Eco-efficiency” in *Journal of Industrial Ecology*, 9(4), 6-8.

Ehrlich, Paul R. (2008).”Key issues for attention from ecological economists” in *Environment and Development Economics*, 13(01), 1-20.

Ekins, Paul. (1998): “Can a market economy produce industrial innovations that lead to environmental sustainability?” in F. Meyer Krahmer (ed) *Innovation and Sustainable Development: Lessons for Innovation Policies,* 35 - 67.

Ekins, Paul. (2010). “Eco- innovation for environmental sustainability: concepts, progress and policies” in *International Economics and Economic Policy* 7, no. 2 - 3 (June): 267-290

Ellen MacArthur Foundation (2013): *Growth Within, A circular economy vision for a competitive Europe*- Available at http://www.ellenmacarthurfoundation.org/

_____ (2014): Towards the circular economy. Accelerating the scale-up across global supply chain. Available at http://www.ellenmacarthurfoundation.org/

EU (2014). *Scoping study to identify potential circular economy actions, priority sectors, material flows and value chain.* European Commission. August 2014. http://www.ieep.eu/assets/1410/Circular_economy_scoping_study_-_Final_report.pdf

European Commission (2011): *Estrategia renovada de la UE para 2011-2014 sobre la responsabilidad social de las empresas*, de 25 de octubre 2011. Communication.

_____ (2013): *Charter Community of Navarra: Complete regional profile* https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/chartered-community-navarre

_____ (2014): *Regional Innovation Scoreboard* 2014

_____ (2013) *Roadmap for circular economy*. UNIT ENV (A1, A2, A3, F1), GROW

Ferri Carreres Javier, Uriel Jiménez,Ezequiel and Moltó Carbonell, María Luisa; (2005) “Estimation of an Extended SAM with household production for Spain 1995” in *Economic Systems Research* 17(3):255-278

Fisher, B. and Tronto, J. (1990). “Toward a feminist theory of caring”. *Circles of care: Work and identity in women’s lives*, 35-62.

Fleurbaey, M. (2003). *Peut-on mesurer le bien-être? Competitivité, Conseil d'Analyse Économique,* La Documentation Française.

Floro, Maria Sagrario (2012): “The Crises of Environment and Social Reproduction: Understanding their linkages” in *Development Dialogue*, No 60 August Dan Hammarskojold Foundation. 175-197

FORETICA/Foro para la Evaluación de la Gestión Ética (2006) *Informe Forética Evaluación de la Responsabilidad Social de las Empresas de España*. Madrid

Foro RSE Navarra (2007): *Comparecencia sobre la RSE Parlamento de Navarra, Comisión de Ordenación del Territorio*. 16 de Febrero.

Fundación Moderna (2010) *New Economic Development Model for Navarra,* Executive Summary. http://www.modernanavarra.com/wp-content/uploads/ExecutiveSummary.pdf

_____ (2014) *Education in Navarra* http://www.modernanavarra.com/wp-content/uploads/knowledge.pdf

Garriga, Elisabet and Domènec Melé. (2012): "Corporate Social responsibility theories: Mapping the territory" in *Business Ethics,* v2 Advances in Business Ethics Research 2, Springer Science pp: 69-96.

Georgescu-Roegen, Nicholas (1971). *The entropy law and the economic process*. Harvard University Press.

Gilligan, C. (1982) *In a Different Voice. Cambridg*e, Mass.: Harvard University Press.

Girouard, Nathalie. (2010). "The OCDE Green Growth Strategy: Key lessons so far" in OECD Observer, no. 279: 53

Goldstein, J. (2006). "Sustainable Communities and the Great Transition". GTI Paper Series.

Gobierno de Navarra (2012) *Sistema de Gestión InnovaRSE* Pamplona. Available at http://www.crana.org/themed/crana/files/docs/054/032/sistemadegestioninnovarse.pdf

Goerner, S. J., Lietaer, B., & Ulanowicz, R. E. (2009). "Quantifying economic sustainability: Implications for free-enterprise theory, policy and practice" in *Ecological Economics*, 69(1), 76-81.

GRI (2009): *Embedding Gender in Sustainability Reporting – A Practitioner´s Guide*

____ (2014) *GRI G4 Guidelines Reporting Principles and Standard Disclosures*

Hajer, M. A. (1995): *The politics of Environmental Discourse: Ecological Modernization*, Oxford: University Press.

Harris, J. M. (2000). *Basic principles of sustainable development*. Medford, MA: Tufts University.

Heinberg, R. (2010). *Peak everything: waking up to the century of declines.* New Society Publishers.

Held, Virginia (1993): *Feminist Morality: Transforming Culture, Society, and Politics. Chicago*, IL: University of Chicago Press, 1993.

_____ (2006) "Feminist Moral Inquiry and the Feminist Future" in V. Held (ed.) *Justice and Care*. Boulder, Co: Westview Press, 2006: 153-176.

Hellström, Tomas (2007): "Dimensions of environmentally sustainable innovation: The structure of eco – innovation concepts" in *Sustainable Development* 15: 148-159 International Association of Science Parks

Henderson, Hazel (1981): "Moving beyond economism: New indicators for culturally specific, sustainable development" in *Towards a new way to measure development*, Caracas: Office of the South Commission in Venezuela.

Hesse-Biber & Levy, Patricia (2010). *Handbook of Emergent Method*, London: The Guildford press.

Hohnen, Paul (2012) "The Future of Sustainability Reporting" in *EEDP Programme Paper* 2012/02 Chatam House

Houle, C. (2009) "Inequality and democracy: Why inequality harms consolidation but does not affect democratization" in *World Politics*, 61(04), 589-622.

Huckle, John (2012) "Even more Sense and Sustainability: A review essay" in *Environmental Education Research*, March 2012 available at http://john.huckle.org.uk/download/2954/EER2012MS&S.pdf

Humphrey, Mathew (Ed.) 2001: *Political theory and the environment. A re-assessment.* London: Frank Cass Publishers.

Ibarrola, Sara (2014); *La igualdad de Género en las Entidades Locales de Navarra. Itinerario para la planificación, gestión y evaluación del trabajo de las Áreas de Igualdad Municipales.* Instituto Navarro para la Familia e Igualdad

ICLEI (1996) *The local Agenda 21. Planning Guide. An introduction to sustainable development.* Canada

ILO 2013, *Women and Men in the Informal Economy: A Statistical Picture*, 2nd Edition. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_234413.pdf

INAFRE (2006) *Aplicación de los criterios de RSE en las organizaciones Navarras.* Available at http://www.crana.org/es/empresas-rse/documentacion_8/documentacian-especafica-sobre-responsabilidad-social-empresarial

Isturiz, Eva 2012: *La experiencia del Servicio de Igualdad del Ayuntamiento de Asoáin integrado en sus políticas públicas de sostenibilidad*. (2008-2012)

Trabajo Final de Master Universidad de Valencia/Institut Universitari d´estudis de la Donna.

Izquierdo, M J. (2000). *Sin vuelta de hoja. Sexismo: poder, placer y trabajo*. Bellaterra, Madrid.

Jackson, Tim (2009): *Prosperity without growth economics for a Finite Planet*. Earthscan.

Janicke, M. (2008): "Ecological modernization: new perspectives" in *Journal of Cleaner Production* 16, no 5, 557-565.

Joffe, H. (2008): "The power of visual material: Persuasion, emotion and identification" in *Diogenes* 55 (1), 84-93.

Jørgensen, S. E., Fath, B. D., Nielsen, S. N., Pulselli, F. M., Fiscus, D. A., & Bastianoni, S. (2015). *Flourishing Within Limits to Growth: Following Nature's Way*, Routledge.

Jorgensen, Dany (1989): *The Methodology of Participant Observation*, Sage publications- Thousand Oaks.

Katz, Christine and Thiem, Anja (2010): "Competencies for sustainability and gender: How to gain advantage. The problem, the theoretical background and questions" in Proceedings from the international conference *Equality, Growth and Sustainability. Do they mix?* Nov 2010 Sweden

Kemp, R., Parto, S., & Gibson, R. B. (2005). "Governance for sustainable development: moving from theory to practice" in *International Journal of Sustainable Development,* 8(1-2), 12-30.

Kennet, M., & Heinemann, V. (2006) "Green Economics: setting the scene. Aims, context, and philosophical underpinning of the distinctive new solutions offered by Green Economics*", International Journal of Green Economics*, 1(1-2), 68-102.

Latouche, S. (2012) *Salir de la sociedad de consumo*, Ed. Octaedro.

Lawn, P.A. (2003): "A Theoretical Foundation to Support the Index of Sustainable Economic Welfare (ISEW), Genuine Progress Indicator (GPI), and Other Related Indexes," in *Ecological Economics* 44 105-118.

Levin, S. A. (1998). "Ecosystems and the biosphere as complex adaptive systems" in *Ecosystems,* 1(5), 431-436.

Lifset, Reid, and Thomas E. Graedel (2002): "Industrial ecology: goals and definitions" in Ayres, Robert, and Ayres, Leslie (ed.) *A handbook of industrial ecology* 3-15. Cheltenham, UK: Edward Elga

Lozano, Rodrigo. 2008: "Envisioning sustainability three dimensionally" *Journal of Cleaner Production* 16 (2008) 1838–1846.

Lyle, John. T. (1996). *Regenerative design for sustainable development*. John Wiley & Sons.

Machiba, Tomoo. 2010: "Eco-innovation for enabling resource efficiency and green growth: development of an analytical framework and preliminary analysis of industry and policy practices". *International Economics and Economic Policy* 7: 357-370

Mackey, S. (2006). "Misuse of the term 'stakeholder'in public relations" in *PRism,* 4(1), 1-15.

Marshall, Catherine & Rossman, Gretchen B. (1989). *Designing qualitative research*. Newbury Park, CA: Sage

Meadows, 1972; Meadows, D. H. / Club of Rome (1972) *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. Earth Island, London, UK.

Meadows, Donella; Randers, Jorgen and Meadows, Dennis (2004): *Limits to growth the 30 years update. A synopsis*. Chelsea Green/Earthscan/Diamong, Inc. / Kossoth Publishing Company.

Mebratu, D. (1998). "Sustainability and sustainable development: historical and conceptual review" in *Environmental impact assessment review*, 18(6), 493-520.

Mellor, Mary (1997), *Feminism and Ecology,* Cambridge, Polity Press.

Merchant, Carolyn (1995), *Earth care, Women and the Environment*, New York, Routledge.

Mies, María and Vandana Shiva (1997), *Ecofeminismo. Teoría, crítica y perspectiva*, Barcelona, Icaria-Antrazyt.

Ministerio de Medio Ambiente, Medio Rural y Marino (2007): *Inventario Forestal Nacional.*

Ministerio de Empleo y Seguridad Social (2014): *Estrategia Española de Responsabilidad Social. Estrategia 2014-2020* para empresas, administraciones públicas y el resto de organizaciones para avanzar hacia una sociedad y una economía más competitiva, productiva, sostenible e integradora. Madrid: Lerko Print S.A.

Ministerio de Industria, Energía y Turismo (2014): *Estadísticas PYME. Evolución e Indicadores*. http://www.ipyme.org/Publicaciones/ESTADISTICAS-PYME-2014.pdf

Mol, A. P. J., & Spaargaren, G.(2006): “Toward a sociology of environmental flows: A new agenda for twenty-first -century environmental sociology” in G. Spaargaren, A. P. J. Mol & F. H. Buttel (Eds.) *Governing environmental flows: Global challenges to social theory* (pp. 39-82). Cambridge, MA: MIT Press.

Mol, Arthur P. J. Sonnenfeld, David A. and Spaargaren. (2009): *The Ecological modenization reader.* Routledge.

Montiel Ivan (2008): “CSR and CS Separate pasts, common futures” in *Organization and environment* 21(3) 245-269

Montiel Ivan and Javier Delgado-Ceballos (2014) “Defining and measuring Corporate Sustainability: Are we there yet” in *Organization and Environment* 27(2), 113-139.

Moore, Niamth (2004), “Ecofeminism as a third wave feminism? Essentialism, Activism and the Academy” in Stacy Gillis, Gillian Howie, and Rebecca Munford, eds. *Third Wave feminism*. New York, Palgrave MacMillan.

Morgera, E. (2005). “An update on the Aarhus Convention and its continued global relevance” in *Review of European Community & International Environmental Law*, 14(2), 138-147.

Naess, Arne. (1973): “The shallow and the deep, long-range ecology movement. A summary” in *Inquiry: An Interdisciplinary Journal of Philosophy*, Vol 16, Issue 1-4.

Najam, Adil (2005): “Developing countries and global environmental governance: from contestation to participation to engagement” in *International Environmental Agreements* 5:303-321

Naredo, José Manuel. (2006): *Raíces económicas del deterioro ecológico y social. Más allá de los dogmas*. Madrid: Siglo XXI.

Nash, Roderick Frizier. (1989): *The Rights of Nature: A history of environmental ethics*. USA: The University of Wisconsin Press.

Nodding C. (1984) *Caring: A Feminine Approach to Ethics and Moral Education*. Berkeley: University of CA Press.

North, Douglas. (1990): *Instituciones, cambio institucional y desempeño económico*, México: FCE.

Novo, María. (2005): “La economía política y la investigación sobre las condiciones de vida”, In Cairó I Céspedes, G. & M. Mayordomo (Comps.) *Por una Economía sobre la vida*, Barcelona: Icaria-Más Madera.

_____ (coord.) (2007), *Mujer y medio ambiente. Los caminos de la visibilidad: utopías, educación y nuevo paradigma*, Madrid, Editorial Los libros de la Catarata.

O´Connor, Karen (2010): *Gender and Women´s leadership. A reference Handbook*, Vol 1, Sage publications: Los Angeles.

OCDE (2004): *Principles of Corporate Governance*, OCDE Publications Service, France.

_____ (2010) *Eco-innovation in industry: Enabling Green Growth*. Paris: OCDE

Olmeda Valle, Amparo; Frutos Frutos, Isabel. *Teoría y análisis de género, Guía metodológica para trabajar con grupos.* Madrid: Edita Asociación de Mujeres Jóvenes, 2001.

Ormazabal, Marta (2013) *Evolutionary Pathways of Environmental Management in UK Companies*. Corporate Social Responsibility and Environmental Management, on line December 2013.

Ostrom E., (1990) *Governing the Commons: the evolution of institutions for collective action*, Cambridge university press.

_____ (2005). *Understanding institutional diversity*. Princeton, NJ:Princeton University Press.

_____ (2008): "Developing a Method for Analyzing Institutional Change" in Batie, Sandra S. and Mercuro, Nicholas (ed.) *Alternative Institutional Structures: Evolution and Impact,* 48–76. New York: Routledge

_____ (2009): "A general framework for Analyzing Sustainability of Social Ecological Systems" in *Science* Vol. 325, 24 July. (http://vw.slis.indiana.edu/talks-fall09/Lin.pdf)

_____ (2010) "Beyond Markets and States: Polycentric Governance of Complex Economic Systems" in *American Economic Review* 100, pp1–33

_____ (2011). "Background on the institutional analysis and development framework" in *Policy Studies Journal*, 39(1), 7-27.

Ostrom, Elinor, Larry Schroeder and Susan Wynne (1993): *Institutional Incentives and Sustainable Development: Infrastructure Policies in Perspective.* Boulder, CO: Westview Press

Pauli, Gunter (2010): *Blue Economy: 10 years, 100 innovations, 100 million jobs*. Paradigm publications: USA (New Mexico).

Paul, B. D. (2008). "A history of the concept of sustainable development: Literature review" in *The Annals of the University of Oradea*, 17(2), 581.

Pearce, David, Marcandya, Anil & Barbier, Edward (1989): *Blueprint for a green economy*. Earthscan: London.

Pepper, David 1998: "Sustainable Development and Ecological Modernization: a radical homocentric perspective" in *Sustainable Development* 6, 1-7 John Wiley & Sons, Ltd and ERP Environment

Pérez, Carlota (2009) Technological Revolutions and technoeconomic paradigms, Working Papers in *Technology Governance & Economic Dynamics* nº 20.

Pérez-Agote, A. (1985). "Cambio social e ideológico en Navarra (1936-1982). Algunas claves para su comprensión" in *Reis,* 7-21.

Picchio, Antonella (2001). "Un enfoque macroeconómico ampliado de las condiciones de vida." *Taller Internacional de Cuentas Nacionales de Salud y Género*, October, Santiago de Chile.

_____ (2005): La economía política y la investigación sobre las condiciones de vida in Gemma Cairó i Céspedes and Maribel Mayordomo (comps.) *Por una economía sobre la vida*, Barcelona, Icaria-Más Madera, 2005.

Pla, I. (2012) Sustainable development and women's participation 2012 ANNUAL INTERNATIONAL ASSOCIATION FOR FEMINIST ECONOMICS (IAFFE) CONFERENCE: Human Well-Being for the 21st Century: Weaving Alliances from Feminist Economics.

Pla, I. and Barberá, E. (2012) Advancing towards social sustainability from a gender perspective 2012 ANNUAL INTERNATIONAL ASSOCIATION FOR FEMINIST ECONOMICS (IAFFE) CONFERENCE: Human Well-Being for the 21st Century: Weaving Alliances from Feminist Economics.

Pla, I. and Guevara, S. (2010), "Ecofeminismos y desarrollo sostenible: espacios para la sinergia" in Isidro Antuñano, Jose M. Jordán and, Jose A. Tomás Carpi (eds) *Crisis y transformación. Una perspectiva de polítca económica*. Ensayos homenaje al profesor Emérit Bono, Valencia, Universitat de València.

_____ (2012) Feminist economics and environmental challenges: Towards an integrative approach to sustainability Congress 2012 ANNUAL INTERNATIONAL ASSOCIATION FOR FEMINIST ECONOMICS (IAFFE) CONFERENCE: Human Well-Being for the 21st Century: Weaving Alliances from Feminist Economics.

_____ (2013). "Towards an integrative approach to sustainability: exploring potential synergies between gender and environment" in *CEPAL Review*, Chile: ECLAC

Plumwood, Val (1993): *Feminism and the Mastery of Nature*, London, Routledge.

Pope St Francis (2015): *Encyclical Laudato Si on care for our common home,* 4 May, the Solemnity of Pentecost, Libreria Editrice Vaticana

Porter, Michael & Mark Kramer (2006): "The link between competitive advantage and corporate social responsibility" in *Harvard business review*, 84(12), 78-92.

_____ (2011) "Creating Share Value" in *Harvard Business Review* 89 (1/2), 62 -77.

Porter, M.; Stern, S. and Green, M. (2014): *Social Progress Index,* USA: Social Progress Imperative.

Puleo, Alicia (2002), "Feminismo y Ecología, Un repaso a las diferentes corrientes del ecofeminismo", *El Ecologista* 31(Verano), 36-39, Madrid, Ecologistas en Acción.

_____ (2007), "¿Que é o ecofeminismo?" in *Andaina: Revista Galega do pensamento feminista,* 47:16-19, Santiago de Compostela, Grafisant, S. L.

Putnam, Robert (1988) "Diplomacy and domestic politics: the logic of two-level games" in *International organization*, 42(03), 427-460.

Redclift, Michael (2005). Sustainable development (1987-2005): an oxymoron comes of age. *Sustainable Development Bradford-*, 13(4), 212.

Reid et al. (2005): *Ecosystems and Human Well-being, Synthesis, Millenium Ecosystem assessment.*

Renner, Michael (2012): "Economía verde al servicio de las personas", *Política Exterior*, Vol. XXVI, Nº 148, Julio-Agosto.

Rennings, K. (2000): "Redefining innovation — Eco innovation research and the contribution from Ecological economics". *Ecological Economics* 32: 319 -332.

Rivas Hermann, Roberto. (2010): *Regional triple helix interactions for Eco-innovation in the developing world. Insights from the Panama channel watershed*. Project Group EM3 2010-2 Joint European Master in Environmental Studies, Aalborg University.

Robinson, Fiona (1999): *Globalizing Care: Ethics, Feminist Theory, and International Relations*. Boulder, CO: West View Press.

_____ (2006): "Beyond labour rights: The ethics of care and women's work in the global economy" in International Feminist Journal of Politics, 8 (3), 321-342.

Rockström, J., W. Steffen, K. Noone, Å. Persson, F. S. Chapin, III, E. Lambin, T. M. Lenton, M. Scheffer, C. Folke, H. Schellnhuber, B. Nykvist, C. A. De Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P. K. Snyder, R. Costanza, U.

Svedin, M. Falkenmark, L. Karlberg, R. W. Corell, V. J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen, and J. Foley. (2009): "Planetary boundaries: exploring the safe operating space for humanity" in *Ecology and Society* 14(2): 32. http://www.ecologyandsociety.org/vol14/iss2/art32/).

Rohrbeck, R., Konnertz, L., & Knab, S. 2013: "Collaborative business modelling for systemic and sustainability innovations" in *International Journal of Technology Management* 63 (1), 4-23

Ropke, Inge (2004): "The early history of modern ecological economics" in *Ecological Economics* 50 (2004) 293-314

RSC Navarra (2009): *Apuntes para una Metodología de Elaboración de un Plan Integral de Promoción de la Responsabilidad Social en una Administración Autonómica. El caso de la Comunidad Foral de Navarra*.

Sandmo, (2014): "The Early History of Environmental Economics" in *Discussion Paper SAM 10*. Norwegian School of Economics.

Schäfer, A. (2012). "Consequences of social inequality for democracy in Western Europe" in *Zeitschrift für vergleichende Politikwissenschaft*, 6(2), 23-45.

Seers, D. (1969). "The meaning of development" in *International Development Review,* Vol II Dec.

Sen, Amartya (1988). "The concept of development" in *Handbook of development economics*, 1, 9-26.

_____ (1999): *Development as Freedom*, U.K., Oxford University Press.

Social Watch (2010). *The Gender Equity Index* www.socialwatch.org

Speth, J. G., & Haas, P. M. (2007). *Global environmental governance*. Pearson Education India.

Stahel, W. and Reday, G.(1976), *Jobs for Tomorrow, the potential for substituting manpower for energy - report to the Commission of the European Communities*, Brussels/Vantage Press, N.Y, 1976/1981.

Steffen et al. (2015). "Planetary Boundaries: Guiding human development on a changing planet" in *Science* Vol. 347 no. 6223

Stiglitz, J. E. (1998). "Towards a new paradigm for development: strategies, policies and processes". *Applied Econometrics and International Development*, 2(1), 116-122.

Stiglitz, Sen & Fitoussi (2009): *Informe de la Comisión sobre la Medición del Desarrollo Económico y del Progreso Social*, www.stiglitz-sen-fitoussi.fr

Strauss, A.S., 1987, Qualitative Analysis for Social Scientists. Cambridge: Cambridge University Press.

STWR, (2012) *Earth Summit 2012: Is a Green Economy the Answer?* http://www.stwr.org/climate-change-environment/earth-summit-2012-is-a-green-economy-the-answer.html

The South Commission (1990): *The challenge to the South: The report of the South Commission*, presided by Julius Nyerere. Oxford University Press, USA.

Toboso, Fernando & Eric Scorsone (2010): "How much power to tax do regional governments enjoy in Spain since the 1996 and 2001 Reforms?" in *Regional and Federal Studies*, Vol 20, No 2 157 -174.

Tomás Carpi, Juan Antonio (2007): "Desarrollo Sostenible". In Bono, Emèrit and Juan Antonio Tomás Carpi, dirs. Estrategias y Elementos para un Desarrollo Sostenible, Vol. I-III, Valencia: Nau Llibres.

_____ (2008): "El desarrollo local sostenible en clave estratégica" in *CIRIEC-España Revista de Economía Pública Social y Cooperativa,* 61 (August) pp. 73-101.

_____ (2010):"Desarrollo sostenible y Onda larga de crecimiento" en Antuñano, I, Jordán, J. Ma. & Tomás Carpi (Eds): *Crisis y Transformación*, Universidad de Valencia.

Turner, G. M. (2008). "A comparison of The Limits to Growth with 30 years of reality" in *Global Environmental Change*, 18(3), 397-411.

_____ (2014) 'Is Global Collapse Imminent? MSSI *Research Paper No. 4, Melbourne Sustainable Society Institute*, The University of Melbourne.

Turner, P., & Pearce, D. Bateman (1993): *Environmental Economics: An Elementary Introduction.* The Johns Hopkins University Press Maryland.

Ul Haq, Mahbub (1988): "People in Development: Contribution to the International Meeting on more effective development indicators" in *Towards a new way to measure development*, Caracas: Office of the South Commission in Venezuela.

UNCED (1992) *Río Declaration on Environment and Development. Río de Janeiro*, Brazil.

UNCSD (2007): *Framing Sustainable Development, The Brundtland Report 20 Years On*, New York.

UNDESA. (2012): *Review of implementation of Agenda 21 and the Rio Principles* Study prepared by the Stakeholder Forum for a Sustainable Future, January

UNDP, (1990-2015) *Human Development Reports* http://hdr.undp.org/sites/default/files/hdrp_2010_29.pdf

_____ (1995): *Informe sobre Desarrollo Humano: La revolución hacia la igualdad en la condición de los sexos*.

_____ (2011): *Human Development Report: Sustainability and Equity, a better future for all.*

_____ (2014) *Human Development Report: Sustaining Human Progress: Reducing vulnerabilities and building resilience*.

UNEP (2010): *Inequality-adjusted Development Human* Index. www.pnud.org.

_____ (2011): *Keeping Track of Our Changing Environment: From Río to Río+20* (1992-2012) Division of Early Warning Assessment (DEWA). Nairobi.

_____(2012): Global Environmental Outlook/GEO 5. Nairobi.

Upward, A. (2013): *Towards an ontology and canvas for strongly sustainable business models: A systemic design science exploration*. Toronto: York University.

Van Wynsberghe, R., & Khan, S. (2007). "Redefining case study" in *International Journal of Qualitative Methods*, 6(2), 80-94.

Vig, Norman & Regina Axelrod (Editors). 1999: *The Global Environment: Institutions, law and Policy* .London: Earthscan.

Wakernagel, Mathis and Rees, William. 1996: *Our ecological footprint: reducing human impact on earth*, Canada: New Society Publishers.

Webster, Ken & Johnson, Craig (2008/2011): *Sense and Sustainability*, London: Terra Preta.

WCED (1987): *Our Common Future* (The 'Brundtland report') Brundtland, G., Khalid, M., Agnelli, S., Al-Athel, S., Chidzero, B., Fadika, L. & Okita, S.

Yin, R. K. (2003). *Design and methods. Case study research*, Third edition Los Angeles: Sage publications.

Young Oran, Frans Berkhout, Gilberto C. Gallopin, Marco A. Janssen, Elinor Ostrom, and Sander van der Leeuwd (2006): "The globalization of socio-ecological systems: An agenda for scientific research" in *Global Environmental Change* 16 (2006), pp. 304–316

NEWSPAPERS

- Diario de Navarra
- Diario de Noticias
- The Guardian
- Washington Post

OFFICIAL WEBSITES

- www.ansoain.es
- www.crana.org
- www.globalcompact.org
- www.globalreporting.org
- www.ine.es
- www.ien.es
- www.ipcc.ch
- www.minetur.gob.es
- www.navarra.es
- www.ocde.org
- www.sustainabledevelopment.un.org
- www.un.org
- www.unep.org
- www.whitehouse.gov

ANNEXES

ANNEX 1
SUSTAINABLE DEVELOPMENT GOALS

Goal 1. End poverty in all its forms everywhere **1.a** Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions **1.b** Create sound policy frameworks at the national, regional and international levels, based on pro- poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions	1.1.-By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day 1.2 -By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions 1.3-Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable 1.4 -By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance 1.5 -By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons 2.3 By 2030, double the agricultural productivity and incomes of small -scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities

	for value addition and non-farm employment 2.4. By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed 2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries 2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round 2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility
Goal 3. **Ensure healthy lives and promote well-being for all at all ages** 3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12per 1,000 live births and under-5 mortality to at least as low

all countries, as appropriate 3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States 3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risk	as 25 per 1,000 live births 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well -being 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes 4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries 4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship 4.5- By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
Goal 5. Achieve gender equality and empower all women and girls 5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws 5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women 5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the	5.1- End all forms of discrimination against all women and girls everywhere 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life 5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents

empowerment of all women and girls at all levels	of their review conferences
Goal 6. Ensure availability and sustainable management of water and sanitation for all 6.a By 2030, expand international cooperation and capacity-building support to developing countries in water-and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies 6.b Support and strengthen the participation of local communities in improving water and sanitation management	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of fresh water to address water scarcity and substantially reduce the number of people suffering from water scarcity 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil- fuel technology, and promote investment in energy infrastructure and clean energy technology	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency

7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land -locked developing countries,in accordance with their respective programmes of support.	
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all 8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries 8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization	8.1- Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries 8.2 -Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors 8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro- small- and medium-sized enterprises, including through access to financial services. 8.4- Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead 8.5 -By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value 8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training 8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of

	child soldiers, and by 2025 end child labour in all its forms 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products 8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation 9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities 9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries 9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.

Goal 10. Reduce inequality within and among countries 10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements 10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest,in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes 10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent	10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status 10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard 10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality 10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations 10.6 Ensure enhanced representation and voice for developing countries in decision making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions 10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion,	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries 11.4 Strengthen efforts to protect and safeguard the

resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels 11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials	world's cultural and natural heritage 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
Goal 12. Ensure sustainable consumption and production patterns 12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production 12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products 12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of	12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries 12.2 By 2030, achieve the sustainable management and efficient use of natural resources 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle 12.7 Promote public procurement practices that are

developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities	sustainable, in accordance with national policies and priorities 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.
Goal 13. Take urgent action to combat climate change and its impacts* 13.a Implement the commitment undertaken by developed- country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible 13.b Promote mechanisms for raising capacity for effective climate change- related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries 13.2 Integrate climate change measures into national policies, strategies and planning 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development 14.1-Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans 14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries 14.b Provide access for small-scale artisanal fishers to marine resources and markets 14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want	14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information 14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation[2] 14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
Goal 15. **Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss** 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use bio-diversity and ecosystems 15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation 15.c Enhance global support for efforts to combat poaching and trafficking of protected species,	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as

including by increasing the capacity of local communities to pursue sustainable livelihood opportunities	internationally agreed 15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels 16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime 16.b Promote and enforce non-discriminatory laws and policies for sustainable development	16.1 Significantly reduce all forms of violence and related death rates everywhere 16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children 16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all 16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime 16.5 Substantially reduce corruption and bribery in all their forms 16.6 Develop effective, accountable and transparent institutions at all levels 16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels 16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance 16.9 By 2030, provide legal identity for all, including birth registration 16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	**Finance** 17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection 17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing

	countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries 17.3 Mobilize additional financial resources for developing countries from multiple sources 17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress 17.5 Adopt and implement investment promotion regimes for least developed countries **Technology** 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism 17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed 17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology **Capacity-building** 17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South -South and triangular cooperation **Trade** 17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda 17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020 17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least

	developed countries, consistent with World Trade organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access **Systemic issues** *Policy and institutional coherence* 17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence 17.14 Enhance policy coherence for sustainable development 17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development *Multi-stakeholder partnerships* 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships *Data, monitoring and accountability* 17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts 17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

*Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change

ANNEX 2 SEMI-STRUCTURE INTERVIEWS

Introducing the project and the survey to potential interviewees/ By mail or phone call.

Thank you very much for this opportunity to speak with you. My name is Sandra Guevara, PhD Candidate at the Applied Economics Department, Valencia University, directed by Professor Isabel Pla Julian. I am carrying out a research on strategies which combine gender and sustainability in the Navarre province, which includes interviews to learn about the public and private initiatives to advance on the environmental performance of the firms/organizations and how it complements or interacts with the gender equality practices.

You have been selected to participate <as considered a key actor in….>/ <as a sample of your sector>. The interview includes specific questions and reflections on topics such as the impact of the participation in related programs carried out by the public sector, the challenges faced to improve the environmental performance of the firm or the gender equality practices implemented. It will take approximately 30 minutes and your participation is entirely voluntary. Your answers will be completely confidential; we will not share information that identifies you with anyone. All data will be stored in a secure location accessible only to the researcher. Any questions regarding study and the interview are welcome.

KEY ACTORS

Entity

Case

Contact

- ✓ Role in the Case
- ✓ Reference to the decision making process.
- ✓ Perception about the strategies to foster sustainable development in the region.

- ✓ Impact of the program: environment, economic performance, eco-innovation, workers, equality, society.
- ✓ The gender perspective with regard to the case
- ✓ Challenges due to the program itself or the political context
- ✓ Possible alliances with other sectors.

ENTERPRISES NAVARRA

Sector & Activity

Employees

Contact **Telephone number**

1. THE ENVIRONMENT

1.1 Have you participated in any of the following programs?

Environment-Enterprise Program □ Yes □ No

InnovaRSE System □ Yes □ No

Comments

_____
_____
_____

1.2 Does your enterprise have any environmental strategy, environmental management system certificate/seal or an ESR strategy?

□ Yes □ No □ In process

Which one?

_____

1.3 How did you learn about the program?

□ Official CEN´s website

□ Official CRANA´s website

□ Consultant

□ Media

□ Other _____

1.4 What impact does any of these strategies have? Please value from 0 to 10, being 10 the highest positive impact.

Economic benefits	
Competitivity, branding	
Innovation stimulus	
Access to funds	
Better relations with the government	
Better labor climate	
Local Environmental impact	
Occupational Safety	
Improved gender equality	
Better relationship with clients	
Improved community conditions	

1.5 Have you developed any eco-innovation activity? On your own or with official support?

_____
_____
_____

2. GENDER EQUALITY

2.1 Proportion of feminine presence in the enterprise? □ Yes □ No

□ 75% - 100% □ 50% - 74-% □ 30 % - 49%

□ 10 - 29% □ Less than 10%

2.2 Proportion of women in decision making levels?

□ 75%- 100% □ 50% - 74-% □ 30 % - 49%

□ 10 - 29% □ Less than 10%

2.3 ¿Level of participation of women in R&D at innovation activities?

_____
_____
_____

2.4 Does your Enterprise have an Equality plan, conciliation plan or similar practices?

Which one?_____

2.5 Please comment on the Impacts of such a strategy or practice

_____
_____
_____

3. ROLE OF THE INSTITUTIONS/ INSTITUTIONAL ARRANGEMENTS

3.1 Would you implement any ESR strategy without governmental support?

□ Si □ No

3.2. How do you value the institutional support to eco-innovation in the region?

_____
_____
_____

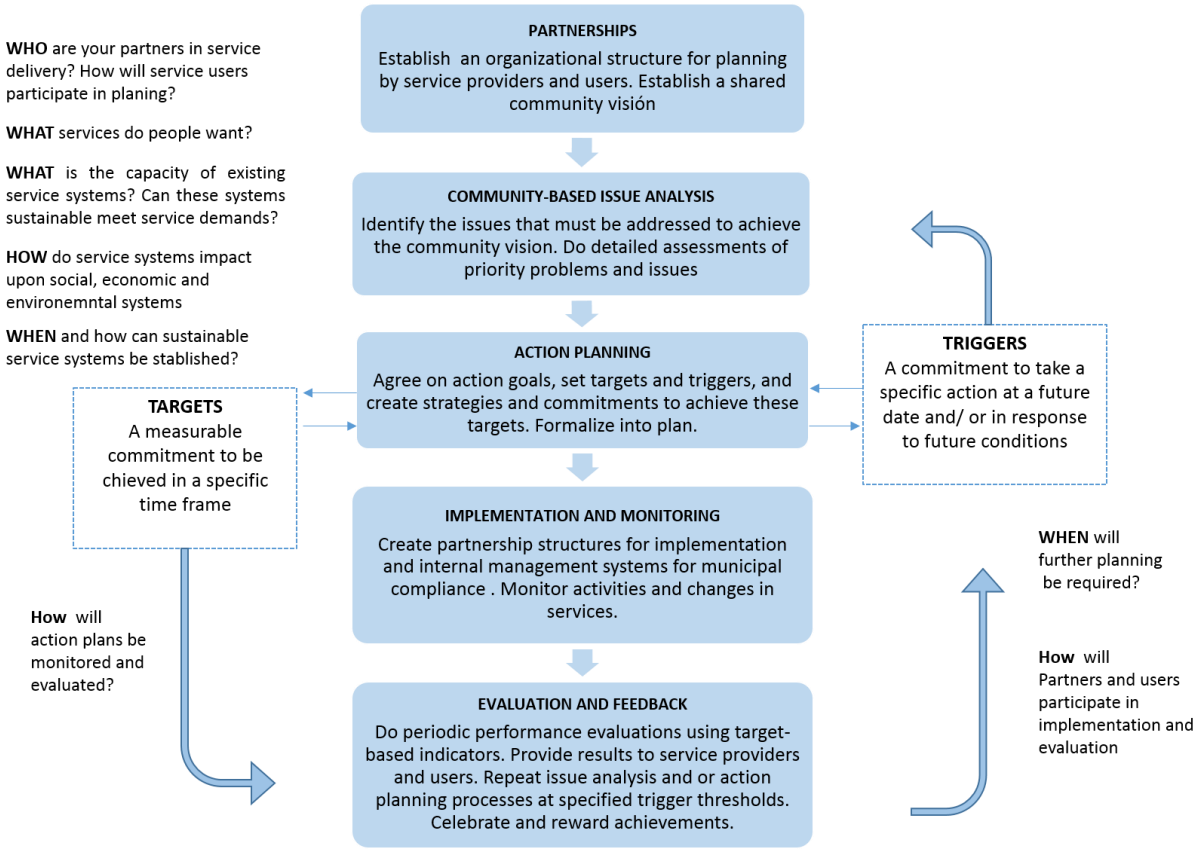
3.3 How do you value the public-private partnership for fostering sustainable development in the region?

_____
_____
_____

What other alliances do you consider necessary to improve your economic, social and environmental performance?

_____
_____
_____

ANNEX 3 ELEMENTS OF SUSTAINABLE DEVELOPMENT AND PLANNING



Source: The International Council for Local Environmental Initiatives (ICLEI)

ANNEX 4 CIRCULAR ECONOMY ROADMAP

european Commission

ROADMAP			
TITLE OF THE INITIATIVE	Circular Economy Strategy		
LEAD DG – RESPONSIBLE UNIT	ENV (A1, A2, A3, F1), GROW	DATE OF ROADMAP	04 / 2015
This indicative roadmap is provided for information purposes only and is subject to change. It does not prejudge the final decision of the Commission on whether this initiative will be pursued or on its final content and structure.			

A. Context and problem definition

(1) What is the political context of the initiative?

(2) How does it relate to past and possible future initiatives, and to other EU policies?

(3) What ex-post analysis of existing policy has been carried out? What results are relevant for this initiative?

(1) This initiative is meant as a direct contribution to the objectives pursued to give a new boost for Jobs, Growth and Investment and placed within the wider context of the Commission's commitment towards sustainable development. Moreover, eco-industries and eco-innovation currently supply a third of the global market for green technologies, worth a trillion euro and expected to double by 2020. This initiative aims to reinforce this trend, thus contributing to green growth and to other EU priorities such as the work towards developing a Resilient Energy Union with a Forward-Looking Climate Change Policy.

In July 2014, the Commission adopted a Circular Economy Package, including a "chapeau" Communication "Towards a circular economy: a zero waste programme for Europe"[1], accompanied by communications on sustainable buildings[2], green employment[3], SMEs[4], and a legislative proposal for the review of waste legislation[5]. The latter specifically was in response to the legal obligation to review the targets of three Directives: the Waste Framework Directive (WFD), the Landfill Directive, and the Packaging and Packaging Waste Directive (PPWD)[6]. In its 2015 Work Programme, the Commission announced the intention to withdraw the 2014 proposal on Waste Review (the withdrawal was finalised on 25/02/2015) and to replace it with a new, more ambitious proposal by end 2015 to promote the circular economy. Two main reasons have motivated this withdrawal.

Firstly, the overall approach presented in July 2014 had a rather exclusive focus on waste management, without appropriately exploring synergies with other policies - clear examples of such policies are product policies or the development of well-functioning markets for secondary raw materials. It is therefore important to step up the ambition by looking more concretely at waste management on the one hand, and related key aspects of the value chain, which are essential in order to "close the loop" of the circular economy, on the other hand.

Secondly, as far as the waste proposal is concerned, the Commission will examine, in particular, how to make this proposal more country specific, and how to improve the implementation of waste policy on the ground. To that effect, the Commission will look more closely in particular into existing problems of non-compliance which is essential to ensure effective implementation.

The new initiative therefore aims to establish a framework to overcome shortcomings and create conditions for the development of a circular economy. This will require a clear and ambitious political vision combined with effective policy tools that can drive real change on the ground.

(2) A number of existing policy initiatives are related to the circular economy. They include:

- The body of existing legislation on waste, including in particular the Waste Framework Directive (2008/98/EC), the Landfill Directive (99/31/EC) and the Packaging and Packaging Waste Directive

[1] COM (2014) 398 final
[2] "Resource efficiency opportunities in the building sector", COM (2014) 445
[3] "Green Employment Initiative: Tapping into the job creation potential of the green economy", COM(2014) 446
[4] "Green Action Plan for SMEs", COM (2014) 440
[5] For the 2014 proposal, see COM (2014) 397 final: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014PC0397
[6] Directive 2008/98/EC of 19 November 2008 on waste, OJ L 312, 22.11.2008, p. 3, Directive 99/31/EC of 26 April 1999 on the landfill of waste, OJ L 182, 16.07.1999, p. 1 and Directive 94/62/EC of 20 December 1994 on packaging and packaging waste, OJL 365, 31.12.1994, p.10

(94/62/EC)

- Europe 2020 Strategy for smart, sustainable and inclusive growth, 2010-2011[7] in particular the flagships Resource Efficient Europe, Industrial Policy for the Globalisation Era and Innovation Union.
- The Seventh Environment Action Programme, 2013[8]
- Horizon 2020: The Framework Programme for Research and Innovation
- Roadmap to a Resource-efficient Europe, 2011[9]
- The Bioeconomy Strategy[10]
- Raw Materials Initiative[11] and the European Innovation Partnership on Raw Materials[12]
- European Innovation Partnership on Water[13]
- European Innovation Partnership on Agricultural productivity and sustainability
- Blueprint for Forest-based Industries[14]
- Consultative Communication on the sustainable use of phosphorus, 2013[15]
- Commission's Communication on Resource Efficiency Opportunities in the Building Sector
- Sustainable Consumption and Production and Sustainable Industrial Policy (SCP/SIP) Action Plan, 2008[16]
- Eco-innovation Action Plan, 2011[17]
- Single Market for Green Products 2013 and Product/Organisational Environmental Footprint pilot 2013 - 2016
- Green Paper on a strategy on plastic waste in the environment, 2013[18]
- Communication "For a European Industrial Renaissance", 2014
- Communication "Social Business Initiative (SBI) - Creating a favourable climate for social enterprises, key stakeholders in the social economy and innovation", 2011[19]
- A European Consumer Agenda, 2012[20]
- The revised Common Agricultural Policy

The Green Action Plan For SMEs: Enabling SMEs to turn environmental challenges into business opportunities [21]

(3) Available ex-post analysis of existing policy:

Product design and use phase:

- Ecodesign and Energy Labelling legislation (Technical report: Evaluation of the Energy Labelling Directive and specific aspects of the Ecodesign Directive, 2014)
- REFIT / Evaluation of EMAS and Ecolabel (Study supporting the evaluation of the implementation of the EU Ecolabel Regulation), 2015 (ongoing); Study supporting the evaluation of the implementation of the EU Eco-Management and Audit Scheme (EMAS), 2015 (ongoing)

Waste:

- Ex-post evaluation carried out by the EEA;
- Ex-post evaluation of five Waste Stream Directives (including the Packaging and Packaging Waste

[7] COM(2010) 2020, COM(2011) 21
[8] Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Acti Programme to 2020 'Living well, within the limits of our planet', OJ L 354, 28.12.2013, p. 171–200.
[9] COM(2011) 571
[10] COM(2012) 60
[11] COM(2008)699 and COM(2011) 25
[12] COM(2012)82
[13] COM(2012) 216 final
[14] SWD(2013) 343
[15] COM(2013) 517
[16] COM(2008) 397
[17] COM(2011) 899
[18] COM(2013) 123
[19] COM(2011) 682 final (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0682:FIN:EN:PDF)
[20] COM (2012) 225
[21] COM/2014/0440 final

Directive and partly referring to the Waste Framework Directive), 2014[22]

- European Court of Auditors 2012 report[23] on the use of Regional funds for municipal waste management, including several recommendations to improve the existing EU legislation as well as its effective implementation.

What are the main problems which this initiative will address?

Global competition for resources is increasing. Supply concentration of resources, particularly critical raw materials outside the EU, makes our industry and society dependent on imports and vulnerable to high prices, market volatility, and the political situation in supplying countries.

By maintaining the value of the materials and energy used in products in the value chain for the optimal duration and by minimising waste and resource use, the circular economy can promote competitiveness, innovation, a high level of protection for humans and the environment, and bring major economic benefits, thus contributing to growth and job creation. It can also provide consumers with more durable and innovative products that provide monetary savings and an increased quality of life.

The circular economy requires action at all stages of the life cycle of products: from the extraction of raw materials, through material and product design, production, distribution and consumption of goods, repair, remanufacturing and re-use schemes, to waste management and recycling. All these stages are linked (for example, use of certain hazardous substances in the production of products can affect their recycling potential, if the substances become subject to regulatory requirements at later stages, or the quality and value of recycled materials, if not addressed adequately), and improvements in terms of resource and energy efficiency can be made at all stages.

Promoting the circular economy also requires demand-side measures. The development of innovative solutions and new markets also need to be supported as a key element of the circular economy.

Important barriers to the circular economy arise from market failures (e. g . weak price signals due to lack of internalisation of externalities on some commodity markets , split incentives for actors across the value chain, lack of information for investors or consumers, etc.), but also governance and regulatory failures, some of which can be linked to EU legislation (e.g. some ineffective or insufficient policy tools, unaddressed implementation problems, lack of coherence between policy instruments, creation of administrative burden and barriers, lack of harmonised standards, etc.).

This initiative aims at tackling some of those barriers through a comprehensive and coherent approach that fully takes into account interactions and interdependence across the whole value chain, rather than focusing exclusively on one part of the economic cycle.

Who will be affected by it?

The circular economy will bring change for:

- EU citizens and consumers as users of products and services;

- All economic actors across the product value chains (resource extraction / mining sector, product designers, manufacturers, distributors, retailers, consumers, repair / reuse businesses, waste management sector)

- public administrations.

All these actors will also be affected as producers of waste.

Is EU action justified on grounds of subsidiarity? Why can Member States not achieve the objectives of the proposed action sufficiently by themselves? Can the EU achieve the objectives better?

EU added-value and subsidiarity will be key guiding principles to select measures to pursue. In this context, potential impacts on the internal market will be an important factor. Non-harmonised national measures on circular economy may threaten the functioning of the internal market thus potentially creating a strong rationale for action at EU level. At the same time, the internal market can provide scale and scope to the introduction and uptake of new solutions. In this context, the enhanced role of public procurement should be also examined. Moreover, some of the problems to be addressed might have direct links with EU product and substance legislation and might not be overcome without adequate action at EU level – for example through regulatory action or clarification of existing legislation. On the other hand, certain other issues don't need EU intervention and can be addressed by Member States.

Regarding waste management, an explicit mandate in EU waste legislation requires a review of existing targets. Moreover, effective design of recycling legislation with smart targets will provide signals and legal certainty to economic operators, allowing smooth functioning of the single market and a level-playing field in terms of environmental protection and resource efficiency. In addition, poor waste management can lead to

[22] http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=CELEX:52014SC0208
[23] http://www.eca.europa.eu/Lists/ECADocuments/SR12_20/SR12_20_EN.PDF

transnational harmful environmental impacts, such as additional emissions of greenhouse gases and air and water pollutants.

B. Objectives of the initiative

What are the main policy objectives?

The main policy objective is to create conditions for the development of a circular economy by addressing barriers and enabling the development of new markets and business models. This objective should be pursued in a more ambitious, concrete and effective way, in areas where the EU has a clear added value, thus bringing in economic, social, and environmental benefits resulting from optimised use of resources in the EU: in particular, the creation of jobs and economic value in the EU, an improved situation for consumers, increased access to raw materials, avoided pollution, and slower resource depletion.

This includes a more effective approach on waste, taking into account the discrepancies between Member States in terms of waste management and addressing the problems on the ground, and aiming in general at decreasing residual waste while increasing the use of secondary raw materials in the EU economy.

On the circular economy at large, an action plan will identify key measures across the value chain. Specific areas of intervention could include, but are not limited to: materials production and use, product design, distribution, use (consumption) phase, public procurement, labelling and product information, waste management, development of markets for secondary raw materials (e.g. organic fertilizers), improving framework conditions in priority sectors such as sustainable chemical production, bio-economy, extraction of secondary raw materials, food, construction, plastics, critical raw materials (including phosphorus), water use, and improving cross-sectoral cooperation, e.g. by the promotion of industrial symbiosis, repair and re use and enabling the development of new business models. Illegal flows of waste, including hazardous waste, are also a particular concern.

Research and innovation will need to be encouraged in order to effectively take these opportunities forward.

An effective financing and support framework for the circular economy will need to underpin these objectives.

Finally, the strategy should allow appropriate monitoring of progress.

Do the objectives imply developing EU policy in new areas?

In principle no, to be confirmed in the light of the options identified.

C. Options

(1) What are the policy options (including exemptions/adapted regimes e.g. for SMEs) being considered?

(2) What legislative or 'soft law' instruments could be considered?

(3) How do the options respect the proportionality principle?

The new approach to the circular economy will contain a number of elements with different level of maturity. It will consist of two main elements: (i) a revised proposal on the waste review, (ii) a Communication explaining the rationale behind the approach accompanied by an action plan addressing the full circle and including a list of actions in each pillar of intervention with precise deadlines to be followed-up by the Commission. A broad spectrum of policy options will be assessed with a view to identifying areas for priority action. Options analysed will include a mix of legislative, non-legislative, and financial instruments which are best suited to each pillar of intervention. Each option shall be assessed on the basis of effectiveness, subsidiarity, and proportionality with regard to the main policy objective in order to ensure that only those options that are likely to make a significant contribution to the objective are retained. Barriers to the circular economic model arising from EU legislation will be examined and addressed as a matter of priority.

D. Initial assessment of impacts

What are the benefits and costs of each of the policy options?

The precise costs and benefits of single options will be further assessed once preparatory work on the individual actions progresses.

Could any or all of the options have significant impacts on (i) simplification, (ii) administrative burden and (iii) on relations with other countries, (iv) implementation arrangements? And (v) could any be difficult to transpose for certain Member States?

(i) simplification: The proposed actions can have a positive effect through a better alignment and streamlining of the implementation and interpretation of EU waste legislation in particular, and possibly other EU legislation.

(ii) administrative burden: The Waste Review can result in simplification of reporting requirements under EU waste legislation.

(iii) relations with other countries: Resource, material and product value chains are increasingly global. The effect on such value chains will need to be assessed, both in terms of third country access to the EU market and of EU exports to their markets. This includes the need to avoid the establishment of non-tariff barriers.

(iv) implementation: The proposed actions can support improved implementation through EU funding, better compliance promotion and simplified legislation. Challenges in implementation and new business opportunities can be linked to effective communication towards all stakeholders, availability of finance, availability of data and information, or to specific policy instruments.

(v) transposition: Waste management legislation can be challenging to those EU Member States which lag behind in implementation (particularly where the implementation gap is created by administrative or political shortcomings or a discrepancy between reported data and actual performance, e.g. as regards recycling rates).

(1) Will an IA be carried out for this initiative and/or possible follow-up initiatives?

(2) When will the IA work start?

(3) When will you set up the IA Steering Group and how often will it meet?

(4) What DGs will be invited?

(1) An existing IA will be used as a basis for the revised proposal on waste. Where necessary, this will be complemented with additional data and information. All additional measures presented in the context of the action plan will be impact-assessed, as appropriate and fully in line with better regulation principles, before their adoption.

(2) An IA for the revised proposal on Waste Review was finalised in 2014. Any complementary analysis will be carried out in the course of 2015.

(3) An inter-service Steering Group was established in January 2015.

(4) SG, ENV, GROW, RTD, ENER, SANTE, AGRI, JUST, ECFIN, CLIMA, REGIO, JRC, EMPL, ESTAT, TAXUD, TRADE, COMP.

(1) Is any option likely to have impacts on the EU budget above € 5m?

(2) If so, will this IA serve also as an ex-ante evaluation, as required by the Financial Regulation? If not, provide information about the timing of the ex-ante evaluation.

(1) Yes, circular economy goals would most likely have to be promoted through various financing sources, including EU funding instruments.

(2) For measures proposed in the action plan that have an impact on the EU budget, an ex-ante analysis will be carried out as appropriate before their adoption.

(1) What information and data are already available? Will existing IA and evaluation work be used?

(2) What further information needs to be gathered, how will this be done (e.g. internally or by an external contractor), and by when?

(3) What is the timing for the procurement process & the contract for any external contracts that you are planning (e.g. for analytical studies, information gathering, etc.)?

(4) Is any particular communication or information activity foreseen? If so, what, and by when?

(1) An array of studies on circular economy (and specific priority areas) exists and can be readily used as a basis for analysis. Examples include:

- SOER 2015 and its sections on resource efficiency and global competition for resources.
- Studies from the Ellen Macarthur Foundation
- JRC foresight study "2035: Paths towards a sustainable EU economy - Sustainable transitions and the potential of eco-innovation for jobs and economic development in the EU eco-industries 2035" (soon to be published)
- Scoping study to identify potential circular economy actions, priority sectors, material flows & value chains, coordinated by Institute for Environmental Studies Vrije Universiteit and Policy Studies Institute at the University of Westminster, 2014.
- The EEA Environmental Indicator Report, 2014.
- Study on modelling of the economic and environmental impacts of raw material consumption (2014):

5

macroeconomic modelling of efforts to improve resource efficiency.

- "Economic Analysis of Resource Efficiency Policies" (2011): examining 120 resource efficiency policies were identified in 23 countries
- Cases of implementing resource efficient policies by the EU industry: 21 cases drawn from eight industrial sectors.
- Macroeconomic modelling of sustainable development and the links between the economy and the environment (2011): Marginal abatement cost curves are developed, showing that resource use can be reduced with benefits in terms of jobs and growth.
- Assessment of Scenarios and Options towards a Resource Efficient Europe (2014): This study identifies the potential for improving resource efficiency in the built environment. This includes assessing the economic, social and environmental effects of technical efficiency improvements from both single technical options and more system wide changes.
- Enhancing comparability of data on estimated budgetary support and tax expenditures for fossil fuels (2014): This report is developing a harmonized approach to the identification and quantification of government support to fossil fuels and applying this approach to all 28 EU Member States. It is building on previous studies, i.e. by the OECD.
- Steps towards greening in the EU: Member States' resource efficiency policies (2013): The study reviews environmental policy in the Member States during 2011-2012. It examines a number of areas of priority in the context of Resource Efficiency and the Europe 2020 Strategy.
- The Number of Jobs Dependent on the Environment and Resource Efficiency (2012): Study explores how 'greening the economy' can boost job creation in areas directly connected to the environment such as conservation, waste, water and air quality.
- Identification and mitigation of the negative impacts of EU demand for certain commodities on biodiversity in third countries: http://ec.europa.eu/environment/nature/pdf/study_third_countries.pdf.
- McKinsey, "The Growth Within – a shift towards a circular economy as a way forward for Europe's troubled economy", ongoing project (2014-2015).
- Issues of Financing for resource efficiency/promotion of a circular economy as a follow-up to the Resource Efficiency Roadmap Communication and the Resource Efficient Finance Roundtable:
    - Impact of accounting rules and practices on resource efficiency in the EU (2015, just finalised): The study analyses whether existing accounting rules can affect companies' decisions about investing in resource-efficient assets or selling more resource-efficient products.
    - Resource efficiency and fiduciary duty of investors (to be finalised Sept/Oct 2015): The study analyses how resource-related issues are currently included in the fiduciary duties of institutions investing on someone else's benefits, so as to more properly reflect investment risks, and will develop recommendations on whether and how this should be done in the future.
    - Potential of green bonds as a way to bridge the supply-demand gap between the debt capital markets and green investment projects: study planned for 2016.
    - Natural Capital Accounting pilot under the Mapping and Assessment of Ecosystems and their Services initiative (MAES report about to be finalised)
    - Corporate Natural Capital Accounting work under the EU Business and Biodiversity platform
    - Study on modelling of the economic and environmental impacts of raw material consumption (2014): This report provides a quantitative analysis of different resource productivity (RP) targets for the EU.
    - State-of-play of national consumption-based indicators (2013): Report on the state of the art in the development of footprint-type indicators for materials, water, land and carbon for use on the national level.
- The Strategic Implementation Plan of the European Innovation Partnership on Raw Materials
- The report on Critical Raw Materials for the EU
- The report of the European Rare Earth Competency Network (not yet published)
- The study on the competitiveness of the European non-energy extractive industries and recycling industries (not yet published)
- Study on waste as a resource
- Study on industrial symbiosis.
- Accelerating economic growth – delivery plan for 2014-15 (UK Innovation Agency): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/362263/Delivery_Plan_2014-15.pdf.
- All projects, studies and actions completed, on-going and recently started under the action plan of the

bioeconomy strategy Communication.

- Priority recommendations of the Ad-hoc Advisory Group of the Lead Market initiative and confirmed as well as currently being assessed for implementation by the Commission Expert Group on Bio-Based Products.
- The Thematic Document Publications of the Bioeconomy Panel and the Stating Committee on Agriculture.
- The current on-going mandated standardisation work for bio-based products that are scheduled for completion by 2016.
- Consumer market studies on environmental claims (to be published in Spring 2015) and legal guarantees (ongoing)
- Studies on food waste prevention (including costs):
  - Counting the Cost of Food Waste: EU Food Waste Prevention – UK House of Lords report
  - Strategies to achieve economic and environmental gains by reducing food waste (WRAP-NCE)
  - Summary report to MS Expert Group on Food Losses and Food Waste
  - Summary report of stakeholder WG on Food losses and food waste
  - Summary report of ad hoc meeting (28.10.2014) with stakeholders on the possible development of EU guidance to facilitate food donation
  - EU Economic and Social Committee: "Comparative Study on EU Member States legislation and practices on food donation"

In addition, building on the Innovation Union and Resource efficiency Flagship initiatives, Eco-innovation and Resource Efficiency projects have been funded in the context of the 7th Framework Programme for Research and Technological Development (FP7). Resulting from 2012 and 2013 calls for proposals, about 15 projects are addressing processes, products and services that support resource efficiency and the circular economy.

Within the new framework programme for Research and Innovation, Horizon 2020, under the Societal Challenge "Climate Action, Environment, Resource Efficiency and Raw Materials", actions relevant to resource efficiency, eco-innovation, and circular economy are addressed. As a result of the Horizon 2020 Work Programme 2014, five projects, for a total EU contribution of 43 MEUR, are addressing the topic of 'Moving towards a circular economy through industrial symbiosis', while the issue of going 'Towards a near-zero waste at European and Global level' is addressed by two coordination and support actions.

On waste, existing work on the waste review proposal (including an IA) will be used. In addition, the following sources are important:

- Several Commission and EEA studies and reports on coherence of waste legislation, implementation, inspections, and waste shipments. At present DG ENV is focusing on implementation with several compliance promotion initiatives about to be launched: second phase of compliance promotion initiative on municipal waste (the 1st one covered 10 MS, now will cover 8 MS); compliance promotion initiative on hazardous waste (covering EU28); study on separate collection systems for municipal waste; a pilot project on construction and demolition waste; a study on landfilling of bio waste as a follow-up to a recent Court ruling on the Malagrotta landfill; a study on waste shipments and efficiency of waste markets.
- Studies on Green Growth in 2010, on coherence of waste legislation in 2011, and on plastic waste in the environment, all addressing aspects of circular economy.
- 2013 Green Paper on a strategy on plastic waste in the environment.
- The fitness check study of current waste stream Directives (2014).

In addition, a number of ongoing initiatives will provide specific information, e.g. Interservice work on the review of Ecodesign and Energy Labelling Directives and the fitness check on Ecolabel and EMAS. Also, the study "A framework for Member States to support business in improving its resource efficiency" is examining measures applied by Member States and the potential to more widely apply best practice.

(2) Depending on the selected pillars of intervention and priority areas, any necessary additional information can be gathered internally or by an external contractor. If additional information has to be gathered on the waste review proposal, this could be done through the existing framework contract with the consulting team that supported the preparation of the IA, with the support of the EEA and Eurostat.

(3) to be confirmed, see above

(4) to be confirmed

Which stakeholders & experts have been or will be consulted, how, and at what stage?
A number of stakeholders and experts consultations have already taken place, as listed below. In addition, appropriate stakeholder consultation will be carried out in the preparation for the new initiative, including an online consultation and a stakeholder meeting.

Previous consultations:

On the circular economy in general:

- European Resource Efficiency Platform (EREP), consisting of high-level politicians, business CEOs, academia and representatives of NGOs and civil society and their Sherpas. In the run-up to the circular economy package, four plenary meetings were held between 2012 and 2014; in parallel, meetings were held in three separate Working Groups dealing respectively with the circular economy / greening the economy (WG I), setting objectives and measuring progress (WG II) and framework conditions for investments in resource efficiency (WG III).
- Public Consultation on the Green Action Plan for SMEs, end 2013[24] and the ongoing Green Action Plan Task Force with representatives from business and environmental associations.

A Group of Experts on a 'Systemic approach to Eco-innovation to achieve a low-carbon, circular economy' has been set up within the Horizon 2020 Work Programme for 2014-2015, under the Societal Challenge 'Climate action, environment, resource efficiency and raw materials'. The Group includes experts from industry, research and public sectors, and delivered a report in March 2015 in the form of a roadmap for future actions and investments on systemic eco-innovation and the circular economy.

On waste:

- In-depth preliminary consultations of key stakeholders has been carried out to ensure a broad identification of challenges posed by the existing waste legislation and the options for addressing them
- Public stakeholder consultation on waste review, 2013[25]
- Committee of the Regions Outlook Opinion on waste review, 2013[26]
- Seminar focussing on SMEs, 2014
- Specific stakeholder consultation on Extended Producer Responsibility
- Green Paper on a strategy on plastic waste in the environment, 2013[27]
- Stakeholder consultation within the context of the ex-post evaluation of five Waste Stream Directives, 2014[28]
- Several stakeholders issued position papers.

On product design:

- Ecodesign Consultation Forum for eco-design related measures, recyclers

On markets for secondary raw materials:

- Meetings with Operational Groups of the Raw Materials Innovation Partnership
- Meetings of the Raw Materials Supply Group and the Forest-Based Industries Expert Group
- Stakeholders workshops within the study on the optimised cascading use of wood
- Public stakeholder consultation on certification of waste treatment facilities (2014)

  Meetings of the Fertilisers Working Groups and ad-hoc meetings supporting the preparation of a proposal for revision of the Fertilisers Regulation N° 2003/2003 and its report on impact assessment (cleared by the IA board – July 2014).

On specific sectors:

- Public consultation on sustainable buildings (July - October 2013)[29]
- REACH Review, 2013[30].
- Member States expert group on food waste ; with all stakeholders of the food chain in working group on food waste set up under the Advisory Group on the Food Chain and Animal and Plant Health:

---

http://ec.europa.eu/enterprise/policies/sme/public-consultation-green-action-plan/index_en.htm#h2-2

http://ec.europa.eu/environment/waste/target_review/consultation.htm

https://load.ec.europa.eu/consipdetail.aspx?folderpath=PNVR-VA015&id=22016

COM (2013) 123

http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=CELEX:52014SC0209

Results of the consultation:

http://ec.europa.eu/environment/archives/eussd/pdf/Outcome%20of%20Public%20Consultation%20on%20Sustainable%20Buildings.pdf

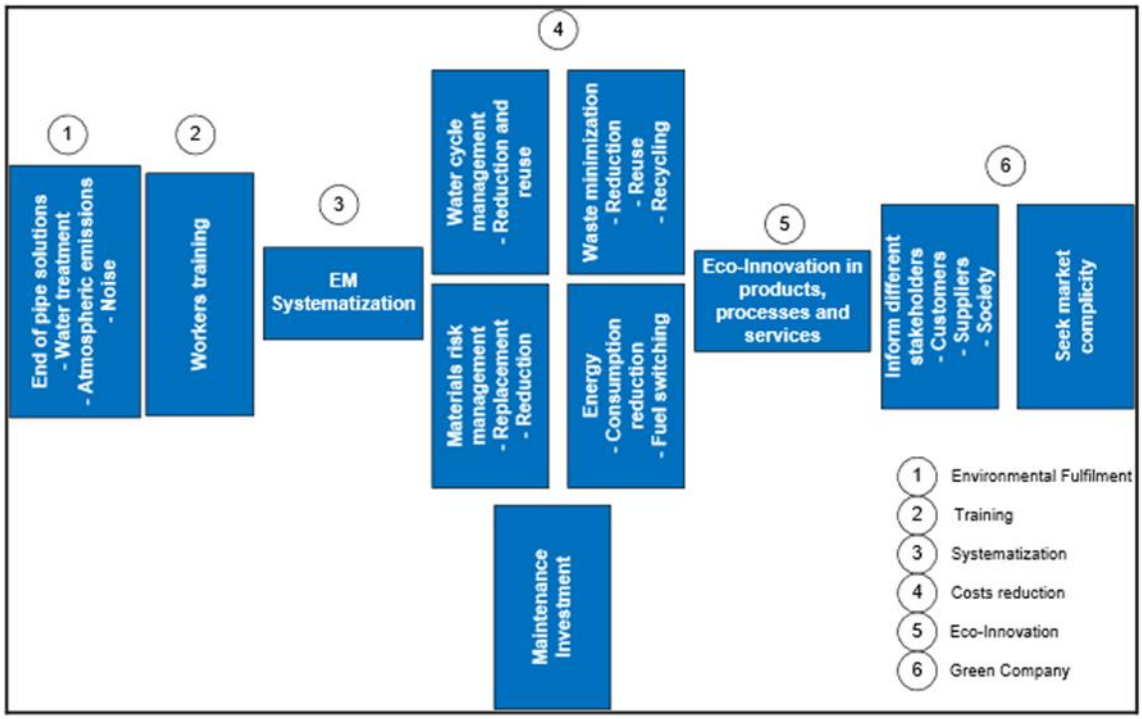
http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?qid=CELEX:52013DC0049&from=EN

- Summary report to MS Expert Group on Food Losses and Food Waste[31]
- Summary report of stakeholder WG on Food losses and food waste[32]
- Summary report of ad hoc meeting (28.10.2014) with stakeholders on the possible development of EU guidance to facilitate food donation[33]

- Public consultation on "the sustainability of the food system" (2013)[34]
- Critical raw materials (European Innovation Partnership on Raw Materials, Raw Materials Supply Group, European Rare Earth Competency Network)
  - Plastics (see waste above).
  - Bio-based industries.
  - Renewable Raw Materials Manufacturers/Suppliers.
  - Agriculture, forest-based and aquaculture as well as marine.
  - Energy and fuel.
  - Collection Systems, logistics and infrastructure management.
  - Cluster management including regional authorities.

[31] http://ec.europa.eu/food/safety/food_waste/eu_actions/member_states/docs/20141107_sum_tor_en.pdf
[32] http://ec.europa.eu/dgs/health_food-safety/dgs_consultations/docs/summary_20140508_en.pdf
[33] http://ec.europa.eu/dgs/health_food-safety/dgs_consultations/docs/20141028_summary_report_en.pdf
[34] Results of the consultation available at: http://ec.europa.eu/environment/archives/eussd/pdf/food_results.pdf

ANNEX 5 ENVIRONMENTAL MATURITY MODEL



Source: Ormazabal (2013)