

### SUSTAINABLE ENVIRONMENTAL POLICIES COHERENT WITH HUMAN DEVELOPMENT<sup>1</sup>

NATALIA MILLÁN ACEVEDO Plataforma 2015 y más

#### 1. INTRODUCTION

The capitalist system that characterises much of the world's economies is based on profitability and the accumulation of capital and therefore requires constant scientific and technological development of the productive system to promote increasingly greater demand and consumption up to a virtually unlimited production of goods and services (Kaplan, 1998). In this context, most development and economic growth strategies drive the rapid accumulation of physical, financial and human capital without considering that these models are based on excessive degradation of natural capital, biodiversity and ecosystems (Oxfam, 2011; UNEP, 2011; UNDP, 2011).

Since the 1990s, the capital allocation model has contributed to promoting this production system. A large proportion of investment was earmarked for construction, infrastructure, fossil fuels and financial assets, while scant resources were devoted to renewable energy, energy efficiency, public transport, sustainable agriculture, protection of ecosystems and biodiversity, and soil and water conservation (UNEP 2011; UNEP, 2010).

The failure to assign an economic value to the enormous benefits obtained from ecosystems has contributed to the loss of biodiversity and degradation of the environment (UNEP, 2010). However, it is important to consider the dangers of "commodifying" natural resources as it is not at all clear that the value of ecosystems can be measured from a strictly economic perspective.

Between 1970 and 2010, human consumption doubled as a result of population growth and increasing individual consumption (WWF, 2011). This exponential increase in consumption has also resulted in a significant loss of ecosystems and biodiversity and the depletion of natural resources, generating enormous risks and challenges for current and future generations (WWF, 2008; UNEP, 2011). According to WWF data (2008), if demands on the planet continue at the same pace, by the mid-2030s the equivalent of two planets will be needed to maintain the style of spending characterising global capitalist society.

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The consequences of this development and consumption model are leading to an "environmental crisis", a "development crisis" and an "energy crisis" that are all part of the same phenomenon and the same problem (UNEP, 2007). Several harmful consequences for the environment are posed by this paradigm: climate change, the extinction of species, loss of fertile land, desertification, decline in the amount of fresh water available for consumption and the accumulation of radioactive waste (UNEP, 2007).

There is a close link between inequality and environmental degradation (UNDP, 2011). The populations of the poorest countries are hardest hit by the consequences of environmental degradation despite having barely contributed to the problem (UNDP, 2011; UNEP, 2011; Oxfam, 2011). An illustrative example is the fact that countries with the lowest HDI have contributed the least to global climate change but have experienced the most pronounced decline in annual rainfall and the greatest increase in its variability adversely affecting agricultural production and the welfare of the population (UNDP, 2011). By contrast, developed countries typically have the highest per capita emission rates: an average inhabitant of a country with a very high HDI produces four times more carbon dioxide than a person from a country with a low, medium or high HDI and approximately 30 times more carbon dioxide emissions than a person from a low HDI country (UNDP, 2011).

Moreover, industrial and pharmaceutical activities have had a very harmful effect on aquatic ecosystems (UNEP, 2007). Unsustainable land use is causing environmental degradation which affects a third of the world's population through pollution, soil erosion, nutrient depletion, water scarcity, salinity and disruption of biological cycles (UNEP, 2007). The decline in biodiversity is associated with a loss of goods and services provided by ecosystems, with negative consequences for the communities that depend on this biodiversity (Vallejo, 2011).

Hence, the promotion of an extreme productivist model based on endless consumption is primarily responsible for environmental degradation and the human vulnerability resulting from it. The drastic loss of biodiversity and the increase in carbon dioxide emissions are the cause of incalculable externalities and challenges for the entire planet. In other words, to the extent that the environment has become a global public good, the activities of a group of countries have put the whole of humanity at considerable risk.

This article aims to describe environmental policy analysis in the construction of a Policy Coherence for Development Index (PCDI) developed by  $Plata forma~2015~y~m\'as^2$ . Following this introduction, the second section explains the basic elements to be considered when

<sup>&</sup>lt;sup>2</sup> For further information on the rationale, construction and approach of the PCDI see Martinez Osés, 2013; Gil, 2014.



analysing environmental policies and is in turn followed by sections describing the theory underpinning the four policies comprising the block of environmental policies included in the PCDI: energy policy, biodiversity policy, rural development and agricultural policy and fisheries policy. The paper concludes with a few thoughts on the need to create tools to promote change in economic and productive systems that have not only become unsustainable from an environmental perspective but are also incompatible with the sort of equitable human development able to guarantee the rights of all the world's people.

# 2. PRIORITY HUMAN DEVELOPMENT FACTORS TO CONSIDER WHEN ANALYSING ENVIRONMENTAL POLICIES

The planet is facing a serious global emergency which can only be addressed by a complex set of economic, scientific and educational policy decisions that are both imperative and complementary, none of which will be effective on its own (Vilches et al., 2011). Necessary measures include the development of political programmes that ensure environmental audits, the protection of biological and cultural diversity, the promotion of sustainable technologies through R&D policies and a green tax policy that penalises polluting consumption patterns and activities (Vilches et al., 2011). In this same vein, in order to combat hunger—which should also be considered a global problem—there is a need to create a global system of food stocks, increase transparency in commodity markets, eliminate certain agricultural subsidies that put developing countries at a disadvantage, establish clear rules when it comes to restricting imports into rich countries and regulate financial speculation on foodstuffs (Oxfam, 2011).

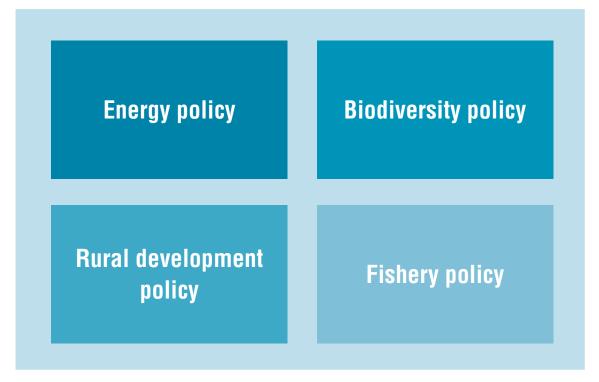
One of the basic characteristics of the environment is its transversality. In other words, environmental policies can be defined as the set of political efforts aimed at conserving the natural basis of human life and achieving sustainable development. Hence, a basic part of the environmental approach is the principle of coherence which means coordinating environmental policy with other departments and integrating environmental issues into other fields. Environmental impacts must therefore be taken into account in all government action, especially in the scope of industry, production and economy. The PCDI that *Plataforma 2015 y más* is developing incorporates an environmental dimension that is essential in order to analyse the different policies that make up the index.

Where the environment is concerned, four specific policies were defined for analysis: i) energy policy, referring to the energy sources of different countries analysing the percentage of polluting fossil fuels used versus clean renewable energy, the energy status of the population and access to energy



supply services, the overall pollution resulting from energy production and institutional mechanisms in place, i.e. ministries, laws or treaties created to improve energy provision; ii) biodiversity policy referring mainly to protection of biodiversity and areas with rich ecosystems, job creation in the domain of nature conservation, the signing of treaties on biodiversity and assumption of the consequences of public policies on biodiversity and natural resource degradation; iii) rural and agricultural development policy based on the concepts of food security and sovereignty, evaluation of the type of agriculture which countries promote, dependence on monocultures, inequality in the distribution and ownership of land and the prevalence of hunger; iv) fishery policy analysing the sustainability of fish production and consumption, the type of work generated, the economic gap between men and women in the fisheries sector and marine protected areas.

Figure 1. The four policies under analysis in the environmental block



Source: own data

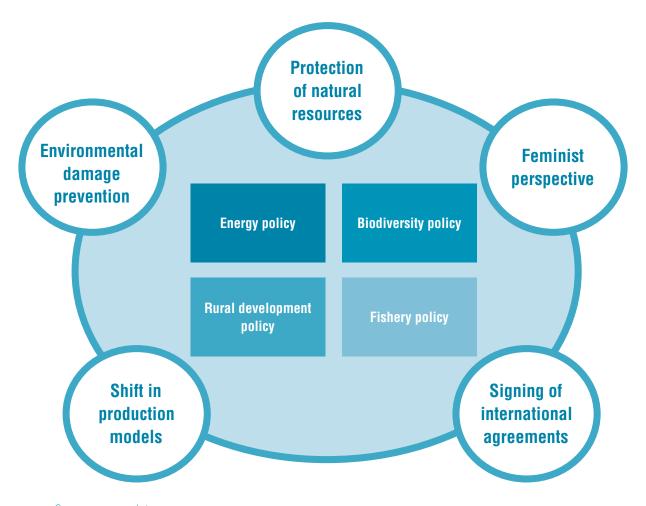
One of the most difficult parts of building the PCDI is defining what factors to assess to determine whether a policy is coherent with human development. This determination is based on the concept of sustainable human development and includes complementary factors such as biomimicry and ecofeminism.

The first element to be considered is the concept of sustainability. One of the most accepted definitions of sustainability describes how societies



adapt their actions to the planet's ability to provide resources and bear the burden of pollutants over time while equitably meeting the needs of all people (Brundtland, 1987). In this regard, there are five elements that could be deemed to contribute to an environmental policy coherent with human development: i) promotion of a change in the energy (and production) model leading to a gradual shift from fossil fuels to renewable clean energy; ii) protection of ecosystems and biodiversity; iii) implementation of actions to prevent and mitigate pollution and environmental degradation; iv) inclusion of feminist perspectives in public decision-making processes; v) signing of international agreements favouring global governance of global environmental goods.

Figure 2. Environmental policy elements that should be analysed from a sustainability perspective



Source: own data

Apart from this perspective, there are important additional concepts to consider when analysing environmental policies, one of which is biomimicry. Biomimicry maintains that human life is part of a broad and complex ecosystem to which human organisations must adapt. We need to move



towards renewable energy sources (in the same way our planet does), close natural cycles so as to generate as little waste as possible (and any waste created should be recyclable), reduce toxic waste and materials that nature cannot dispose of on its own, reduce consumption in affluent societies, promote local consumption, reduce the pace at which humans move in the world and promote collective and cooperative actions (González, 2011: 18).

Another extremely rich and relevant approach to environmental policy is ecofeminism, critical of the capitalist patriarchal symbolic order and based on an alternative paradigm that puts conservation of human life at the centre (Herrero, 2012). Ecofeminism underscores the fact that life and economic activity would not be possible without the goods and services that the planet provides or without the work of women who are responsible for social reproduction. Unlike capitalist society where production hinges on economic profitability, ecofeminism proposes prioritising activities related to the protection and reproduction of human life (Herrero, 2012). Thus, feminist economics propose putting the maintenance and protection of human life at the centre as a way to achieve a more just and sustainable society. The aim is to develop lifestyles built upon collective care, recognising that people are vulnerable and interdependent beings.

In short, the aim is to analyse environmental policies taking into account the human development perspective and the sustainable development elements raised in this section. From this vantage point, each policy will be evaluated based on five dimensions: economic, social, governance, environmental and gender.

A broad multi-dimensional analytical framework has been developed to deal with the complexity of the social and environmental phenomena affecting public policy and the quality of life of people throughout the world. This is an essential theoretical exercise needed to clarify the approach, perspective and vision of the PCDI we are building. However, the policies under analysis cannot be expected to individually incorporate all of these elements. Just as with any other indicator-based instrument, the PCDI will have certain analytical limits directly related to the indicators used to evaluate policies. When building a measurement tool, the availability of information—especially regarding the variables associated with some of the approaches mentioned—is one of the limitations to accepting, in its entirety, the approach proposed in the theoretical substantiation of the PCDI.

Lastly, it is worth recalling that no public policy is an end in itself but rather a vehicle through which to promote human development, improve living standards, safeguard health, reduce social and economic insecurity, protect nature and create a clean environment for the good of the planet. All these elements should be considered when studying environmental policies.



On the basis of these considerations, the following sections describe the vision of each of the environmental policies and the main elements to be considered in their analysis from a PCD perspective.

## 3- TOWARDS AN ENERGY POLICY COHERENT WITH HUMAN DEVELOPMENT

Energy supply policy is a key element for a country's economic, political and social development and is closely linked to the transition from subsistence agricultural economies to industrial service-based societies. It goes without saying that energy is a vital element in enhancing social and economic wellbeing. It is also a basic tool for combating poverty, human vulnerability and even inequality in many societies.

As has already been mentioned, energy generation based mainly on fossil fuels is inherently unsustainable (IAEA, 2008; Oxfam, 2011; UNEP, 2011; UNDP, 2011). Moreover, the burning of fossil fuels is mainly responsible for air pollution in our cities, regional acidification and the risk of climate change (IAEA, 2008). The unsustainable use of energy derived from fossil fuels also poses important social risks insofar as these processes produce extremely harmful pollutants affecting health (IAEA, 2008).

Therefore, an energy policy coherent with human development hinges on a change in the energy model (Barbero and Llistar, 2014). While this transition should be progressive, the shift to renewable energy would not only entail an economic commitment to a sustainable model but would also mean a reduction in carbon dioxide emissions that contribute to climate change and increase human vulnerability and social insecurity.

Moreover, it should not be forgotten that a strong institutional framework is essential for the development of a secure, reliable, efficient and sustainable energy system. In this context, the signing of regional and international treaties aimed at reducing the negative impacts (environmental, social, economic, etc.) of energy production in the global system represents a step forward towards comprehensive and multi-level governance.

Lastly, from a gender perspective it should be noted that women are particularly sensitive to energy supply since they are the ones who assume the responsibility of "taking care" of home and life. This is especially true in poorer countries and households where women traditionally engage in survival activities such as collecting firewood and water, cooking, and food processing and the movement of products.

Summing up, an energy policy that is coherent with human development should promote a change in the energy model towards renewable energy incorporating the institutional dimensions of global governance. It should



take into account that women are the caretakers and that inadequate access to energy particularly affects them, as they are responsible for protecting the home.

### 4. TOWARDS A BIODIVERSITY POLICY COHERENT WITH HUMAN DEVELOPMENT

Moving on from our analysis of energy policy, the next main pillar in the promotion of sustainability is the care and protection of our planet's natural resources.

Ecosystems provide innumerable basic services for the promotion of human development, three of which stand out among the rest: i) supply services mainly in the area of raw materials; ii) self-regulation services, i.e. natural processes that preserve environmental diversity such as pest control, soil formation and water purification; and iii) cultural services, including intangible benefits related with ecotourism, spiritual values, aesthetic values and environmental education (Gomez-Baggethun and Martín-López, 2010).

Loss of biodiversity poses important threats to freedom and human development related to food security, health, energy security, access to clean water, spiritual and social values in some cultures, freedom of choice and the preservation of raw materials. The sustainability of a country's economic and social model is contingent upon assessing all of the potential benefits arising from protecting biodiversity and the costs (direct and indirect) that the loss of this natural wealth over the short and long term would have for that country. From a global perspective, biodiversity degradation could pose a threat to the livelihood of over 3 billion people who depend on marine and coastal biodiversity, and that of 1.6 billion who depend directly on forest ecosystems (Convention on Biological Diversity, 2008).

Ecological economists have developed conceptual and methodological tools to identify and quantify ecosystem services in both biophysical and monetary terms. The underlying premise is that it is impossible to measure the value of ecosystems in economic and monetary terms alone. A systemic ecointegrator approach has been proposed to capture the complexity of the systems involved and the interrelationships between them (Figueroa, 2005).

In short, caring for ecosystems is vital for the conservation of the environment, the upkeep of ecosystems, preservation of the cultural values of indigenous communities and the resilience<sup>3</sup> of natural systems. The development of biodiversity programmes coherent with human development is contingent upon economic, social and governance policies geared towards conserving biological diversity and diminishing the social risks arising from changes in the environmental system.

<sup>&</sup>lt;sup>3</sup> The concept of resilience can be defined as the ability of a system to remain stable in the face of human or natural disturbances.



# 5. TOWARDS A RURAL DEVELOPMENT AND AGRICULTURAL POLICY COHERENT WITH HUMAN DEVELOPMENT

From the human development perspective presented here, today's problems of hunger, undernutrition, malnutrition and rural poverty, as well as those relating to the environmental unsustainability of the prevailing food production and consumption model, are a key part of the PCDI. In recent decades, agriculture has undergone a major transformation in an effort to enhance productivity in the face of greater competition, resulting in the progressive industrialisation of agricultural processes, less public intervention to protect crops and farmers, and an exponential increase in international trade (Ortega and Rivera, 2010). In this respect, the various national and international policies related to the production system, agricultural management, the distribution and use of land and food prices are having serious consequences for human security.

It is estimated that over the next four decades, most of the world's poor will still be living in rural areas (Windfuhr and Jonsén, 2005). Therefore, strategies aimed at reducing hunger and rural poverty require a new approach addressing the needs and rights of citizens, especially those living in rural areas. Our analysis of rural development policy is based on the concept of food sovereignty, a political approach developed by *La Via Campesina* in 1996 during the World Food Summit in Rome. While a number of different definitions of food sovereignty exist, this concept can be defined as "the right of peoples, communities and countries to define their own agricultural, labour, fishing, food and land policies which are ecologically, socially, economically and culturally appropriate to their unique circumstances. It includes the true right to food and to produce food, which means that all people have the right to safe, nutritious and culturally appropriate food and to food-producing resources and the ability to sustain themselves and their societies" (IPC, 2002).

The food sovereignty approach therefore covers a broad range of priorities and topics that can be summed up in five principles. According to studies conducted by Garcia (2003) and by Ortega and Rivera (2010), these principles are:

- Access to resources: foster and support individual and community access and control processes to natural resources while respecting the usage rights of indigenous communities with particular emphasis on access to resources by women.
- **Production models:** increase diversified local production while promoting and validating traditional models of agricultural production in an environmentally, socially and culturally sustainable manner.



- Processing and marketing: promote the rights of farmers, rural workers, fishermen, shepherds and indigenous peoples to sell their products to feed the local population. This entails the development of policies aimed at creating and supporting local markets where farmers sell their goods directly or with a minimum of intermediaries.
- Food consumption and the right to food: guarantee citizens' right to healthy, nutritious and culturally appropriate food from local producers and grown using ecological farming techniques.
- Agricultural policies: as mentioned above, the concept of food sovereignty is the political interpretation of production and consumption models that defend farmers' right to know, participate in and influence local public policies related to the production, distribution and consumption of food.

### 6. TOWARDS A FISHERY POLICY COHERENT WITH HUMAN DEVELOPMENT

Fisheries and aquaculture can play a key role in eliminating hunger, promoting health and reducing poverty in the world (FAO, 2014b). Indeed, fish is a highly nutritious food and an important source of protein and nutrients for many communities worldwide. In addition, fishing is a growing global activity that generates employment (direct and indirect) and provides a livelihood for millions of people worldwide (FAO, 2014b). In fact, in recent decades the world's supply of fish products for human consumption has outpaced the growth of world population (FAO, 2012).

In the case of developing countries, the fishing industry can be a great source of wealth and employment helping many communities to rise out of poverty. In fact, developing countries continue to lead the world in fishery exports (FAO, 2012). In addition, aquaculture has become one of the fastest growing production sectors of food of animal origin and it is estimated that in the near future the total production of capture fisheries and aquaculture will exceed that of beef, pork and poultry (FAO, 2012).

However, over and above the significant economic potential of fisheries, this policy must be analysed using a multidimensional and comprehensive approach consistent with the vision of human development on which the index proposed here is based.

According to FAO reports, the capacity of the fishing industry is significantly higher than the rate at which ecosystems can produce fish which means that this activity is contributing significantly to the loss of environmental resources and marine biodiversity (FAO 2000; FAO, 2012; FAO, 2014a). Globalisation and trade acceleration has led to a shift away from fish production towards exports and improving efficiency and competitiveness.



The exponential increase in fish consumption in the world has heightened pressure on the fishing industry resulting in more fishing vessels, equipment and industry. In addition, the mobility of fishing fleets and technological innovation has limited the ability of individual governments (especially in developing countries) to exercise real control over fishing pressure in their territorial waters.

This represents a change in paradigm coinciding with a gradual shift from artisanal to industrial fishing in the understanding that fishing is no longer an art but now lies within the realm of "fisheries science". This industrial fishing system has led to serious human development problems, mainly in the environmental and social fields.

First, pressure on marine waters has caused significant change in the structure of marine ecosystems, loss of marine biodiversity, many endangered species, waste in the form of discards and the loss of key marine habitats.

Secondly, the shift to fishery exports by some developing countries has led to major food security problems for local communities and increasing conflicts and clashes over access to fishing grounds. This fishery export approach adopted by some developing countries has also caused major food security problems for local communities in many poor countries.

A sustainable human development perspective calls for a different approach to fishing involving institutional and policy change at national and global level. According to the FAO Code of Conduct for Responsible Fisheries (FAO, 1995), the basic principles for the promotion of sustainable fishing are:

- Ecosystem-focused management.
- Protect sensitive species and habitats.
- Maintain stocks of all target species at a healthy level.
- Use selective fishing methods.
- Maintain biodiversity of other species associated with the fishery.
- Minimise energy consumption, use of chemicals and waste.
- Operate in a fair and responsible manner, both socially and economically.
- Always furnish information on the source of all fish from the point of capture to the point of sale.
- Promote sustainable aquaculture.



In short, the current fishery system aimed at improving competitiveness and efficiency is based on an economic and monetary approach to fisheries. In contrast, we propose an analysis of fishery policy from a multi-dimensional human development perspective that especially takes into account that all fishery activity must be environmentally and socially sustainable and equitable for all countries and communities directly or indirectly involved.

#### 7. CONCLUSIONS

The PCDI being developed by *Plataforma 2015 y más* is founded on the basic theoretical premise that human development is complex and multidimensional. It requires collective action at different levels and must be addressed transversally in all public decision-making processes.

As part of the post-2015 development agenda debate which proposes a cosmopolitan and structural view to tackle the problems of unsustainability, hunger, poverty, injustice and human insecurity, tools to supervise, monitor and provide accountability need to be developed to assess progress made in PCD, generate critical awareness among the public and to provide information to support civil society organisations in their lobbying and advocacy efforts.

The environmental policies touched upon in this paper demonstrate the environmental, social and human unsustainability of the economic and production system affecting natural resource policies. In addition, climate change, the degradation of ecosystems and loss of biodiversity have become real global problems beyond the territorial control of States and require collective action by stakeholders on different levels.

Environmental problems and their consequences have become an important issue and are calling into question the feasibility of the capitalist globalisation project. Of the different fields that would benefit from moving towards global governance, environmental management is perhaps the one in most urgent need of global responses to the energy, environmental and food crises created by the production and consumption-based model.

Therefore, the PCDI aims to analyse all the dimensions of environmental policies in its assessment of their consequences on the world's population (making no distinction between national and foreign populations), studying all countries whether developed or developing and under the assumption that the protection of rights, human security and sustainability must be the cornerstones of the design and implementation of any public policy.



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