

International financial and technical aid for Climate Change Adaptation in developing countries: the case of the Republic of the Maldives.

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Abstract:

This thesis deals with Climate Change Adaptation plans implemented in developing countries by international donors under the UN Framework Convention on Climate Change. The case study discusses the Climate Change Adaptation projects carried out in the Republic of the Maldives through the financial help and the technical know-how offered by the international community. The first question this thesis sets out to address concerns the main points of weakness of CCA plans implemented in the Maldives Island. To this end, I conducted interviews with four policy officers (World Bank, EuropeAid, Maldives Government) to obtain primary data to be compared with secondary data previously collected through a meta-analysis of various institutional reports. After highlighting what the main points of weakness are, I asked the four interviewees to formulate one policy recommendation to answer the second research question: how can Climate Change Adaptation assistance be made more effective and democratic? I then analysed these four policy options from a political ecology perspective to gauge the ecological and social impacts that these would have on CCA projects in developing countries.

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1. Introduction:

1.1 Aim of the study:

The aim of the present thesis research is to investigate the nature and the extent of financial and technical aid offered by the international community –that is, donor countries and international organizations- to developing countries for Climate Change Adaptation (CCA). In order to investigate this topic I decided to carry out a case study on the Republic of the Maldives to collect data on the points of weakness of CCA projects in this country. Thus, the research questions underpinning my thesis are the following:

- What are the main points of weakness of CCA projects financed by international donors in the Maldives?
- How can Climate Change Adaptation assistance be made more effective and democratic?

The final purpose of this thesis is to single out some lessons to be learned that could prove to be relevant to development practitioners in other developing countries as well. In particular, I will attempt to pinpoint how these lessons can be connected to the three main tenets of this course in human ecology –namely, *culture*, *power*, and *sustainability*-.

In the “Introduction” I will first offer an overview of the current state of CCA finance under the United Nations Convention on Climate Change (UNFCCC) and then present some information on the Republic of the Maldives. In the “Findings” I will explain what the main points of weakness of CCA in the Maldives are according to the interviewees and, then, in the “Discussion” I will put forward four main ideas expressed by the interviewees on how to make CCA more effective in developing countries.

1.2 CCA under the UNFCCC:

With the entry into force of the UNFCCC in 1994 the United Nations established an international structure for studying and addressing greenhouse gas emissions, promoting information and technology sharing, and cooperating for Climate Change Mitigation and CCA (UNFCCC, 2014). In the first years following the creation of this institution, the UNFCCC focused only on CCM, but later, with an increase of awareness and of observable effects of changes in the global climate system, international responses to climate change

have broadened from mitigation to encompass adaptation as a way of reducing the negative effects of changes in global climate patterns (IPCC, 2007). Furthermore, climate vulnerabilities are not evenly distributed around the world and historical responsibility is inversely proportional to vulnerability: namely, greatest vulnerabilities lie in countries that have contributed the least to historical greenhouse emissions (Dellink et al., 2008; Wisner, 2011). Consideration of the fairness of adaptation strategies is central in the attempt to legitimate the future of international action. Equity is one of the main tenets not only of the Framework Convention on Climate Change, but also of all international law. Most of developing countries in the UNFCCC debate post-2012 (year in which the Kyoto Protocol expired) are driven by perceptions of inequity in vulnerability and in the burden sharing of adaptation costs (Adger et al., 2006; Pielke, 1998).

In the course of the COP 15 in Copenhagen in December 2009, the major emitting countries agreed on the Copenhagen Accord stating “the need to establish a comprehensive adaptation programme including national support” with the aim of reducing vulnerability and building resilience in developing countries (Fujikura and Kawanishi, 2011; Mitlin and Satterthwaite, 2004). The issue of burden sharing of adaptation costs is an urgent international policy question. An answer to this sensitive question must draw from political, legal, and economic theory. Consequently, the UNFCCC chose as a normative theory in which to anchor the legal framework for allocating adaptation costs among Parties the principle of “Common but Differentiated Responsibilities and Respective Capabilities” (CBDR). Article 3 of the UNFCCC Convention reads as follows: “The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof” (UNFCCC, 2013).

The essence of this article is that developed countries are to show leadership in combating climate change and its adverse effects and the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change should be given full consideration. The parties are to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects and where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures

(Adger et al., 2006; Masika, 2002). From its inception the UNFCCC has used differentiation among parties to respond to challenges of equity in adaptation, much as it does in the context of the mitigation of GHG emissions. The convention distinguishes among “developed”, “developing”, and “least developed countries”; between “vulnerable” and “particularly vulnerable” countries; and among “Annex I”, “Annex II” countries, and “economies in transition” (den Elzen et al., 2005; Heltberg, 2007). The convention also draws a distinction among countries with different physical characteristics, highlighting the needs of small island countries, countries with low-lying coastal areas, countries prone to floods, droughts, and desertification, and countries with fragile ecosystems. Such differentiations are used for allocating responsibilities between groups (Grasso, 2007; Devereux and Sabates-Wheeler, 2004).

In practice, there is a similarity between the two sets of principles (i.e. responsibilities-capabilities) since historically larger polluters tend to be currently more wealthy countries. As for the “Differentiated Responsibilities principle”, this principle is underpinned by the “Polluter Pays Principle”, which is a key principle in domestic and international environmental policy and which is embodied in the Rio Declaration (Muller et al., 2007; Osbahr et al., 2008). This states that victims of pollution have a right to a certain acceptable state of the environment and that polluters must pay for measures to ensure that the environment returns to -or remains in- this acceptable state. If environmental quality cannot be returned to this state, as is the case for climate change impacts, the PPP may be extended to include the principle of compensation (Allen, 2003; McGregor, 2007). Here the polluter bears responsibility for compensating for the damage caused. This extension of the PPP draws on principles in international law, such as the principle of limited sovereignty which embodies the idea that states cannot cause harm to other states (Fujikura and Kawanishi, 2011; Cullet, 2007). As for the “Respective Capabilities Principle”, this second tenet of the ethical structure for CBDR stems from the same ethical principle upholding traditional Official Development Assistance (ODA). As a matter of fact, the provision of traditional ODA is rooted in humanitarian objectives –donating critical resources to alleviate poverty, famine, and other debilitating challenges– as well as the desire to prevent such dire conditions that populations may be pushed into taking drastic actions, such as rebellion, piracy, or other militaristic operations (Fujikura and Kawanishi, 2011; Behrens, 2008). Furthermore, the reasons why developed countries can have an interest in preventing natural disasters in the Global South can be traced back to population displacement and the

disruption of global supply chains.

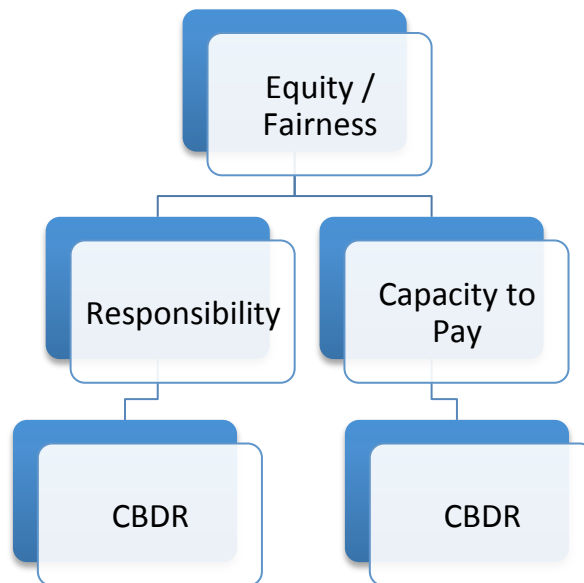


Fig. 1 General principles of fairness translated into policy actions (author's creation)

1.3 Assessing the scope of CCA:

In the course of the last decade, the scope of CCA has been broadened to include its linkage with development. As a matter of fact, adaptation is a continuum including both highly specialized activities in response to slow-onset events and to extreme weather events and activities that address the drivers of vulnerability and build response capacity. These two domains of action are just the two sides of the same coin. But is there a linkage between CCA and Official Development Aid (ODA)? The IPCC Fourth Assessment Report (2007) highlights that successful CCA in developing countries depends upon a broader development process. However, this practice soon runs into some complications because developing countries call for additional funding on top of their ODA allowance (Fujikura and Kawanishi, 2011; Gupta, 2007). There is widespread apprehension in developing countries that donors will divert their current ODA rather than providing additional funds necessary to increase resilience. This conundrum is referred to as “additionality” (Heyward, 2007; Davies et al., 2009). The idea underpinning the concept of additionality is that developing countries were already in need of assistance before the extent of adaptation needs and associated costs were known; consequently, developed countries should proportionally increase their donations. The level of ODA from 1970 onwards has been set at 0.7 per cent of GNP for each developed

country. This resolution of the UN General Assembly was taken long before the need for CCA was emphasized. In general terms, it is unclear whether adaptation assistance must be in addition to the 0.7 per cent ODA goal (namely, if a donor country has not reached that level yet and additional funding will still be considered as ODA) or simply in addition to the current ODA amount (Ikeme, 2003; Bockel, 2009). Regardless of the perspective espoused, the most important aspect to consider is the need to avoid making a country choose between basic services and adaptation. Furthermore, the UNFCCC specifically requires that all assistance for CCA should be “new and additional” (Klinsk and Dowlatabadi, 2009). However, this is difficult to implement and demonstrate. Firstly, the distinction between an adaptation activity and a development activity can be blurred; secondly, the UNFCCC requires developed countries to provide funds to cover the “incremental costs” of implementing mitigation and adaptation efforts (Najam et al., 2003). However, it may be hard to calculate the incremental costs incurred as a result of climate change, and to delineate what portion of previously transferred or newly provided funds go solely to adaptation. A way out from this conundrum can be summarized in the idea of “mainstreaming adaptation” (Oxfam International, 2007).

Mainstreaming adaptation means taking into account climate hazards when designing development projects. Generally speaking, the actions that increase a developing country’s resilience to climate change are the same as those that stimulate economic and social development. Fujikura and Kawanishi (2011) estimated that approximately 60 per cent of all ODA could intersect with adaptation activities and that 30 to 40 per cent of ODA is directed towards sectors that are sensitive to climate change. Some scholars stress the idea that delivering on adaptation will be made more efficient and effective through strengthening of existing development process (Persson et al., 2009). As a matter of fact, the “climate-proofing” of ODA may provide long-term financial, environmental, and social benefits. To conclude, it is important to bear in mind that the overlap between CCA and development assistance pose greater problems for the funding entities than for the project applicants (Paavola and Adger, 2006). In fact, most of the time adaptation projects and development projects do not conflict on the ground. Nevertheless, the difficulties associated with making this distinction make it challenging to track whether adaptation funds are truly in addition to existing development assistance and to decide which funding arm a project should be funded under (Rive et al., 2006).

CCA financial assistance includes the provision of grants or favourable loans to support adaptation-related projects, whereas technical assistance may consist of guidance for drafting or reviewing adaptation-oriented legislation, or non-financial support for the design or implementation of a particular project or policy. Several global and regional financial adaptation assistance programmes have been established to assist developing countries in adapting to climate change (Srinivasan et al., 2008). The main global adaptation funding mechanisms are administered by the Global Environment Facility (a branch of the UNFCCC), the World Bank, and the Adaptation Fund Board (a branch of the United Nation Development Program). The GEF is an independent financial organization administered jointly by the World Bank, the UN Development Programme (UNDP), and the UN Environment Programme (UNEP). Apart from these global funds, there are then some prominent national development agencies -such as, USAID, AusAID, EuropeAid- that operate in the field of CCA (Tol and Verheyen, 2004).

On the side of technical assistance, the National Adaptation Programme of Action (NAPA) is by far the most important mechanism. The establishment of NAPA can be traced back to the Marrakech Accords of 2001 when a work programme for Least Developed Countries (LDCs) and a mechanism for identifying the urgent and immediate needs of LDCs were first created (Dellink, 2009). As part of these accords there is a strengthening of national climate change secretariats and training in negotiation skills for LDC negotiators. But most significantly, it includes the development, preparation, and implementation of NAPA to serve as a simplified and direct channel of communication of information relating to the vulnerabilities and adaptation needs of LDCs. Related Marrakech decisions establish a LDC Fund to support this work program, an LDC Expert Group to assist with its implementation, and guidelines for the NAPA process (Adger et al., 2006). Some pivotal aspects which characterize NAPAs are the country-driven and bottom-up processes that are pursued to generate a list of priority activities for adaptation in LDCs whose further delay could increase vulnerability, or lead to increased costs at a later stage (Möhner and Klein, 2007). Another important aspect is the stakeholders engagement process which is the backbone of the iterative process culminating in the drafting of NAPA. The national experts in charge of drawing up the NAPA report synthesize available information on adverse effects of climate change on the natural ecosystems and human settlements of the country in question (Reid and Huq, 2007).

1.4 Overview of the Maldives Islands:

Many countries in the world with little or no historical responsibility for GHG emissions, such as Small Island Developing States (SIDS) in the Pacific and in the Indian Ocean, face daunting challenges in addressing climate change impacts. As a matter of fact, their access to financial resources, know-how, and technology for adaptation will determine their ability to minimize loss of life and productive land, and disruptions to their natural, social, and economic systems. In this research I will investigate the case of the Maldives to see what kinds of international aid this country has had access to and how this aid can be made more effective.

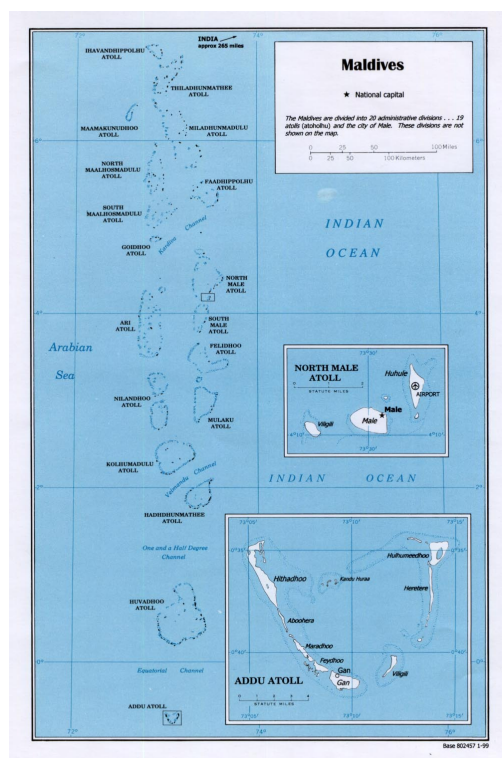


Fig. 2 Map of the Maldives (reproduction from The World Factbook under CC License)

From the point of view of the international community, the Republic of the Maldives has been one of the countries that have made considerable strides on their development path. The Maldives consists of 1,192 tropical islands of various sizes: with more territorial sea than land, marine resources have played a vital role in shaping the contours of economic development, with nature-based tourism and fishing being the main drivers of economic growth. In the 1980s the Maldives was one of the poorest countries in the world, but today it is a middle-income country according to the criteria established by the World Bank (2011).

As a matter of fact, the Maldives is one of the few countries which ever achieved the objective of advancing from the status of LDC and achieve the status of Middle-Income Country. This happened in 2010 and forced the Maldives to rely on its own finances for infrastructural and trade projects since the international community limited possible lines of credits. The progression to the middle income category limits a country's access to concessional credit, removes certain trade concession, and some donor aid because of the perception in the donor community that it is "less deserving" than countries still on the LDC list. Consequently, in 2011 the Maldives contested at the UN that graduating countries still require financial and technical assistance.

Since the Maldivian economy relies on natural assets, environmental sustainability is the fundamental development challenge in the country. Thus, the sound management of the country's ecosystems will determine its growth prospects. The government realizes the importance of environmental sustainability, especially as for biodiversity that contributes to almost 80% of GDP, and is placing a high priority on work in this regard (World Bank, 2008). The Maldives is particularly vulnerable to projected adverse consequences of climate change, including sea-level rise, increases in sea surface temperature, ocean acidification, and frequency/intensity of droughts and storms. These impacts in turn pose serious challenges in areas such as water security, biodiversity conservation, and coastal erosion that call for adaptation solutions. Technical constraints and financial limitations are affecting the ability of the public sector to provide climate-resilient infrastructures and services. Institutional capacity remains much lower than that of an average upper-middle-income country and this is because, even though the GDP per capita is quite high, there are structural shortcomings in the Maldivian society which hinge on corruption and lack of economic differentiation. Building capacity and providing ongoing training to public servants will be an important element of modernizing the country's public service. (World Bank, 2008).

The government has established various committees in charge of coordinating projects for CCA, such as the Climate Change Advisory Council in the Office of the President. This governmental body is tasked with providing strategic direction to the climate change activities. In addition, a Technical Committee composed of technical experts of the Maldives Government, private sector and leading civil society organizations is responsible for reviewing and recommending technically well-sound project proposals for financing and

monitoring the overall progress of CCA projects. Furthermore, there are various contact groups tasked with working with the several international donors cooperating with the Maldives (World Bank, 2008). However, obtaining information on the various departments and ministries working on CCA has not been an easy task because of the lack of coordination among the various departments and the contradicting information I was given when I tried to determine who was the official in charge of drafting the NAPA.

2. Methods:

In this thesis I set out to conduct an exploratory research focusing on a specific case study; namely, the dynamics of CCA in the Maldives. The present research is based on qualitative methods as I carried out a limited number of interviews to gather primary data and as I carried out a meta-analysis of various reports to obtain secondary data. The time dimension of my research is “cross-sectional” as data are gathered once, over a period of six months, rather than being collected several times over an extended period of time (Sayer, 1992). The aim of this research is to analyse how things are now, without any sense of whether there is a history or trend at work. At first, I considered the idea of conducting a longitudinal study as I had carried out an interview to one of the interviewees (i.e. Mr Ahmed Waheed from the Maldives Government as part of a research project at Lund University) in 2012. The advantage of conducting a longitudinal study for a research on development projects is that it offers the opportunity to assess change over time and whether the goals that had been set at the beginning of the project have been accomplished. Specifically, I had considered asking Mr Ahmed Waheed if he had witnessed changes in the state of implementation of NAPA from October 2012 (the time of the first interview) to March 2014 (the time of the second interview). However, I had to relinquish this initial plan as it soon run into two main issues: firstly, the time-span was too limited, and secondly, I had not conducted interviews to the other interviewees in the same period. As a matter of fact, one year and a half is too limited a period of time for witnessing substantial changes and, thus, the data I could have collected would have been insubstantial. Furthermore, I only have cross-sectional interviews with the other officials and so my research would have not been consistent across the interviewees.

I carried out three interviews with four policy-makers to obtain primary data to be compared with secondary data obtained from official reports. The interviews were addressed to several officials working on CCA projects in the Maldives. Thus, I interviewed the following policy-makers:

- Mr Ahmed Waheed, who is a civil servant at the Ministry of the Environment of the Government of the Maldives and is in charge of the NAPA project (which was carried out with the support of UNFCCC). I interviewed him twice;
- Mr Priti Kumar, who is in charge of the World Bank-funded project in the Maldives;
- Mr Etienne Coyette and Ms Sophie de Coninck, who are policy officers at EuropeAid and are in charge of the program Global Climate Change Alliance. I interviewed them together.

All these interviews were conducted on Skype, with the exception of those with Mr Coyette and Ms De Conicke that I had the opportunity of meeting in person at the European Commission's headquarters in Bruxelles (Belgium) on 22nd October 2013.

With regard to the primary sources used for generating data, I used the methodology known as "semi-structured interview": when using semi-structured interviews, the researcher encourages an informal conversation covering certain themes and questions. These questions may vary from one interview to the next. Semi-structured interviews are primarily used in explanatory research to understand the relationships between variables, perhaps as have been revealed by some prior descriptive research (Sayer, 1992). Additionally, semi-structured interviews are used in exploratory studies to provide further information about the research area. The reason why I resorted to use this methodology is because I wanted the interviewee to disclose as much information as possible, but without feeling forced to do so. As a matter of fact, "squeezing" the interviewee for information would have been counter-productive. I also omitted some information that I had gathered from the other interviews to leave free space to the interviewee to talk about the points that they deemed the most salient.

With regard to the secondary sources used for generating data, I resorted to institutional reports and international NGOs' reports. For international studies, secondary data analysis is the most common type of study performed. As a matter of fact, there is a

substantial body of research in the field of CCA in developing countries and so there was a considerable amount of information that could be extrapolated from it. All the organizations whose reports I worked on for this research publish several reports each year and at times also working documents that are those used by the officials in charge of the projects. With all the information available in these reports I had to carry out a meta-analysis, namely, discover concepts that tend to be in the form of themes, motifs, generalizations, and taxonomies across several reports. Analysis proceeds by extracting themes or generalisations from evidence and organizing data to present a coherent, consistent picture. While reading the various organizations' reports I became increasingly aware of the fact that there were patterns that were replicated in the various reports and that tended to organize the information offered to the reader in very similar ways. This has made my work of comparing and complementing the various reports easier and more coherent. However, I soon realized that each report was made to conform to an "unwritten" standard that was acting as a barrier between the reader and the effective disclosure of reliable and meaningful information. This is the reason why in the course of the various interviews with the policy officers I questioned them on the reports they contributed to and tried to highlight all the contradictions that were emerging between their declarations and what was actually written in the reports that they had themselves co-authored.

Each interviewee focused on different issues stemming from their personal experiences and from the institutional standpoint they witnessed CCA projects from. The primary data collected in the course of the interviews were then compared to the secondary data extracted from the reports of the organization the given interviewee works at. In this way I obtained a more comprehensive view of the work of the interviewees. Thus, in the "Findings" part each interviewee will be presented in a different section in which their statements are integrated with the information extracted from the reports of the organisation they work for. Then, in the "Discussion" section, I will bring these different issues together and discuss ways in which they can be effectively addressed by the Maldives Government and by international donors.

3. Theory:

In this section I will explain why the topic of CCA finance is relevant to the field of human ecology and how the three main tenets of this Master course at Lund University –that is, *culture, power, and sustainability*- underpin my research. Two main theoretical frameworks have been chosen to examine the phenomenon being investigated in the present thesis. The first theoretical framework is “ecological unequal exchange” and it is used here for shedding light on the issue of responsibility of developed countries to finance CCA in developing countries. The ecological impact of industrialized countries is not just detrimental to environmental sustainability, but also to the economic development of LDCs as the rates of natural resources consumption in the Global North promote the underdevelopment of the Global South (Rice, 2007; Paulson and Gezon, 2005). The theory of unequal exchange suggests that the structure of international trade shapes disproportionate access to global environmental space (namely, resources and sinks) in a way determined by countries’ hierarchical position in the world-systems theory as formulated by Wallerstein (1974). Disproportionate consumption of global environmental space by industrialized countries limits the utilization opportunities of LDCs. This happens both in a present-time perspective - raising the issue of “intragenerational equity”- and in a future-time perspective –raising the issue of “intergenerational equity”-. Thus, utilization of environmental space and of global common goods is increasingly becoming a zero-sum game as global ecological systems are straining to accommodate the demands of human social organizations (Rice, 2007). A country’s position in the world system shapes domestic environmental opportunities and burdens in an uneven manner. The “rules of the game” of international trade influence the global patterns of economic activities. Consequently, underdevelopment is shaped by ecological transformation and change (Hornborg, 2001).

The second theoretical framework through which I examine the phenomenon investigated in the present thesis is “critical development studies”. This line of research emphasizes the limitations of the theories of development that have failed to account for the fact that extraction and export of natural resources North-South constitute: i) a transfer of value embodied in matter and energy; ii) path dependent dynamics as extractive activities at one point in time shape the demographic, ecological, organizational, and infrastructural context in which subsequent development efforts are situated in LDCs which rely on high levels of resources extraction. Furthermore, traditional theories of development have

insufficiently recognized the fundamental differences regarding the internal dynamics and logic of accumulation between extractive and productive economies (Rice, 2007). So, how to examine the issue of CCA finance through the lenses offered by these two theoretical frameworks? Environmental space encompasses the stocks of natural resources and sink capacity properties of ecological systems. Such conceptualization of environmental space rests upon the assumption that there exists a carrying capacity or biophysical limits to human induced pressure upon the environment. At any particular point in time there are limits to the human induced pressures upon the Earth's ecological services that can be sustained without inducing irreversible damages (Rice, 2007; Paulson and Gezon, 2005). This brings about the issue of climate justice connected to ecological unequal exchange and theories of development. Ecological debt, thus, can be seen as a measure of environmental injustice and be used as a motor of change of the international law system. Environmental justice is defined as a fair distribution of charges and benefits derived from using natural resources, in order to provide minimal conditions of welfare to all human beings, including future generations (Rice, 2007).

Ecological debt expresses an unfair and illegitimate distribution of benefits and burdens within the social metabolism, including ecologically unequal exchange and disproportionate occupation and damaging of common goods, such as the atmosphere. The idea of ecological debt points to financial debt as a means to plunder peripheral societies in the global South (Holnborg, 2001). This mirroring justifies the use of "debt" as a term for pointing to environmental injustice. Therefore, ecological debt serves to underline the inequitable and unsustainable consequences of the social metabolism of the capitalist world-system. Global power structures responsible for ecological unequal exchange require a legal response. With that, principles such as democracy, human rights, equality and solidarity, checks and balances, and the rule of law are thought to set up the legal foundation for the allocation of power in the international sphere (Pigrau et al., 2013; Paulson and Gezon, 2005). For this reason, ecological debt is to be used as a means of appropriate compensation of an unfair system of human relations which has to be changed. Ecological debt can be used as well to define the burdens to be assumed as costs of the change required in international relations and giving appropriate protection to human beings in a paradigm of sustainability and equity.

What is the relevance of these two theoretical frameworks to the present thesis? This theoretical analysis makes the case for investigating further the dimension of the framework “Common but Differentiated Responsibilities and Respective Capabilities” in a political ecology perspective. If global commons have been unevenly appropriated by countries, do not developing countries have the right to compensation? This is a clear issue of power distribution. And within this broad issue we can investigate the ways in which this uneven distribution can be rectified or, at least, compensated for (Pigrau et al., 2013). In the framework of the “Millennium Development Goals” elaborated by the UN, development is seen only as a way of financing industrialization in developing countries in order to help them to enter the web of global economic trade and increase their national GDPs. However, the issue of ecological sustainability is the main issue which determines whether these countries -like the Maldives- will be able to develop or not. As a matter of fact, if developing countries are faced with the destructive effects of climate change, how can they support long-lasting economic growth and human development? Consequently, the first step down this path is buffering climate change which, in turn, is a by-product of developed countries’ industrialization process (Pigrau et al., 2013; Holnborg, 2001).

Last but not least, the political ecology tenet of “culture” enters into the equation when we analyse effective ways in which this process can be reconciled with the specific cultural conditions of the society in question. For example, how can this process of development be made sustainable in countries where civil participation is often neglected? To tackle these issues, I will ask the policy-makers interviewed for the present research specific questions that can cover the various issues of power, sustainability, and culture. For example: i) How to make sustainable development in the Maldives inclusive for all social groups?; ii) How to foster a transfer of technology and capabilities from developed countries to the Maldives in order to ensure the development process in the long run? iii) How to involve all the Maldivian stakeholders in the process of decision-making? iv) How to involve the Maldives Government in the process of laws-formulation in the context of global climate agreements? All these questions are aimed at highlighting the relevance of the issue of CCA finance in the Maldives to the field of political ecology.

4. Findings:

I will now present the findings obtained in the course of the interviews with the aforementioned policy-makers. In this section of the thesis, I will report the main answers expressed by the interviewees to the first research question: what are the main points of weakness of CCA projects financed by international donors in the Maldives? Each one of the interviewees started out explaining the main projects their organization works on in the Maldives and then focused on the issues they considered the most urgent. The interview method I used is semi-structured and, consequently, the way in which each interview unfolded is very different from the others.

4.1 World Bank:

The Maldives Government and the World Bank Group signed in 2010 a Memorandum of Understanding establishing a new Trust Fund designed to build resilience to climate change in the Maldives. The majority of the funds received from the World Bank will be utilized by the Maldives to carry out its priority projects relating to CCA and CCM. The aim is to build a climate-resilient economy and society through adaptation to the impacts of climate change and mitigation for a carbon neutral development path. Three projects have been confirmed for support under the Maldives Climate Change Trust Fund:

- The Clean Energy for Climate Mitigation project will provide an annual 300 MWh of renewable energy through grid-connected solar photovoltaic systems and energy efficiency measures to 7000 inhabitants on Thinadhoo Island in the Gaafu Dhaalu Atoll.
- The Wetlands Conservation and Coral Reef Monitoring for Adaptation to Climate Change project will be implemented in Fuvahmulah of Gnaviyani Atoll, Hithadhoo of Addu Atoll and Alif Alif Ukulhas Island in North Ari Atoll and enable local governments to implement a clear strategy for wetland management, drainage management, ecotourism and community rainwater harvesting. The Project will also enter into a partnership with selected tourist resorts in the North and South Male Atolls for coral reef monitoring and demonstrate how information from monitoring can be used to support decision-making to prioritise areas for conservation.
- The Ari Atoll Solid Waste Management Pilot will help to manage solid waste generated in selected inhabited islands of the Ari Atoll, thereby reducing the environmental

risks to marine habitats and greenhouse gas emissions. The Project aims to set up five Island Waste Management Centres and facilitate an integrated solid waste management system in the inhabited islands and resorts of Ari Atoll.

For the purpose of my research I decided to focus on the project for wetlands conservation and coral reef monitoring. Thus, I carried out a Skype interview with the World Bank team leader for the aforementioned project, Mr Priti Kumar. The interview took place on 23rd February 2014. The World Bank consultancy contributed to the wetlands conservation project by assisting stakeholders to develop and agree on community-based wetlands management plans, drainage management plans, ecotourism package, sustainable development trainings, and prepare Environmental and Social Management Plans. For this project the World Bank worked closely with the Project Management Unit established within the Ministry of Environment and Energy. Key stakeholders included Hithadhoo City Council, Fuvahmulah Atoll Council, local communities, local tourist sector operators, and the Maldivian Environmental Protection Agency (Devex, 2014). The statements made by Mr Kumar in the course of the interview have been verified and critically compared with the information contained in the World Bank project report (2012).

In the Maldives there are numerous wetlands situated along the coast that are locally called “Kulhi”. Of the 1,190 islands that constitute the country only 41 have wetlands that, for the most part, support mangroves. The Maldivian wetlands are considered to be highly productive ecosystems that provide several goods and ecological services. Firstly, the low-lying, richer soils support numerous species of mangrove. Secondly, wetlands contribute to groundwater recharge and support livelihoods of local communities by providing wood, supporting agriculture, contributing to fish yield, supplying plants for traditional medicine, and supporting tourism. Another important ecosystem in the Maldives is the coral reef system which is estimated to comprise 3.14% of the total coral reef area of the world. Coral reefs are a major driver for key economic sectors such as tourism and fisheries. The wetland and coral ecosystems of the Maldives make a significant contribution to its economy. A 2009 study on the economic value of biodiversity to the Maldives indicated that 71% of national employment and 89% of GDP are biodiversity dependent.

The Maldives is a signatory to the Convention on Biological Diversity and this is a proof of the fact that the Maldives has a policy supportive of wetlands and coral reefs conservation in place (Satterthwaite, 2007). Furthermore, the Maldives is currently in the negotiation process to become a signatory to the Ramsar Convention which is an international treaty aimed at protecting wetlands of major importance. Sustaining wetlands and coral reefs is a cost-effective strategy for CCA with strong benefits for disaster mitigation, poverty reduction, and biodiversity conservation. On the one hand, wetland ecosystems help in CCA through their role in flood and soil erosion control, groundwater recharge, freshwater storage and livelihood support (Parry et., 2009). They lessen the effect of flooding during high rainfall events and storm surges and also provide water security during low rainfall periods. On the other hand, the coral reefs serve as natural breakwaters and loss of corals means decreased protection from waves and currents, and an increase of beach erosion and inundation. For all of these reasons the NAPA emphasizes wetland conservation through priority actions -such as flood control, aquifer recharge, and natural water catchment area protection- and it recognizes the importance of coral reefs through coastal protection services, by banning coral mining, and protecting reefs from projects being planned in sensitive areas (Sachs and McArthur, 2005).

Mr Kumar declared that the two overarching national bodies in charge of implementing the Wetlands Conservation and Coral Reef Monitoring for CCA projects are the Ministry of Housing and Environment and the various agencies tasked with bridging the gap between national and local institutions, of which one is the Environmental Protection Agency (EPA). According to Mr Kumar this agency faces serious institutional constraints that prevent it from implementing their projects effectively. These constraints are of various nature, but they consist mainly of limited human and financial resources. The reason why EPA is facing a shortage of personnel is because there has been a downsizing in the course of the last year. Furthermore, local governments –such as, city councils, atoll councils, and island councils-, which are responsible for supervising projects which are implemented within their respective jurisdictions, often face lack of skilled personnel able to carry out comprehensive Environmental Impact Assessments and Cost-Benefit Analyses. Most of these local administrations have been only recently established as a consequence of a decentralization act and this explains the lack of competent staff to be found in this newly-established institutions. Even when climate change information is available to local governments, civil servants may not have the technical expertise to determine how this

information should best be used (World Bank, 2011). As a matter of fact, acquiring information is just the first step and it is important to develop the know-how to integrate it into planning and investment decisions. Gaps in expertise may be limited to specific areas – such as, skills in geomorphology, and coastal processes- or may be interdisciplinary in nature –such as, skills in incorporating the complexity and uncertainty of climate hazards into decision-making frameworks across all local government disciplines-. Generally speaking, - Mr Kumar maintained- strong competition for qualified workers with a university degree from other levels of government as well as the private sector, has meant that local governments are often subject to a shortage of suitably skilled workers.

I then asked Mr Kumar what the main criteria for deciding which pilot projects to finance are. He answered that, first of all, it would be important to demonstrate that –in addition to ecological benefits- these natural ecosystems can yield measurable economic benefits and that these results can be achieved with the involvement of local authorities rather than merely imposing top-down regulations. Secondly, it would be important to demonstrate how information from monitoring can help to prioritize areas for conservation based on mapping and tracking at specific locations over time to understand the response of ecosystems to specific development projects. He also added that the projects have to be in line with government policies and the various action plans and that preference is given to projects that prioritize actions that increase the adaptive capacity of communities to manage climate change related risks. Last but not least, preference is given to projects that preserve and enhance the biodiversity in the atolls. Thus, the criteria for the allocation of funds are related to building a socially and ecologically resilient system that can support the Government of the Maldives in its development objectives.

4.2 Maldives Government:

The first NAPA designed by the Government of the Maldives was aimed at communicating the most urgent and immediate adaptation needs as stipulated under the UNFCCC. The drafting of NAPA was funded and supported by the Global Environment Facility and the United Nations Development Programme. The procedure for the drafting of NAPA began in October 2004 and was eventually submitted for approval in 2007 after a two-year break on the account of the Tsunami which hit the Maldives in 2004 (NAPA, 2007). In order to gather information concerning the making of NAPA I held two interviews with Mr Ahmed Waheed,

who is Head of the Climate Change Department in the Ministry of Environment and Energy. The first interview took place in the form of an email exchange in 2012 (for a research project I was working on as part of a groupwork at Lund University) and the second interview was held through Skype in February 2014.

In the course of the interviews Mr Waheed declared that the NAPA process was guided by the principles of collaboration among the various governmental agencies, broad stakeholder engagement, and ownership by the people of the Maldives. In order to enhance stakeholders engagement a multidisciplinary National Climate Change Technical Team was established under the auspices of the Maldivian President Maumoon Abdul Gayoom. Awareness raising activities and community consultations were organised for several atolls' representatives in the capital Malé along with awareness raising activities for secondary school students. Furthermore, the first Climate Risk Profile for the Maldives was compiled with existing climate data analysed by international experts. National experts produced papers relating to vulnerability and adaptation for priority sectors identified by the NAPA Working Groups. Prior agreed methodologies were established to hold extensive consultations at national and regional level.

Mr Waheed also asserted that one of the main objectives of the NAPA is to establish synergies with national development goals. The main development goals for the Maldives are enshrined in a work programme called "Vision 2020" outlined by President Maumoon Abdul Gayoom in 1999. NAPA is aimed at supporting this programme particularly through providing a planned approach to combat the climate change threat. The following priorities for Vision 2020 are sketched out in the NAPA report (2007):

- Create an environment conducive for growth and generate employment;
- Enhance trade, support businesses and build competitive industries;
- Invest in strategic and state-of-the art infrastructure to enable ease of movement, enhanced access to services, and build competitive advantage;
- Create a built environment with opportunities for equitable access to housing, sports, and recreation and preserve cultural heritage;
- Protect the natural environment and make people and property safer;
- Invest in people through providing equal opportunity for education, life long learning and training;

- Improve health and well-being;
- Promote gender equality, family values and youth development;
- Safeguard the values, rights and freedoms necessary to allow all to live a life of dignity;
- Promote access to justice, rule of law and maximize public safety;
- Strengthen governance and national security.

However, the research I carried out through academic papers and NGOs' reports contradicts some of these claims and clearly shows that NAPA has not gone as far as expected. The main obstacle that hinders the implementation of NAPA is an unbalanced involvement of different stakeholders in the drafting of NAPA.

Even if the NAPA process was supposed to be guided by the principles of broad stakeholders engagement and ownership by the people of the Maldives, this has hardly been the case. The lack of public participation and transparency in the drafting of NAPA is a clear obstacle to its implementation as it lacks credibility and as stakeholders are not equally represented in the sharing of burdens for its implementation (Aishath and Storey, 2011). The mandatory use of Environmental Impact Assessments (EIA) in the process of environmental policy-making in the Maldives is a well-established reality after the first guidelines were published a decade ago (Hay et al., 2008). One of the key attributes of these guidelines was the call for public concerns to be given more attention, greater identification of interested and affected stakeholders, the strengthening of methods to ascertain community views, and the call for greater use of such data in final decisions. Thus, an EIA is an assessment of the possible positive or negative impacts that a proposed project may have on the environment, together consisting of the environmental, social, and economic aspects. EIA process often represents the only opportunity for contesting centralized decision-making over island and regional development (Sovacool, 2012). The assessment process can play a vital role in building environmental democracy and justice towards substantive citizenship and inclusive decision-making; outcomes which reflect both the principles of the 1992 Rio Declaration and also the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. The NAPA formulation process involves identification of key vulnerabilities and adaptation measures through a series of EIAs. Nevertheless, as research has demonstrated, stakeholders exercised power unevenly in the NAPA decision-making process (Shaig, 2010).

This is often due to public participation being understood by governments, the private sector, and planners as costly and an impediment to economic development. "Cultural factors" were also seen as hindering effective public participation. One report (Aishath and Storey, 2011) stated that "locals do not feel comfortable to criticize the development direction of the country in public". Furthermore, it is believed that women particularly remain silent in community meetings. On the whole, communities did not consider their voice to be equal to that of government with regard to the environment and resources management. Such "cultural factors" are evidently associated with political dynamics. Though a successful democratic election took place in late 2008 there has been over 30 years of intolerance to political criticism and a centralization of power away from traditional community leadership. People are only informed and not involved even though planning for developments should be a two-way process. Currently it is a one-way process where the government or developers tell the people what is best for them and tell the community how they should live (Aishath and Storey, 2011).

Research carried out by the NGO Bluepeace proved that there is limited evidence of public input in potential impact identification, or when mitigation measures and project alternatives are determined (Bluepeace, 2014). The EIA process gives overwhelming weight to economic benefits such as employment opportunities (even though many jobs go to migrant workers from South Asia), particularly for proposed infrastructure and tourist resort developments. Often socio-economic benefits are highlighted without any indication of the costs for local communities or the negative impacts to the public. Enhanced participation in environmental management and policy could ultimately benefit from, but also contribute to, the broadening and deepening of political and policy reforms as well as development models which can be sustained. Furthermore, there is a problem of "revolving-doors": with only one exception, all EIA consultants held concurrent positions in the government or private sector. The majority of those who held positions in the government sector were in senior positions at the Environment Ministry. This was quite expected as only a handful of Maldivians have tertiary qualifications in environmental sciences. Still, concurrent roles are a real concern for independent decision-making, as well as providing a challenge for researchers seeking "independent" views of respondents who wear multiple "hats" in their working lives. The analysis I carried out highlighted that environmental assessment and decision-making in the Maldives continue to suffer from highly constrained public participation due to lack of awareness, lack of providing sufficient information, lack of political will, and lack of

enforcement of participatory guidelines. The prevailing power of developers, especially in the tourism industry, also counteracts the desire to strengthen participatory planning.

Why is this relevant to the field of political ecology? Public participation (in antithesis to prevailing top-down modes of decision-making) in the process of environmental policy-making is important both as a legal right of affected social groups and as a means of improving the quality and effectiveness of decision-making. In regard to the last point, public participation increases feasibility and democratic content, prevents implementation problems, and establishes commitment among stakeholders. Public awareness and public participation, along with education, training and access to information, are essential for gaining public support for measures to combat and cope with climate change. A way in which the government can foster the development of a thriving civil society is by establishing grants for NGOs. It is difficult for NGOs to thrive in a country like the Maldives where most of the population has no disposable income to support civil society organizations (e.g. by buying a membership). At the same time, there is an urgent need to ensure that NGOs' projects are independent from government's encroachment. This last point should be dealt with in the broader sphere of "corruption prevention". Apart from strengthening civil society organizations it is necessary to offer the chance to these organizations to have their say in the process of policy formulation. This can be achieved in several ways: participatory planning, hearing rounds, consensus conferences, and scientists-stakeholders workshops. Thus, the analysis of various academic papers revealed that there should be a revised plan for stakeholders involvement if NAPA is to be an effective document for CCA in the Maldives.

4.3 EuropeAid:

The European Union is the world's biggest aid donor and this leadership is maintained also in the domain of contribution of climate finance to developing countries. The European Union provides more than half of global Official Development Aid and climate change is being increasingly integrated into the European Union's broader development strategy. The European Union's Global Climate Change Alliance (GCCA) programme is aimed at providing technical and financial support to developing countries to include CCA into their development budgets and policies in order to implement projects that address climate change on the ground (GCCA, 2013). The GCCA currently provides financial and technical support to 35 countries in 4 regions of the world. Since 2007, the year of its inception, this

programme has already channelled 300€ million to LCDs and to SIDS. However, the budget of the GCCA will increase even more in the years to come since the European Union has recently passed a law establishing that 20% of the new funding made available for external cooperation programmes will have to be earmarked for interventions that contribute to the transition to a low carbon-economy (i.e. mitigation) and climate-resilient society (i.e. adaptation) in developing countries. The main priority areas of GCCA are the following:

- Mainstreaming climate change into development efforts: this is an important aspect of climate change adaptation as it supports the systematic integration of climate change into national development planning through institutional strengthening. However, the practice of mainstreaming is also related to budgeting and planning;
- Adaptation: the GCCA builds on NAPAs to improve knowledge about the effects of climate change and design the implementation of appropriate adaptation actions;
- Disaster Risk Reduction: the GCCA helps developing countries to prepare for climate-related natural disasters, reduce their risks, and limit their impacts.

In order to obtain insights into the work of GCCA in the Maldives I interviewed two policy officers in the EuropeAid headquarters in Bruxelles on 27th October 2013. The functionaries I interviewed are Mr Etienne Coyette and Ms Sophie de Coninck who are Programme Managers for GCCA. In the course of the interview Ms de Coninck declared that the aim of the GCCA is not just to provide financial resources, but also to strengthen dialogue and cooperation between donor country and receiving country and among receiving countries in order to foster useful exchanges of best practices and information. This statement is substantiated by the GCCA report published in 2013 in which it is stated the following: “While the ecosystems and development sectors targeted may vary, the vast majority of the programmes address adaptation and mainstreaming challenges — which means that there are always other GCCA programmes sharing similar objectives, foci or approaches, enabling all GCCA partners to learn from each other” (GCCA, 2013). The rationale behind this forum for information exchange that GCCA carries out is that climate change frameworks across the world have changed considerably in the course of the last ten years and no country has all the answers to the problems brought about by climate change. Consequently, sharing experiences is important for developing and developed countries for learning from each other. Only in this way the global community will find appropriate answers to the engagement of fighting climate change.

In the course of the interview Mr Coyette declared that the criteria to select countries that can access finance through the GCCA build on the Bali Action Plan adopted in 2007 by the UNFCCC, which emphasizes the importance of helping developing countries that have to face drought, desertification, and flooding on the account of climate change. To be eligible for GCCA funds, a country has to be among the 73 LDCs or SIDS that are recipients of aid. The assessment of a country's vulnerability is carried out taking into account the risk exposure and the population density of the country in question. These two variables are important for calculating the destructive effects of natural disasters since highly populated areas are more vulnerable to the effects of climate change. The importance of the agricultural sector is also included in the assessment since this is one of the sectors the most sensitive to climate change. The assessment also incorporates an estimate of the country's adaptive capacity using the UNDP Human Development Index as a source. However, it is also relevant the level of engagement of the applicant country for opening a line of credit since the GCCA puts at the forefront of its activities the role of forum for exchange of best-practices. Thus, governments of developing countries can get involved in the GCCA by participating in the policy dialogue on climate change with the European Union.

EuropeAid, which is the branch of the European Commission administrating the GCCA and the department in which both Mr Coyette and Ms de Coninck work, puts the emphasis on involving local authorities in the development projects. Relevant ministries, government agencies, and other public institutions are involved in all countries in which a GCCA-funded programme has been approved throughout the various phases of the project: identification, formulation, implementation, monitoring, and evaluation. Governments interested in applying for a GCCA-funded project should address themselves to the EU delegation in their country. The EU delegation, in collaboration with the European Commission's headquarters in Bruxelles, checks whether the applicant country meets the selection criteria. Furthermore, several European governments co-finance GCCA programmes by allocating resources from their national budgets. During the preparation and implementation of a GCCA intervention, the EU delegation in charge consults and engages local representatives of international organisations in order to coordinate the development of the project.

Mr Coyette also pointed out that another important priority of GCCA is increasing the absorptive capacity of the recipient country in order to help the country in question to put to good use the funds received. As a matter of fact, several developing countries are flooded with development aid that is not effectively channelled into the projects that offer the highest Internal Rate of Return simply because money is diverted into corruption or inefficient management of funding. The simple fact of increasing the ability of a country to benefit from the aid received can create a “multiplier effect”. Furthermore the GCCA operates within a broad network of institutional (such as, EU delegations, national ministries, UN agencies) and non-institutional (such as, international NGOs, local NGOs, civil society) actors in order to coordinate projects in effective and efficient manners. This is in direct connection with the objective of increasing absorptive capacity since if all stakeholders are involved in the planning and monitoring process the project is more likely to be supported by the local population and, consequently, not to be halted on the account of civil society protests or corruption among civil servants since all stakeholders are aware of the exact amount of money being channelled into the project. The GCCA Report reads as follows: “In all cases, institutional strengthening is an integral part of efforts to develop climate change and disaster risk reduction–related strategies, and mainstream them into wider development policies and strategies” (p. 35, 2013).

In the course of the interview Ms de Coninck declared that one of the main aims of GCCA-driven projects is to develop the technical capacities of governmental officials –such as, sector ministries and local authorities- and to involve civil society organizations and the private sector in strategic policy dialogue. This is of great relevance because capacity building is expected to be fostered and deepened through involvement in field projects. Another important aspect of this involvement of local authorities is the strengthening of partnerships with the private sector, in particular the tourism sector. The tourism sector is the major business actor in the country and it is also the sector projected to bear the bulk of the economic costs associated with climate change. Last but not least, Mr Coyette emphasized the importance of engaging civil society in GCCA: a process which could be referred to as “raising awareness”. This is important in order to have the support of civil society in the projects in the pipeline and also in order to raise the profile of CCA projects on the national agenda. The GCCA report on the work undergone in the Maldives states as follows: “Awareness raising and training activities are part of the field activities supported by the programme. Pilot activities were selected in part on the basis of their potential for replication.

Lessons will be learned from their implementation, and they will be disseminated” (p. 48, GCCA, 2013). Some of the most difficult hurdles to overcome are related to the choice of the project to finance since project selection is often lengthy because of poor communication with social actors and the absence of GCCA staff on the ground. Secondly, the lack of previous exercises of capacity building in the context of climate change adaptation are to be factored in at the time of planning because it can impair the effective implementation of selected projects.

Ms de Coninck stated that the importance of strengthening the training of governmental officials in recipient countries is to be found in the fragmentation of climate change adaptation finance. This fragmentation makes the task of navigating this wide ocean of funds and frameworks challenging for any official who has not received sufficient training. As a matter of fact, the significant diversity in objectives, rules, procedures and governance arrangements across instruments and initiatives creates barriers to access for countries with limited expertise. Furthermore, the transparent and systematic tracking and reporting of climate finance flows and expenditures — so as to foster accountability, ensure complementarity and enhance effectiveness in the combined use of external and domestic resources — poses a considerable challenge for developed and developing countries alike (GCCA, 2013).

5. Discussion:

In this section of the thesis I will discuss some instruments and strategies that, if adopted, would greatly increase the effectiveness of CCA projects undergone in the Maldives and in developing countries in general. These four ideas have been proposed by the interviewees and I will attempt to articulate them in relation to the three main tenets of the present course in human ecology —namely, *culture*, *power*, and *sustainability*-. This section aims at answering the second research question: *how can CCA assistance be made more effective and democratic?*

5.1 Climate markers for tracking CCA finance:

The current situation of CCA finance is characterised by a fragmentation of financial sources that force developing countries to navigate an uncertain and muddy ocean. This is a major challenge for developing countries which have seen their budgets being dried up by swelling costs of CCA projects in the course of the last decade (Twigg, 2007). Significant diversity in rules and procedures of various financial funds place considerable stress on countries with limited human resources and technical capacities. The transparent and systematic tracking of finance flows is one of the many steps that developing countries should make in order to access funds more effectively. The Copenhagen Accord signed under the auspices of the UNFCCC in 2009 established financial support for developing countries by developed countries to tackle the costs arising from CCA. The pledge was in the magnitude of 10\$ billion per year from 2010 to 2012 and then an increase to 100\$ billion per year as of 2020 (Syroka and Wilcox, 2006). However, the nature of this accord is voluntarily and not binding making this pledge rest on the good will of donor countries. To date several initiatives to generate international public funding exist and this brings about a considerable fragmentation of efforts. This list, rather than shrinking, grows longer year after year and this entails a myriad of differing administrative arrangements for national governments. What is needed is a greater degree of harmonisation allowing recipient countries direct access to funding. On top of this, there is an urgent need for strengthening national ownership, accountability, and transparency of CCA established in developing countries (ODI, 2010).

The Durban Outcome agreed in 2011 requires developing countries to register, monitor, and report on the climate finance that the country in question has had access to. The same requirement applies to developed countries that have the duty of keeping track of all the funds and grants disbursed: in doing so the information provided by the donor country and by the recipient country can be compared (Mitchell et al., 2011). According to Mr Kumar (policy officer at the World Bank), a comprehensive guideline for this finance-flow should include a formal and clear finance marker system in order to identify and distinguish climate finance and traditional development finance. In so doing, the problem of “additionality” would be effectively addressed. As a matter of fact, there is widespread apprehension in developing countries that donors will divert their current ODA rather than provide additional funds necessary to increase resilience. This conundrum is referred to as “additionality”. The idea underpinning the concept of additionality is that developing countries were already in

need of assistance before the extent of adaptation needs and associated costs were known; consequently, developed countries should proportionally increase their donations. In order to overcome this issue, Mr Kumar proposes the introduction of “climate markers” to register whether funding goes into ODA or into CCA. To date the most widespread climate finance marker system is the one developed by the OECD: the so-called “Rio markers” (Mechler, 2006).

The Rio markers have been in use since 1998 in the domain of climate change mitigation and since 2010 for adaptation. A project is considered related to climate change, and thus eligible for the Rio markers, if it contributes to the integration of climate change concerns with the recipient countries’ development objectives through institutional building, capacity development, strengthening of the regulatory and policy framework, or research. Projects undergone in developing countries and financed by developed countries are divided into three categories: i) projects that have adaptation as “principal objective” (meaning that the project has been established in the first place for its adaptation objectives and that it would have not been established at all if it had not been for its contribution to CCA); ii) projects that have adaptation as a “significant objective” (meaning that the project have other prime objectives and that it involuntarily contributes to adaptation or that it has been adjusted the perform this function); iii) projects that are not targeted at adaptation. The first two project typologies are eligible for Rio markers (with a greater number of credits allocated to the former and fewer permits allocated to the latter), whereas the third typology is not eligible for Rio markers at all (Benson, 2009). The markers allow an approximate quantification of aid flows that target climate objectives.

This idea, as it has been proposed by Mr Kumar, would increase the sustainability of the cooperation between donor countries and receiving countries. As a matter of fact, distrust often arises between partner countries because of the issue of “additionality” and the efficiency with which the money received is then invested by the receiving countries. On the one hand, developing countries are distrustful of the international community on the ground of resources being diverted away from ODA and into CCA without any real increase in the money flow. On the other hand, donor countries and international organizations do not have the opportunity of tracking whether the money they donated has been effectively invested. “Rio markers” would go a long way in rectifying this situation and making CCA finance

flows more sustainable in the long run. From a political ecology perspective, the adoption of this instrument would foster the degree of sustainability of finance-flow in the medium and long-term.

5.2 TAMD Ecosystem Management Plans:

All parties to the UNFCCC are obliged to develop and periodically update national inventories of greenhouse gas emissions by source and removals by sinks and report to the Conference of the Parties through national communications and biennial reports (Callaway, 2004). On the adaptation side, there is currently no harmonised framework for monitoring and reporting of activities undertaken. Reporting on adaptation activities implemented by developing countries (e.g. progress made, achievements, lessons learned, and challenges) takes place primarily through national communications (Noy, 2009). The monitoring and evaluation of adaptation actions is particularly important for developing countries. This is because it is through such actions that countries can identify effective measures and, thus, allocate scarce resources to those actions that are the most likely to increase resilience to climate risks so as to best support countries' short and long-term development objectives (GCCA, 2013). According to Mr Coyette (policy officer at EuropeAid), a way in which this reporting can be made more effective is by adopting the Tracking Adaptation and Measuring Development framework (TAMD) as it has been developed by the International Institute for Environment and Development (IIED). The creation of this framework was commissioned by the UK Department for International Development in 2012 (Brooks et al. 2013). TAMM is aimed at checking whether climate change adaptation is keeping development on-track, and whether costs and benefits are fairly distributed. TAMM does this by assessing risk management and resilience at many levels. TAMM shows the linkages between adaptation and development outcomes; specifically, it assesses the impacts on poverty, livelihoods, and income status. This is important because climate change adaptation is tightly linked with development outcomes (McGray et al., 2007).

In Mr Coyette's opinion, TAMM offers a bespoke framework that can be customized on countries' needs. All the existing frameworks for assessing CCA are top-driven and take into consideration only short time spans. On the contrary, TAMM assesses how well investments made by governments -but also by international organizations and private companies- render development outcomes. As a matter of fact, adaptation has to overcome a

development deficit and TAMD offers development practitioners in developing countries a pragmatic framework for assessing the way and the extent in which adaptation finance leads to development outcomes. A constructive way in which TAMD can be perceived by adaptation practitioners is as a “facilitator”: instead of seeing TAMD as a burden and a time-consuming activity with no perceptible use, TAMD should increasingly be seen as a way in which developing countries can prove to donors that received finance has been put to good use (Brooks et al. 2013). In the long-term this can induce developed countries and international donors to increase the finance flow. To obtain such outcome it is important to communicate to practitioners that TAMD is a country-led approach designed specifically for being used by adaptation practitioners to substantiate the claims made by their governments when trying to access climate finance.

Over 2013 and 2014 IIED will pilot TAMD in several countries. The development of robust and cost-effective adaptation evaluation frameworks is under way. In collaboration with policy-makers and researchers in Kenya, Mozambique, Nepal, and Pakistan, frameworks are being tailored to specific national and sub-national circumstances. During the first phase, IIED research partners completed a scoping report. IIED also carried out an appraisal of existing monitoring and evaluation systems in pilot countries for designing TAMD prototypes for each country (Brooks et al. 2013). Phase two entails testing the feasibility and utility of the approach in each country. It is envisaged that this will be completed by late 2014. IIED will concentrate on developing robust and bespoke frameworks tailored to national circumstances by:

- Partnering with government agencies responsible for delivering social and economic development;
- Working to make climate change a mainstream part of national development planning;
- Using existing information on development progress;
- Introducing new thinking and frameworks for assessing climate risk management;
- Fostering shared learning and a community of practice among public sector staff across developing countries.

The relevance of TAMD to a political ecology perspective on development aid is that it shows the linkages between adaptation and development outcomes; specifically, it assesses

the impacts on poverty, livelihoods, and income status. This is important because CCA is tightly linked with development outcomes. This tool, as proposed by Mr Coyette, is relevant from a political ecology perspective for the fact that it ensures the sustainability of ecosystem management plans in the long-run by offering a rigorous framework for assessing costs and benefits of specific development plans.

5.3 Enhancing stakeholders' involvement:

According to Ms De Conicke (policy officer at EuropeAid), an important element for making CCA projects more effective is involving civil society in the process of decision-making. As it has been highlighted in the interviews and in the research on NAPA, a democratic deficit can be a hindering factor in the process of making ecosystems and society more resilient to climate change. As a matter of fact, whereas plans for CCA are for the most part top-down in approach, climate change is locally experienced and so there is a need for bridging the gap between the decisions taken at governmental level and the projects that then have to be implemented at the local level. In the case of the Maldives, the emphasis in drawing up the NAPA has been placed on technology, infrastructures, and natural resources management by state agencies. NGOs and communities have played a minor role in the formulation of strategies for CCA. The relevance of this proposal from a political ecology perspective hinges on the importance that the element of power has on the inclusiveness of CCA projects. The real issue at stake when we talk about stakeholders' involvement and public participation in decision-making is power distribution among social actors. What has been highlighted in this research on NAPA is the fact that decisions were imposed on local populations, rather than being discussed with them. Power is one the three main tenets of this course in human ecology and, thus, the proposal articulated by Ms De Conicke is very much relevant to the aim of this research.

Ms De Conicke argues that technology interventions can be sustainable and effective only if they are owned by the local communities that are expected to benefit from them. This shared ownership is also an effective way in which possible tensions within the community can be defused. In fact, certain interventions of CCA are set to benefit certain stakeholders more than others: the shared ownership of these projects can be a way to reconcile the needs of all stakeholders and overcome conflicts that could possibly arise. On a similar note, successful projects and technology transfers should be within the management capacity of the

community if they are to be successfully adopted and sustainably deployed. The adaptive capacity of a community depends upon the degree of understanding it has of the threats it is facing, the resources it has access to, and the depth of social capital it can draw upon (Lobo, 2013). Furthermore, the involvement of NGOs can be beneficial in gaining the support of local stakeholders because local communities trust such organisations and can easily identify with them. Local communities can more easily hold accountable NGOs than central governments and, thus, these organizations can act as guarantor of the implementation of the CCA project in question. Another important element connected to the aforementioned democratic deficit is the need to raise awareness on the effects of climate change in the long run. What is even more relevant is informing on the impacts of climate change on livelihoods and habitats and on the interactions between these two systems (Ebi, 2007). To this end, NGOs can act as catalysts in helping local communities to reduce vulnerability, mitigate risks, and build resilience. For instance, NGOs can help communities identify and map local biodiversity resources to meet livelihood, food, and medicinal needs in times of natural calamities (such as, epidemics, crop failures, droughts). Furthermore, NGOs can also assist communities in claiming their rights over natural resources that are pivotal for supporting their livelihoods and in familiarising them with the legal, regulatory, and commercial regimes that affect their claims (Bosello et al., 2007).

In Ms De Conicke's opinion, NGOs could make up for the shortcomings of governmental agencies; as a matter of fact, NGOs are best placed in devising technical and social adaptive strategies to put at the disposal of local communities and in providing feedback to related public agencies (Agrawala, 2005). Consequently, a partnership between governmental agencies and NGOs can effectively help communities prepare to face the challenges brought about by climate change by facilitating large scale adoption of climate smart adaptive strategies and by setting up technological and institutional arrangements that can help reduce vulnerability and risks, build resilience and mitigate the impacts of disasters and extreme events (Satterthwaite, 2007). Last but not least, the complexity and the scale of the ecological changes brought about by climate change calls for knowledge sharing among societal stakeholders at all levels: at the regional, national, and international level. To this end, institutional frameworks for CCA should be developed in a consultative and participatory manner including governmental officials, international donors, NGOs and representatives of civil society. Broad consultations would allow for an effective implementation of CCA strategies and projects. In the case of the Maldives, NAPA should be

redrafted taking into consideration the needs of local populations and of the priorities expressed by them. The main elements that should be included in an effective version of NAPA in any developing country are the following:

- Promoting interaction: exchange of information and knowledge between stakeholders;
- Democratize information: open access to all sources available;
- Ensuring real engagement: no predetermined solutions to avoid the phenomenon of "tokenism" where decisions are made beforehand and no actual democratic decision making happens;
- Fair engagement: involvement of all stakeholders wanting to partake in CCA policymaking;
- Iteration: ongoing process of definition and redefinition of the problem.

5.4 Capacity Building & Technology Transfer:

Another important issue to tackle is the shortage of skills of civil servants tasked with the design and the implementation of CCA projects. In fact, of the 37 coastal and marine areas that the Maldives Government declared being of ecological value only two of these areas are at the moment being protected. As a reason for this Mr Waheed (governmental official in the Maldives) puts forward the skill shortage in the public sector and argues for a number of options aimed at addressing skill shortages, including contracting out services, training, and assistance from the central government. There may be circumstances in which expertise is available for adaptation, but local governments would have to offer higher wages in order to attract skilled staff to their local area, particularly in remote areas. This may be beyond the resources of some city councils, especially if the expertise is only needed infrequently (AUSAID, 2012). One option to address this is for city councils to outsource some functions to a private organisation. In order to overcome this lack of skills in the Maldives, Mr Waheed argued for the establishment of partnerships with the private sector in order to exploit the competencies offered by scientists working for natural resorts and employed by the private sector. Several resorts in the Maldives employ in-house marine biologists and environmental scientists as consultants in charge of monitoring the quality of the environment around the resort. By establishing these partnerships with the private sector the public administration of the Maldives would be able to overcome the shortage of qualified personnel that is experiencing at the present moment. Mr Waheed also declared that it would be useful to

establish pilot projects for wetland management and coral monitoring in order to foster new skills development among civil servants. This would be particularly useful to enhance the know-how of the practitioners partaking in them and of the local policy-makers designing them. Furthermore, such pilot programmes would be particularly useful in the light of the recent devolution which allocated more and more legislative power to the local governments and city councils. In fact, if the pilot projects prove to be successful, the models can then be scaled-up and replicated across the country (Berry, 2007).

Along with fostering skills learning among civil servants, the pilot projects financed by the international community could also be the opportunity for increasing technology transfer towards developing countries. As a matter of fact, there is a strong link between transfer of technology and transfer of skills since the former can incentivize the latter. A possible definition of Climate Change Technology Transfer is a systematic process of co-production and sharing of knowledge, experiences, skills, and equipment (Wilson Centre, 2012) between the Global North and the Global South. At the beginning of this process it is necessary that local officials identify the technology needed at the local level for boosting CCA and then the setting up of the required platforms for co-operation among the central government and the international donors. A cooperative model of technology transfer presupposes multi-lateral dialogues, multi-dimensional resources, knowledge flows, equal partnerships, and effective engagement between technology providers and recipients. If all these elements are included in a Technology Transfer scheme, then this can truly enhance a transition towards a resilient economy and society in the Maldives.

However, this scheme of Technology Transfer can be approached in two very different ways: on the one hand, there is the linear model of innovation diffusion, and on the other hand, there is the more systemic holistic model of knowledge-sharing and socio-technological transition. The main difference separating these two models rests in the relationship between the technology producers and the final users: in the first case there is a simple transfer from one stakeholder to the other, whereas in the second case we witness a process of cooperation aimed at tailoring the technology being shared to the local environment and to the social condition in which this technology has to be introduced. But how can this process of “technology sharing” be brought about? There are some elements which are pivotal to the success in this direction: i) assessment to identify the real needs of end-users; ii) capacity-building in recipient countries for the use, maintenance, and mastery

of a given technology; iii) improvement in education and raise in awareness on the value and use of the newly-introduced technology (Wilson Centre, 2012; Dlugolecki, 2007). But who is the stakeholder that should kick-start this process? All actors can take the lead in initiating a process of Technology Sharing: the government and associated public bodies; the private sector; and community groups or NGOs. Another important element in Technology Sharing is the social accountability of the use made of a specific technology. As technologies are socially constructed, their diffusion should be democratically governed (Wilson Centre, 2012). There is a strong relevance of this proposal by Mr Waheed from a political ecology perspective. In fact, the element of culture underpins this idea of Capacity Building and Technology Transfer. When techniques and technologies are transferred from one social context to another, we must be wary of the implications that this brings about. The culture of the local populations adopting a specific technology must be able to work on it and re-shape it in accordance with their specific needs. In order to do this, local practitioners must be endowed with the critical tools needed for acting on the technology offered to them. It is clear that the two elements of background knowledge and technology ownership by a specific social group mutually reinforce each other.

The UNFCCC has put in place a framework for regulating Technology Sharing and improving Capacity Building with the following purpose: “the purpose of capacity building under the framework is to strengthen the capacities of Parties other than developed country Parties and other developed Parties not included in Annex II, particularly developing country Parties, to promote the widespread dissemination, application and development of environmentally sound technologies and know-how, to enable them to implement the provisions of the Convention” (McCarl, p.65, 2007). Always according to the UNFCCC technology transfer and capacity building is a process aimed at building, developing, strengthening, enhancing, and improving existing scientific and technical skills, capabilities and institutions in developing countries in order to enable practitioners in these countries to assess, adapt, manage, and develop technologies. The UNFCCC also puts the emphasis on the fact that this process of capacity building must be country-driven, it must address specific needs and conditions of the ecological and social environment in which it will be applied and it must reflect their national sustainable development strategies, priorities, and initiatives (McCarl, 2007).

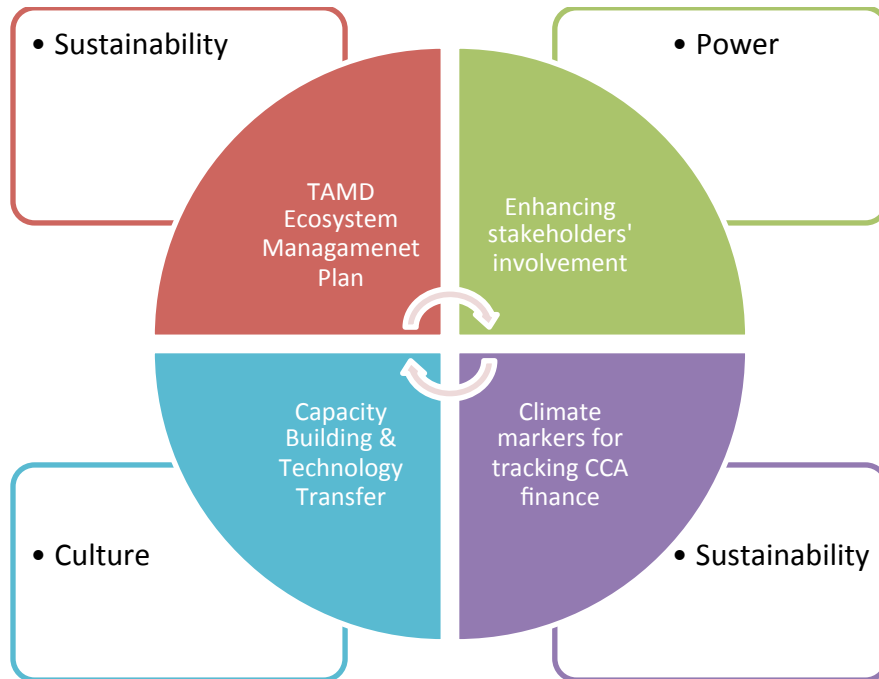


Fig.3 Four strategies for making CCA more effective and their links to political ecology (author's creation)

6. Conclusion:

The present thesis was aimed at answering the following two research questions:

- What are the main points of weakness of CCA projects financed by international donors in the Maldives?
- How can Climate Change Adaptation assistance be made more effective and democratic?

In the “Findings” I presented the data collected in the course of the interviews I carried out with four development practitioners and their answers to the first research question. Then, in the “Discussion” I presented the four main techniques put forward by the interviewees for answering the second research question and I made the case for their relevance to the field of political ecology.

As for the first point of weakness, namely the inadequacy of Ecosystem Management Plans to assess the value of CCA projects, Mr Coyette (policy officer at EuropeAid) endorsed the adoption of TAMD monitory mechanism. TAMD assesses how well investments made by

governments -but also by international organizations and private companies- render development outcomes. As a matter of fact, adaptation has to overcome a development deficit and TAMD offers development practitioners in developing countries a pragmatic framework for assessing the way and the extent in which adaptation finance leads to development outcomes. But what is even more relevant from a political ecology perspective is the contribution that TAMD can bring to assessing whether CCA is keeping development on-track, and whether costs and benefits are fairly distributed. TAMD does this by assessing risk management and resilience at many levels. TAMD shows the linkages between adaptation and development outcomes; specifically, it assesses the impacts on poverty, livelihoods, and income status.

As for the unbalanced involvement of different stakeholders in the drafting of NAPA and the problem of communities being only informed and not involved in CCA policy-making, Ms De Conicke proposed a greater involvement of civil society in the process of decision-making in the context of CCA. As a matter of fact, the democratic deficit can be a hindering factor in the process of making ecosystems and society more resilient to climate change. The shared ownership is also an effective way in which possible tensions within the community can be defused. In fact, certain interventions of CCA are set to benefit certain stakeholders more than others: the shared ownership of these projects can be a way to reconcile the needs of all stakeholders and overcome conflicts that could possibly arise. Furthermore, the adaptive capacity of a community depends upon the degree of understanding it has of the threats it is facing, the resources it has access to, and the depth of social capital it can draw upon.

The third point of weakness which emerged in the course of this research is the lack of data records on finance donated and received by partner countries and the difficulties in accessing CCA funding due to complex mechanisms and overlapping institutions. To this end, Mr Kumar (policy officer at the World Bank) proposed the adoption and the improvement of the “Rio climate markers”. A project is considered related to climate change, and thus eligible for the Rio markers, if it contributes to the integration of climate change concerns with the recipient countries’ development objectives through institutional building, capacity development, strengthening of the regulatory and policy framework, or research. The markers allow an approximate quantification of aid flows that target climate objectives. Clearly, these three instruments and working methods alone would not be able to overcome all

the problems CCA practitioners are faced with in developing countries, but they could, nevertheless, increase the effectiveness of such projects and ensure the long-term sustainability of these projects.

Last but not least, the skill shortage at the local level emerged in the present research as one of the main obstacles hindering CCA projects. To this end, the role of possible partnerships has been investigated and some recommendations –such as, hiring scientists working in the tourist resorts or increasing the knowledge transfer between developed and developing countries- have been put forward by Mr Waheed (government official in the Government of the Maldives). As a matter of fact, the governments of developing countries and international institutions could benefit from the in-depth knowledge of scientists and managers working in private companies operating in the field. Often these companies have a greater understanding of the needs of the people and of the resources available in a given territory than the government itself. For example, in the case of the Maldives the managers and the scientists working for the local resorts experience first-hand the ecological shortages and disruptions that arise from climate change and, thus, are better placed for providing support to development practitioners. Capacity building is often connected to Technology Transfer and, thus, partnerships between developed and developing countries in this regard have also been investigated. The UNFCCC itself has put in place some platforms for cooperation in the domain of technology transfer and capacity building as a process aimed at building, developing, strengthening, enhancing, and improving existing scientific and technical skills, capabilities and institutions in developing countries in order to enable practitioners in these countries to assess, adapt, manage, and develop technologies.

The present research thesis has not the presumption of being an exhaustive discussion of all the points of weakness that development practitioners might encounter when undertaking CCA projects, but rather it was simply an attempt to sketch out some main recommendations for making CCA more effective and efficient in developing countries through a case study of the current CCA scenario in the Maldives. As recommendations for further research, I would propose the inclusion of activities aimed at raising awareness on the links between ecological and social systems in the context of climate hazards and environmental degradation into school curricula. In so doing, future generations of Maldivians would be endowed with the background knowledge necessary for understanding the intricate connection between human and natural systems. Furthermore, if strong

foundations of environmental science and of political ecology are laid early in school, more Maldivians would pursue these research interests into tertiary education to gain the necessary know-how for working on CCA projects in their home country.

Another topic for further research is the development of eco-tourism in Maldivian resorts as a way of reconciling economic development with environmental protection. UNDP has already financed some eco-tourism projects on some of the atolls and now it is focusing on an eco-resort on Gaafu Dhaal Vaadhoo Island (UNDP, 2014). NGOs and cooperatives are already building on the opportunities offered by the UNDP funding initiative and proper facilities to drive eco-tourism on the island are already taking place. The interest in looking into these projects from a human ecology perspective rests with the questions of indigenous inclusion, non-discrimination of minorities, and the actual sustainability of such business activities in a horizon of post-peak oil production in which international tourism will be on the ebb. Last but not least, further research should focus on a way in which CCA could be made more effective by linking it to Disaster Risk Reduction. The various techniques and mechanisms known under the general name of Disaster Risk Reduction –such as, buffer zones, early-warning systems, and risk assessments- are an important complement to CCA because they help practitioners with the task of assessing risk and possible vulnerabilities that natural hazards can have on local communities. As a matter of fact, there is not such a thing as “a natural disaster”, but rather there are “natural hazards”. These natural hazards, if properly accounted for and prepared for would not turn into “natural disasters”. The UN agency in charge of DRR is UNISDR: this agency has already started cooperating with the Republic of the Maldives in order to draw up a Strategic National Action Plan. This plan of pairing CCA and DRR should be brought further if long-lasting benefits are to be achieved.

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