EP

United Nations Environment Programme

UNEP(DEPI)/MED WG.368/7
07 May 2012
Original: ENGLISH

MEDITERRANEAN ACTION PLAN
UNEP/MAP GEF Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem

Third Steering Committee Meeting of the Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership)

15-17 May 2012, Istanbul, Turkey

INTEGRATION OF CLIMATIC VARIABILITY AND CHANGE INTO NATIONAL STRATEGIES TO IMPLEMENT THE ICZM PROTOCOL IN THE MEDITERRANEAN
ROADMAP FOR THE FIRST YEAR OF PROJECT'S IMPLEMENTATION
D R A F T

Together for the Mediterranean Sea

UNEP/MAP
Athens, 2012

INTEGRATION OF CLIMATIC VARIABILITY AND CHANGE INTO NATIONAL STRATEGIES TO IMPLEMENT THE ICZM PROTOCOL IN THE MEDITERRANEAN

ROADMAP FOR THE FIRST YEAR OF PROJECT'S IMPLEMENTATION

D R A F T

1. INTRODUCTION: THE INCEPTION PHASE AND THE ROLE OF THE ROADMAP

The Inception Phase is the first major, and critical, stage in the implementation of any project, in particular when there is a delay between its approval/endorsement and the start of its actual implementation. Although the "Integration of climatic variability and change into national strategies to implement the ICZM Protocol in the Mediterranean" project (in further text "CVC Project") has been endorsed by GEF CEO less than six months ago, it has been in the making for more than 2 years. It is reasonable to expect that there has been a change in scope from the initial assumptions to the approved project document, hence the importance of the Inception Phase. The Inception Phase and the Inception Report, as its major output, provide, therefore, an important means of taking stock of these changes through reviewing the current prevailing conditions for achieving project objectives in comparison with the activities originally proposed.

The Project Document is not very specific about the Inception Phase. It states that the Inception Phase will take the first four months of the project, that the regular MedPartnership Steering Committee meeting will also serve as the Inception Workshop, and that the Inception Report will be prepared soon after the Inception Workshop. However, following the experiences of the MedPartnership (CVC Project is complementary to the MedPartnership and it is envisaged that the implementation of both projects will be coordinated very strictly, both in temporal as well as in managerial sense), activities to be undertaken in the Inception Phase should be many.

The overriding goal of the **Inception Phase** is to achieve familiarity of all stakeholders and project partners with the objectives, activities and deliverables of the CVC Project. The specific objectives could be stated as follows:

- To plan co-ordination of actions to be undertaken by all 4 project co-executing agencies (UNEP-MAP, PAP/RAC, BP/RAC and GWP Med);
- Project Management Unit (PMU) of the MedPartnership to take ownership of the project's goals and objectives and establish close working relationships with all co-executing agencies;
- To revise the overall work plan and budget;
- To finalize the project's first annual (2012) work plan and list of meetings and other events;
- To revise indicators in the monitoring and evaluation(M&E) plan, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), as well as mid-term and final evaluations;
- To make all parties acquainted with their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms; and
- To finalise all legal agreements necessary for the implementation of the CVC Project.

The outcomes of the Inception Phase are expected to be the following:

- MedPartnership PMU takes full ownership of the CVC Project;

- The 2012 MedPartnership Steering Committee organized, also serving as the CVC's Inception Workshop;
- The Roadmap for the first year of project's implementation prepared and adopted;
- Discussions and consultations between programme partners at the regional and national levels undertaken;
- Agreements with project partners signed;
- The implementation of a number of actions started;
- The Inception Report finalised and disseminated.

The purpose of the **Inception Report** is to provide additional clarity on the project and, eventually, refine the Project Document should there be too many changes from the original context of the project. The Report also aims at facilitating integration among project's components and providing more detailed instructions for the implementation of the project. The objective of the CVC Inception Report will be to harmonize, interrelate and integrate actions to be implemented within individual Project activities. The Inception Report will be essential in guiding the project implementation process over the succeeding phases of activities. The information contained in the report and in the annexes is supposed to be a complement to the Project Document. However, to be more specific, it should be stated that the Inception Report aims to do the following:

- To provide an agreed statement of the overall work programme and budget, i.e. the revised overall and first year work plan and timetable of the activities to be implemented, and to incorporate any comments following the Inception Workshop;
- To develop, where necessary, the methodologies, tools and techniques to be applied;
- To draw a baseline with regards to the regional context and outline complementary issues which the project has to deal with in the following phases of its implementation;
- To indicate risks and point to activities where increased efforts will have to be employed soon after the Inception Report will be adopted.

The purpose of the **Inception Workshop** is to present the goals, objectives and approach to the implementation of the project as agreed in the Project Document together with any recommendations for revision. The meeting should be carefully designed to focus the discussions on implementation rather than the original concept of the project that has been agreed by the GEF and countries.

The **Roadmap** preparation is an interim step between the period when the endorsement of the CVC Project Document was obtained and the moment the Inception Report will be finalized and disseminated (end June 2012). Its aim is to maintain the momentum and stimulate the interest of the participating countries' and other stakeholders in the project and, more specifically, to serve as the background document for the Steering Committee Meeting/Inception Workshop in Istanbul in May 2012.A roadmap guides actions that match short-term and long-term goals with specific proposals to help meet those goals. It provides a view of how to get where the stakeholders want to go and achieve their desired objective. It also makes sure the resources to achieve their objectives are in place at the time needed. The Roadmap is not a duplication of, but a complement to the Inception Report. The activities undertaken during the Roadmap preparation period should be considered as a stage in the preparation of the Inception Report and results achieved will be fully utilized for the Inception Report's finalization.

2. CLIMATE VARIABILITY AND CHANGE: STATE OF THE ART

Climate variability and change over the past century have already had significant and measurable effects on ecosystems, societies, economies, and health. Climate change contributes to sea-level rise

and to the frequency and intensity of floods, droughts and other extreme weather events, wildfires and crop failures, and outbreaks of disease and insect damage. Even though average precipitation is increasing as the climate warms, changes in the amount, timing, and distribution of rain, snow, and runoff are challenging the ability to manage water supply. Projected changes in temperature and precipitation patterns in response to increasing greenhouse gas emissions throughout the 21st century are expected to intensify the effects on species, ecosystems, societies, economies, and health in many areas of the world.

At this point, it would be important to clarify some semantic/technical issues related to the definitions of "climate variability" and "climate change". Although these notions are not the same but compatible, we could often find the mix up of their definitions, and/or not always clear distinction between them. There are many references to climate change in the literature, but much less so to the climate variability. The clear definition of "climate variability" is rarely found. Some of the definitions are found below.

Climate Change: A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces, or to persistent anthropogenic changes in the composition of the atmosphere or inland use (IPCC, 2007). This definition differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), where climate change is defined as: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.” The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes. According to USAID (2007), climate change refers to shifts in the mean state of the climate or in its variability, persisting for an extended period (decades or longer). Climate change may be due to natural changes or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

A changing climate leads to changes in the frequency, intensity, spatial extent, duration, and timing of extreme weather and climate events, and can result in unprecedented extreme weather and climate events. Changes in extremes can be linked to changes in the mean, variance, or shape of probability distributions, or all of these. Some climate extremes (e.g., droughts) may be the result of an accumulation of weather or climate events that are not extreme when considered independently. Many extreme weather and climate events continue to be the result of natural climate variability. Natural variability will be an important factor in shaping future extremes in addition to the effect of anthropogenic changes in climate (IPCC, 2012).

The distinction between "climate variability” and "climate change” relates to differences in time-scale. On the one hand, "climate variability” is conceptualized as variations in the climate system over short time scales such as months, years or decades and on the other hand "climate change” is conceptualized as longer term trends in mean climate variables of periods of decades or longer (IPCC, 2001; see Figure 1).

Many weather and climate extremes are the result of natural climate variability (including phenomena such as El Niño), and natural decadal or multi-decadal variations in the climate provide the backdrop for anthropogenic climate changes. Even if there were no anthropogenic changes in climate, a wide variety of natural weather and climate extremes would still occur.

Climate variability: Variations in the mean state of climate on all temporal and spatial scales beyond that of individual weather events. Examples of climate variability include extended droughts, floods, and conditions that result from periodic El Niño and La Niña events(USAID, 2007).

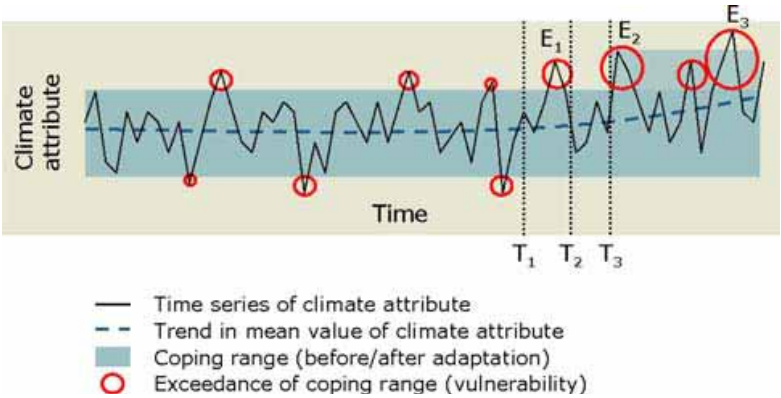

Figure 1: How climate variability evolves into climate change

Climate variability can cause abrupt disruptions, such as floods, droughts, or tropical storms. These disruptions can take a major toll on a country's economy if a significant part of economic activity is sensitive to the weather and climate as is, for example, the case with coastal economies.

The recent IPCC report "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" (2012) states that extremes, exposure, and vulnerability, as the clearest phenomena associated with climate variability, are influenced by a wide range of factors, including anthropogenic climate change, natural climate variability, and socioeconomic development. Similarly, there are predictions that due to accelerated anthropogenic activities, climate variability will continue to increase, characterized heightened frequency and intensity of extreme weather conditions. Therefore, future changes in exposure, vulnerability, and climate extremes resulting from natural climate variability, anthropogenic climate change, and socioeconomic development can alter the impacts of climate extremes on natural and human systems and the potential for disasters. It has also been observed that climate variability becomes inter decadal, namely climate variability becomes the phenomenon on the time scale of a few decades, i.e., the time scale of an individual human's life cycle. The combination of global warming, superimposed on decadal climate variability and interannual fluctuations (ENSO, NAO) are expected to lead to a century of increasing climate variability and change that will be unprecedented in the history of human settlement.

Therefore, adaptation to climate variability is necessary both to reduce current vulnerability to climatic hazards and stresses as well as to prepare for future climate change. Although development cannot necessarily be made climate-proof, development strategies should acknowledge predicted climate change in order to minimize its impact. This is particularly relevant for coastal areas as they count among the most sensitive ecosystems on earth. Current management practices, which typically focus on the shorter-term actions targeting impacts of climate variability, should also reflect this need to change the focus to a longer term.

3. INTEGRATED COASTAL ZONE MANAGEMENT PROTOCOL: AN INSTRUMENT TO TACKLE CLIMATE VARIABILITY AND CHANGE IN THE MEDITERRANEAN

With few exceptions, the potential consequences of climate change are not yet fully being considered in coastal management. Assessing what will be potential effects of climate change on coastal and marine resources over the next few decades is extremely difficult. The task is made even worse if we consider that coastal areas count among the most environmentally sensitive and dynamic areas in the entire world. If we add to that the impact of human induced disturbances, many coastal ecosystems will face reduced capacity to cope with effects of climate change (see Tables 1 and 2). Assessing potential consequences of climate change on coastal areas and devising adequate adaptation strategy is a rapidly growing but still a very young scientific and managerial discipline. The current coastal management system in many countries of the Mediterranean is not particularly adaptable, even to current climate variability and risks, and there is little inclination to restrict development in vulnerable locations. Adaptation strategies would involve conserving remaining natural coastal areas, placing less property at risk in low-lying or flood- or slide-prone areas. It is especially urgent to begin adaptation now with regard to development of land in the coastal zone to be materialized in the years or decades yet to come(US Global Change Research Program, 2000).

Climate Change Impacts	Effects on the Coastal Environment
Higher sea levels **Higher sea temperatures** **Changes in precipitation patterns and coastal runoff** **Changed oceanic conditions** **Changes in storm tracks, frequencies and intensities**	Bio-geophysical effects • Displacement of coastal lowlands and wetlands • Increased coastal erosion • Increased flooding • Salinisation of surface and groundwaters Socio-economic impacts associated with climate change include: • Loss of property and land • Increased flood risk/loss of life • Damage to coastal protection works and other infrastructure • Loss of renewable and subsistence resources • Loss of tourism, recreation, and coastal habitats • Impacts on agriculture and aquaculture through decline in soil and water quality Secondary impacts of accelerated sea level rise: • Impact on livelihoods and human health • Decline in health/living standards as a result of decline in drinking water quality • Threat to housing quality Impacts on infrastructure and economic activity: • Diversion of resources to adaptation responses to sea level rise impacts • Increasing protection costs • Increasing insurance premiums • Political and institutional instability, and social unrest • Threats to particular cultures and ways of life

Table 1: Impacts of climate change in the coastal zone (PAP/RAC, 2010)

Attribute	Details
Physical	Shoreline erosion, flooding, unstable shorelines (rock and sandstone cliffs).
Ecosystems and biodiversity	Observed temperature rises and changes in precipitation patterns already affect various aspects of the Mediterranean's natural systems. Projected climate change is expected to lead to considerable losses of species and habitats throughout the region.
Livelihoods	*Social:* Changes in frequency and intensity of extreme weather and climate events could pose a serious threat to human health. These threats may either be direct, such as heat waves and flooding, or indirect, for example, by the spread of tick-borne diseases. Particularly vulnerable sections of the population are elderly people with limited access to health care services. There are already major Water Source Shortages in some areas, and these will increase due to climate change (rainfall and runoff decreases, SLR, saline intrusion of groundwater) as well as population increases. A growing share of water demand is being met through the over-exploitation of groundwater, prompting seawater seepage (which, among other problems, leads to soil salination problems when this water is used for irrigation). This problem will be exacerbated with SLR. *Economic*: Fisheries - The structure and dynamics of fish stocks on the Mediterranean continental shelf are likely to react both to the effects of human activity (fishing) and to climate change (warming, sea level rise, decreased rainwater run-off, etc.), with consequences for the fisheries which rely on them. Forestry – increased risk of forest fires and parasites (forest production, and impacts of fires on people and economy and environment). Tourism - If heat-waves and summer temperatures increase, the Mediterranean regions could become less attractive to the benefit of more northern destinations. Extreme natural events or a significant rise in the cost of transport relating to global warming prevention programmes could also harm tourist activity as could potential clashes with other users over scarce water resources. Further, biodiversity and quality of natural environment are strong attractors of tourism, and these may be negatively effected by climate change. Economy-wise the most vulnerable sectors are beach tourism and fisheries.

Table 2: Climate change impacts in the Mediterranean (PAP/RAC, 2010)

When exploring the link between ICZM and climate variability and change, we shouldn't lose sight of the fact that climate change mainly comes into play by accentuating threats and problems – sometimes opportunities – that already exist. Currently, problems in Mediterranean coastal zones do not stem from the impact of climate change but from the impact of unsustainable development models so far adopted by the societies concerned. The problem of coastal erosion is a good example of this. It is major challenge for many Mediterranean coastal zones but it is mainly related to:

- coastal installations: sea defense facilities which prevent shore drift and accelerate erosion down shore, walls and rock armor at the top of the beach, destruction of dunes by treading or construction, etc.
- river installations: it is estimated that sediment input from rivers decreased by 90% in the second half of the 20th century because of the construction of dams and the massive extraction of granular material.

ICZM should seek to integrate all key issues of critical importance to the management of coastal resources and resource use - including climate variability and change adaptation. It is important that climate change is not seen as an issue outside of an ICZM framework. Rather, it is vital to understand that effective ICZM can only be achieved by ensuring that it is viewed through a climate change

"lens"; thus climate change adaptation must be couched within an existing operational framework to facilitate implementation and ensure a coherent, transparent and long-term approach.

The ICZM Protocol provides the key tool to facilitate coastal climate variability and change adaptation in the Mediterranean. The ICZM Protocol is a legal international instrument unique in the context of international environmental law. It is a key tool for sustainable coastal development, as it provides an effective way of ensuring that human activities are undertaken with a concern for balancing economic, social and environmental goals and priorities in a long-term perspective. It adds provisions on the strategic environmental assessment, environmental impact analysis, the protection and sustainable use of coastal areas, particular coastal ecosystems, coastal landscapes and islands, economic activities and cultural heritage. Particularly, it is important to point out that the Protocol is the first regional ICZM legal instrument that deals extensively with the issue of climate change, both at the strategic level (by requesting countries to mainstream climate change issues into national ICZM strategies and plans) and local levels (by requesting countries to define, *inter alia,* the coastal setback zone). Table 3 gives an overview of Protocol's articles that directly or indirectly deal with the issues of climate variability and change.

The total of 22 Protocol's articles are related to climate variability and change and are a proof enough that this issue has been adequately mainstreamed into this major Mediterranean ICZM legal framework, and that the focus of CVC Project is rightly twofold:

- to analyze the issue of **climate variability**, and consequently climate change, in the Mediterranean region, particularly in its Southern and Eastern Adriatic countries by identifying the critical areas; and
- to promote the **ICZM** as the most adequate tool to mainstream climate variability and change issues and to show how it could be put into practice in some of the critical areas identified.

It is important to constantly keep in mind that both issues are equally important, and that giving preference to one of these issues only would be missing the target of the project.

The preparation of national ICZM strategies and plans (Article 18) has been defined above as one of the strategic aspects of the Protocol. Consequently, ICZM strategies and plans may be considered as crucial tools for the assessment of impacts of climate variability and change, and for proposing solutions to adapt to them. One of the partners in the project, PAP/RAC, has developed a simple 6-step ICZM process, which has been driven by the Mediterranean ICZM Protocol. The process is highly adaptable, and one of the first side activities was to see how the climate variability and change issues could be integrated into every step of the process. The basic flowchart of the ICZM process is given as Figure 2. This process will be adjusted to the needs of the project and will be tested in one of the critical coastal areas in the Mediterranean identified in this project.

Part	Climate change adaptation considerations
Requirements	Article 8: Climate change is a cross sectoral issue that will effect marine and land management. Consequently, climate change should be mainstreamed into coastal strategies, plans and programmes across all levels of operation. Criteria to monitor the potential impacts of climate change, and the effectiveness of adaptation strategies to mitigate the potential impacts of climate change, should be incorporated within national legal instruments. While general criteria can be outlined, all criteria must be place-based. Climate change criteria are under development internationally. This is a new area of research and therefore consultation and collaboration with international partners will be vital to ensuring robust criteria area developed. Article 9: Climate change will impact economic activities in the region. The potential impacts of climate change on economic activities in the coastal zone must be clearly understood to support effective management of such activities. For example, approaches to manage agriculture or tourism activities in the coastal zone may differ under an altered climate regime. Articles 10 & 11 & 12 & 13: Measures to protect coastal ecosystems, landscapes and socio-economic elements (i.e. cultural heritage) should be based on an understanding of how they may change under projected climate changes. Such an approach will ensure that measures taken to protect the characteristics of specific coastal ecosystems, landscapes and socio-economic elements are sustainable despite a changing change. Islands are particularly susceptible to the potential impacts of climate change, namely rise in mean sea level. The impacts of climate change on islands must be considered. Articles 14 & 15: Awareness raising activities, training programmes and research into ICZM must incorporate climate change. Climate change adaptation is a core component of an integrated approach to coastal management, and the potential impacts of climate change must be understood to ensure ICZM can be achieved. For example, training in vulnerability and adaptation assessments and research into the potential impacts of climate change on the social, economic and environment elements of the coastal zone, are priority areas of information collection.
Instruments	Article 16: Climate change should be monitored and observed through existing, or new, mechanisms. The outputs should be maintained within national inventories that capture information mean sea level, storm events, etc, following an agreed format and process for data collection. In addition, experience in climate change adaptation should be shared through participation in coastal networks (such as the Mediterranean coastal network and the Adaptation Learning Mechanism). Article 17: Climate change adaptation is incorporated within the Mediterranean Strategy for Sustainable Development (MSSD). The MSSD should be taken into account to define a common regional framework for ICZM in which climate change is mainstreamed. Subsequently, climate change should also be mainstreamed into ICZM implementation tools, such as regional action plans, national strategies and other operational instruments. Article 18: As per Article 17, climate change should be mainstreamed into national coastal strategies and coastal implementation plans and programmes. The national coastal strategy should contain summary of existing situation (including a climate change vulnerability assessment), rationale for management priorities, and schedule of measures to be taken and implementation details (cost, institutional structures). Indicators to evaluate effectiveness of strategies (adaptation strategies and broader environmental strategies), plans, and programmes and progress of implementation of the Protocol are required. Refer to Article 8 for information on climate change criteria that may be used to as indicators for inclusion in strategies, plans and programmes. Article 19: Environmental impact assessments consider the sensitivity of the environment to projected impacts of climate change and the inter-relationships between marine and terrestrial parts of the coastal zone and the cumulative impacts on the coastal zone in respect to coastal carrying capacities. Article 20: Adopt land policy instruments and measures (i.e. planning, acquisition, cession, donation, or transfer of land) to ensure sustainable management of public and private land of the coastal zones under a changing climate. For example, development set backs should be established, which incorporate projections for rise in mean sea level.

Part	Climate change adaptation considerations
	Article 21: Adopt financial, economic or fiscal instruments to support implementation of national coastal strategies, plans and programmes. Financial instruments to support climate change adaptation may include UNFCCC sources, GEF sources + other sources of funding. In addition, opportunities to establish a climate change trust fund may be investigated.
Risks	Article 22: Undertake vulnerability and hazard assessments to take preventive, mitigation and adaptive measures to address the effects of natural disasters, in particular climate change. Article 23: To prevent or mitigate the negative impacts of coastal erosion adopt the necessary measures to maintain or restore the natural capacity of the coast to adapt to change, including rise in sea levels. The effect of climate change on local and regional sediment budgets should be assessed. Such information will support the development of coastal or marine structures that take into account the potential negative effects on coastal erosion and the direct and indirect costs that may result. In addition, scientific data to improve knowledge on state, development and impacts of coastal erosion under changing climate should be shared. Article 24: Climate change is expected to increase the intensity (and potentially the frequency) of extreme events. Consequently, it is important to ensure that action is taken to build response capacity. International co-operation to co-ordinate the use of equipment for detection, warning, and communication is important in this regard.
International Cooperation	Article 25: Training in the field of ICZM (which incorporates climate change - as per Article 15) should be undertaken to strengthen capacity, develop scientific and technical research, promote centres specialised in ICZM, and promote training programmes for local professionals. Articles 26 & 27: Co-operate for the provision of scientific and technical assistance in climate change adaptation, including access to adaptation technologies and their transfer. Co-operate in the exchange of information on best practice climate change adaptation; in particular: establish and mainstream vulnerability and adaptations assessments; define adaptation strategies for application in the coastal zone; identify indicators to monitor the effectiveness adaptation action; and carry out activities of common interest, such as demonstration projects. Articles 28 & 29: Ensure climate change is a core component in all co-ordinated national coastal strategies, plans and programmes related to contiguous coastal zones. Co-operate through notification, exchange of information and consultation in assessing the environmental impacts (which incorporates an understanding of climate change) of plans, programmes and projects, prior to authorisation. To this end, co-operate in the formulation and adoption of guidelines to establish procedures to support notification, exchange of information and consultation at all stages of plan, programme and project formulation.
Institutional provisions	Following the descriptions above, climate change adaptation is an integral component to ICZM. It is not an additional activity or action to be undertaken. Therefore, the institutional provisions remain as per the Protocol and do not need to be individually specified here.

Table 3: Alignment of climate variability and change adaptation to the ICZM Protocol (PAP/RAC, 2010)

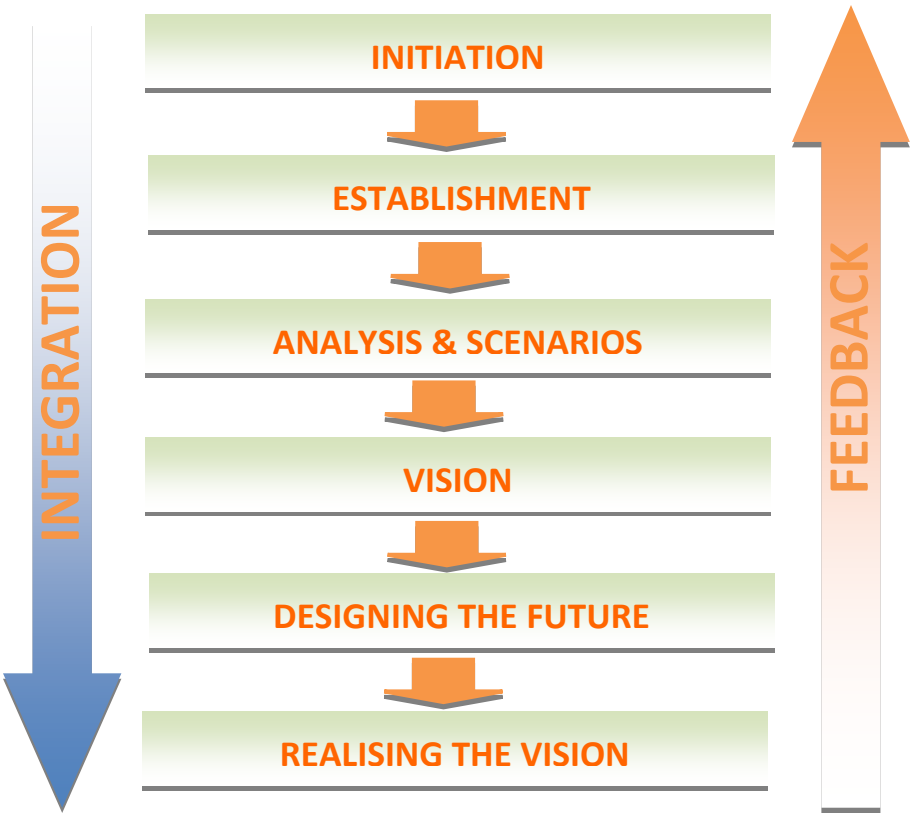

Figure 2: The 6-step ICZM Process

4. STRUCTURE OF THE PROJECT

The intervention logic of the CVC Project states that while it is critically important that research work advances our understanding of how climate variability will impact the coastal zone communities, natural resources and marine and coastal biodiversity of the Mediterranean, it is equally important to ensure that scientific information be made accessible to decision makers, and that actions be taken within the context of ICZM to integrate them into current coastal land use and water policies and practices, i.e. measures to improve sustainability in view of future climatic scenarios.

The overall project goal is to support the implementation of the ICZM Protocol in the Mediterranean through development of region wide coordination mechanisms and tools to address climate variability and change in the Mediterranean Region. The objective of the project is to create an enabling environment for the integration of CV&C coping strategies into ICZM policies, plans and programs of Mediterranean countries by (i) strengthening the understanding of the impacts of CV&C on the coastal zones of the Mediterranean region and (ii) by establishing the needed information exchange mechanisms, capacity and regional pilot experiences. The project components and expected results are given in Table 4.

Component	Outcome	Output
Component 1: Establishment of a CV&C information sharing platform This component will strengthen the coordination for a long term regional climate variability monitoring program with consensus on objectives, targets, impact indicators and implementation modalities. This will be supported by a web-based regional data platform on climate research with particular focus on the environmental and economic impacts of climate change in the coastal zone. The monitoring program and database will be integrated into national and regional ICZM monitoring processes and in doing so will contribute to on-going work within the ICZM protocol to the Barcelona Convention.	Outcome 1.1 Multi-country data platform on climate research supports ICZM planning and management	Output 1.1.1: Regional consensus achieved on mechanism for CV&C indicators, data collection and data sharing protocols. Output 1.1.2: Regional consensus achieved on mechanism for CV&C data sharing. 1.1.3: Online Multi-country Information Sharing Platform on CV&C monitoring data in coastal areas developed
Component 2: Strengthening the knowledge base on regional climate variability and change In order to enrich our understanding of climate variability in the Mediterranean, this component will ensure that current models assessing scenarios and impacts of climate variability are applied to the region, and will assist countries to more precisely calculate the impacts of climate variability to their marine and coastal zone. In partnership with other regional programmes (such as MedClivar), it will include latest results on the regional and global processes influencing climate	Outcome 2.1 Improved understanding of CV&C in the Mediterranean region, enables countries to assess impacts on the coastal environment.	2.1.1: Regional analyses of sea-level rise and storm surges, of changes in water characteristics and marine acidification, and with special focus on river deltas and on the identification of vulnerable areas/ hotspots. 2.1.2: Assessment of environmental and socio-economic impacts in two critically vulnerable sites, and evaluation of response options. 2.1.3: Regional assessment of socio-economic impacts of CV&C and coping strategies in coastal zones for various scenarios.

variability such as the influence of the North Atlantic Oscillation (NAO) and Indian monsoon, predicted changes in marine salinity and marine acidification. It will focus on the coastal watersheds, with emphasis on risks to water availability and quality and marine ecosystems (including agriculture and fisheries), and other risks to be further defined, likely to include coastal erosion and landslides. Based on the findings of these studies, the TDA for the Mediterranean Basin will be updated with respect to climate change and climate variability.		2.1.4: TDA for the Mediterranean Basin revised with consideration of climate change and variability.
Component 3: **Support to ICZM Protocol implementation and capacity building** Increased capacity, strengthened partnerships and joint actions will create an enabling environment for implementation of the ICZM protocol. At the national level, inter-ministerial committees will contribute to multi-sectoral dialogues on policy and management processes in the Mediterranean, and facilitate the mainstreaming of the ICZM protocol into national plans. Targeted capacity building will enable stakeholders to fulfill these roles. In addition to strong platforms for exchange within the region, project experiences will be shared within the larger international waters community, through IW:Learn, IWC, IWENs, among others.	Outcome 3.1 Science based methodological approach enables countries to integrate climate variability and change issues into ICZM policies, plans and programs. Outcome 3.2 Increased knowledge, capacity, and awareness improve inter-sectoral coordination in mainstreaming climate variability and change issues into the ICZM protocol implementation process.	3.1.1: Methodology and tools for mainstreaming climate variability considerations into national ICZM planning and practices developed considering synergy with other related national plans (IWRM, NSSD, CCA, etc) 3.1.2: Integrated management plan developed in one of the locations 2.1.2.2 3.2.1.: Existing inter-ministerial coordination mechanisms capacitated to mainstream climate variability and change issues into ICZM planning processes. 3.2.2: Awareness raising, policy dialogue and capacity building processes on implications of climate variability on ICZM protocol and other related national policies for policy makers and stakeholders supported. 3.2.3: Mediterranean Clearing House Mechanism established to disseminate knowledge on most efficient tools to address climate variability and change impacts in coastal areas across the region

	Outcome 3.3 **Project experiences and lessons disseminated to larger IW community**	**3.3.1: Project web site (following IW LEARN standards) created, IWENs produced, use of GEF 4 IW tracking tool and participation at GEF IW conferences and other IW LEARN activities ensured.**
Component 4: **Project Management**	**Outcome 4.1** **Project implemented effectively and efficiently to the satisfaction of partners**	**Output 4.1.1: Capable human resources and efficient systems support project implementation** **Output 4.1.2.: Monitoring, consultation and advisory mechanisms support project implementation**

Table 4: Project components and expected results

The intervention logic for the project assumes that:

(i) the participating countries are committed to achieve and sustain adequate coastal zone management for the protection of coastal waters, habitats and living resources, and for the enhancement of the socio-economic potential of coastal zones; and

(ii) due to growing concerns and evidences of increasing CV&C, the whole concept of ICZM has to be re-assessed in view of the expected prevailing future climatic conditions and of their impacts on the coastal environment.

As shown in Figure 3 below, the project will develop its action along three main lines. The first one concentrates on consolidating a shared patrimony of knowledge on CV&C, harmonizing contributions from all project countries, and making it available to all as online information platform. The second will focus on producing a regional assessment of the present and expected future environmental and socio-economic impacts of CV&C, and translate this newly acquired understanding into an updated Transboundary Diagnostic Analysis of the Mediterranean Sea LME. The third line will consist into two main steps: producing within the context provided by the regional assessment, a more refined methodology for the assessment of CV&C impacts at the local level, and apply this methodology to actual pilot cases; secondly, provide a demonstration in a specific site on how to translate all this into an ICZM Plan including CV&C issues. Execution arrangement is given in Figure 4.

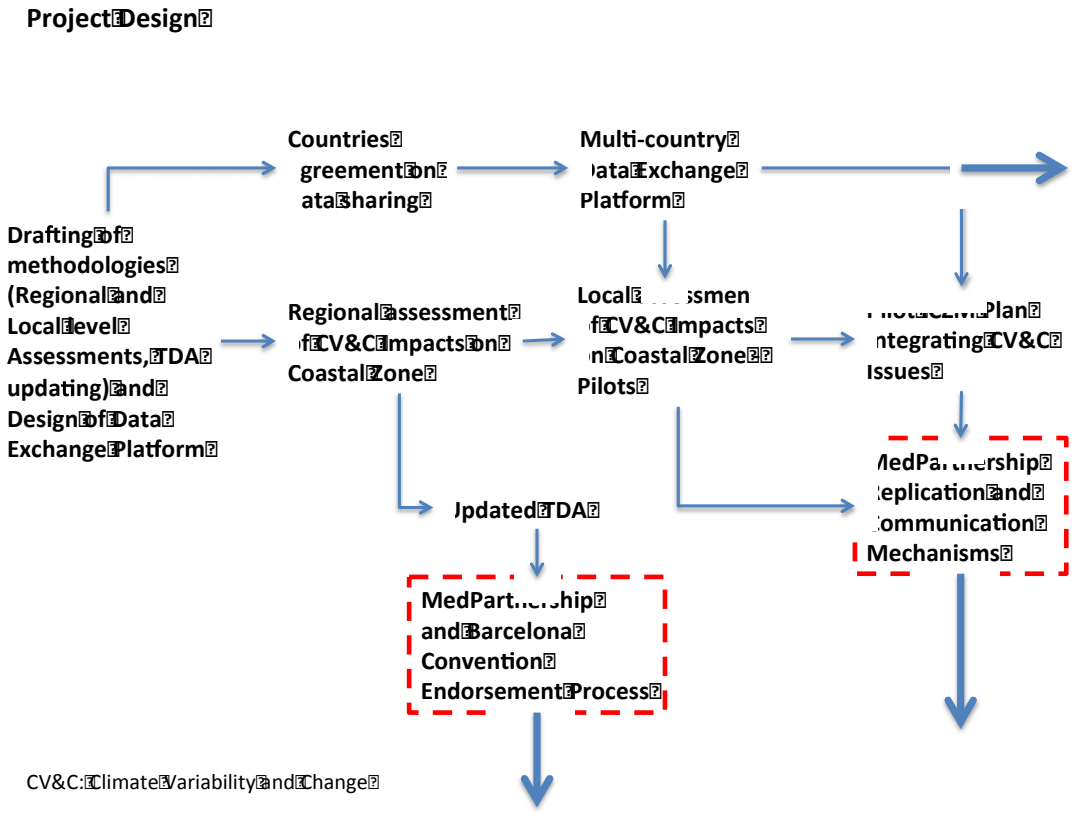

Figure 3: Project Design

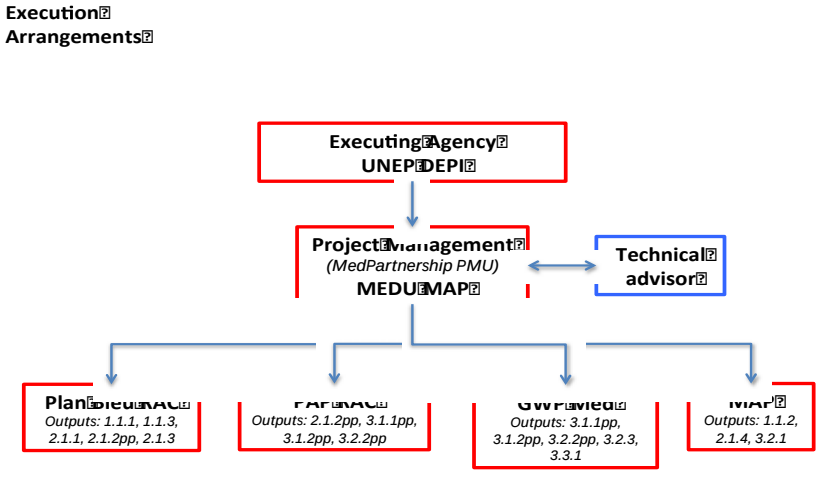

Figure 4: Execution arrangement

5. ROADMAP TO 2014

The project was initiated in second half of 2009, and preparatory activities started the same year. Since then, the following has been accomplished:

- September 2009: PIF prepared and cleared by GEF CEO
- February 2010: PPG approved
- September 2010: International Consultant hired to prepare Project Document
- February 2011: Regional and National Reports finalized
- March 2011: First draft of the Project Document presented at the MedPartnership Steering Committee meeting in Damascus
- June 2011: Second draft of the Project Document prepared
- October 2011: Project Document finalized and submitted to GEF CEO for endorsement
- January 2012: Project Document endorsed by GEF CEO

The project is entering the critical phase when it has to be launched and momentum for its implementation gained. The next six to eight months, i.e. the period until the next Steering Committee Meeting in early 2013, could be considered as crucial for its overall implementation. The following is being planned:

- Steering Committee Meeting/Inception Workshop in Istanbul (May 2012): Major gathering of countries and executing agencies to launch the project. It is expected that the agencies will present detailed account of activities and deliverables, while the country representatives will discuss each component and, eventually, adopt recommendations for their adjustment and fine-tuning. The meeting will also advise, as per proposal of the participating countries, on the potential sites where pilot and demonstration activities could take place, as well as chose project focal points which will be subsequently contacted directly during the project's implementation. Several complementary projects related to climate variability and change, and ICZM will be presented and opportunities sought to create synergy between CVC Project and other initiatives in the region. The Workshop will also be an opportunity to level up the countries' ownership of the project, while executing agencies will be stimulated to reach out to the countries in order to internalize the project as much as possible. The decision of the Istanbul meeting would be to continue with the finalization of the Roadmap and the preparation of the Inception Report.

- Roadmap: The first task after the Istanbul Inception Workshop will be to finalize the Roadmap for the first year of project's implementation. While the Roadmap is an interim document it will be highly useful for the preparation of the Inception Report. The elaboration in the Roadmap of

basic notions for the project, i.e. the climate variability and climate change, is crucial for the understanding of the whole project. After the discussion during the Inception Workshop, the definition of these two notions will be further simplified and will be made available to the wider public. Equally important will be further definition of the linkages between climate variability and change and the ICZM, as that is considered as the crux of the entire project. For the preparation of the Inception Report it is very important that this linkage be also define d in the Mediterranean context, i.e. be identified through the manifestations of the climate variability and change phenomena with the regional dimension. The Roadmap is expected to be finalized by the end of May 2012.

- Inception Report: Preparation of the Inception Report is the next big task to be completed. The executing agencies have already been asked to develop their activities in detail and work out their overall and 2012 work plan and budget. They have also been asked to link between them particularly in relation to those activities that are jointly being executed by more than one agency. The agencies are also expected to contact countries to scan for potential pilot and demonstration sites, to identify potential national team members and to find potential sources of data and information, as generation of new data is not envisaged in this project. The draft table of contents of the Inception Report has already been circulated between the partners and its final version will be decided upon during the Istanbul meeting. Finally, list of complementary projects carried out in the Mediterranean will be finalized and level of synergies between them and CVC Project will be defined. The Draft Inception Report will be finalized by mid June 2012, and it will be disseminated to the countries for their written comments. The final version of the Inception Report is expected by the end of June 2012.

- Legal agreements: Parallel with the preparation of the Inception Report the legal agreements, first between UNEP/DEPI and MAP, and then between UNEP/DEPI and executing agencies will be drafted. The implementation of this task presupposes the finalization of the work plan and budget by each component of the project. The first draft of the legal agreements will be completed by the end of June 2012,while their signing could be expected by the end of July 2012.

- Implementation of activities: Even if the legal agreements will not be signed before, at best, end of July 2012, the implementation of the activities per component can start, albeit at a slower pace as drawing of funds allocated to this project by GEF would not be possible before the legal agreements are being signed. To avoid delays, the partners will be advised that, in case of smaller funds needed, they should utilize their “cash” co-financing at this early stage. As a small delay in the implementation of activities has already been accumulated, due to the not uncommon inception “inertia”, two things should be kept in mind: (1) for the time being, no extension of the project will be requested, hence the completion of activities should be planned for the end of June 2014, as was originally envisaged in the Project Document.; and (2) every effort should be made that the first year’s activities are completed as originally planned, although certain shifts in the work plan will be allowed. These shifts will have to be identified as soon as possible and duly recorded in the Inception Report.

- Next Steering Committee Meeting: It is planned for the February 2012, jointly with the SC meeting for the MedPartnership. By the end of 2012, the section of the Annual Report, to be merged with the MedPartnership 2012 Annual Report, describing the highlights and presenting the detailed account of activities performed will have to be prepared. For the SC meeting, the partners will prepare their 2013 work plans and budgets, and prepare proposals for revisions of the project to be adopted by the Steering Committee.