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# Adapting to climate change from a regional perspective: in search of a requisite policy and legal framework for the Mediterranean

by Simone Borg (University of Malta)



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## **Abstract**

This paper aims to identify the Mediterranean States' potential in adopting a regional strategy on climate change adaptation. The author proposes a Mediterranean Strategy on Adaptation to Climate Change as the first step to a political/legal regional approach to climate change issues that would supplement the multilateral process under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. According to the author such a strategy would enhance cooperation between the EU and other Mediterranean states in various ways. The experience of the EU in regulating climate change and its ever growing knowledge-base on its impacts could serve to guide the other Mediterranean states' and help bridge their knowledge-base gap on the topic. On the otherhand, the support and cooperation of the EU's Mediterranean partners would provide an opportunity for the EU to address better the challenges that climate change threatens to bring in its southernmost regions. The strategy could eventually even pave the way for the very first regional treaty on climate change that could be negotiated under the auspices of the Regional Seas Programme and the Union for the Mediterranean.

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# Adapting to climate change from a regional perspective: in search of a requisite policy and legal framework for the Mediterranean

by Simone Borg\*

## 1. Introduction and Current State of Play.

The recognition of climate change as one of the major challenges facing our society, has, in these last few decades, reverberated from the grass-roots to the highest political echelons. Advancements in collating relevant scientific data provide further evidence of unprecedented, human-induced climate change<sup>1</sup>. Innovative technology has improved

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<sup>1</sup> IPCC, 2013: *Climate Change 2013 The Physical Science Basis: Working Group 1 Contribution for the Fifth Assessment Report*. See also IPCC, 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core

access to alternative energy generation to mitigate climate change and provides better options for preparedness and adaptation to it. These developments have fuelled an ever-growing interest on the topic, heightening the need for political commitment to achieve, *inter alia*, a low carbon economy and better resilience to the effects of climate change. Such trends have motivated state participation in the development of international legal instruments namely the United Nations Framework Convention on Climate Change (UNFCCC)<sup>2</sup> and its Kyoto Protocol (KP)<sup>3</sup> and to proceed with formulating national climate change policies and legal instruments. Not all states have maintained the same momentum when regulating climate change at a national level and very few regions have adopted some form of collective approach towards dealing with climate change.

The only true example of regional climate law and policy one can identify, is that of the European Union.<sup>4</sup> The EU has in fact generated

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Writing Team, Pachauri, R.K and Reisinger, A. (eds.)). IPCC, Geneva, Switzerland.

<sup>2</sup> The United Nations Framework Convention on Climate Change (UNFCCC) adopted on 9 May 1992 in New York and entered into force on 16 February 2005. 192 States have ratified it to date.

<sup>3</sup> The Kyoto Protocol amending the UNFCCC was adopted on 11 December 1997 in Kyoto, Japan, and entered into force on 16 February 2005. 191 Parties of the UNFCCC have ratified the Protocol to date.

<sup>4</sup> See: [http://ec.europa.eu/clima/policies/brief/eu/index\\_en.htm](http://ec.europa.eu/clima/policies/brief/eu/index_en.htm)  
[http://ec.europa.eu/clima/policies/brief/consequences/index\\_en.htm](http://ec.europa.eu/clima/policies/brief/consequences/index_en.htm)

the most widely-developed legal and policy framework to address climate change mitigation. However, some world regions such as the South Pacific and the Caribbean have also adopted a collective approach both in conducting international negotiations as well as in investing in climate change research<sup>5</sup>. The members of the South Pacific and the Caribbean regions, overwhelmingly made up of small island nation-states, have a common interest in addressing the consequences (and hence the anthropogenic causes) of climate change.

On the other hand, the Mediterranean region has failed to adopt a regional approach towards climate change regulation, despite the positive experience of Mediterranean Action Plan under the Regional Seas Programme<sup>6</sup>. There have been some attempts under the auspices of UNEP and the Mediterranean Action Plan to study climate change and its effects from a regional perspective but these have been scientific studies<sup>7</sup>. Useful as these are, it is

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<sup>5</sup> Alliance of Small Island States (AOSIS) see: [http://ec.europa.eu/clima/policies/brief/eu/index\\_en.htm](http://ec.europa.eu/clima/policies/brief/eu/index_en.htm).

<sup>6</sup> In 1975, 16 Mediterranean countries and the European Community adopted the **Mediterranean Action Plan (MAP)** the first-ever plan adopted as a Regional Seas Programme under UNEP. <http://www.unepmap.org/index.php?module=content2&catid=001001002>.

<sup>7</sup> See for example: Jeftic L., Keckes S., and Pernetta JC., (Editors), *Climatic Change and the Mediterranean*, Volumes 1 and 2, Arnold Publishers London, a UNEP Publication 1996 and Thibault and Queflec (et al), *Climate Change and Energy in the Mediterranean*, Energy and Climate Issues, Plan Bleu Regional Activity Centre, Sophia Antipolis, 2008.

indeed sad to note that the so called “*Mediterranean Climate Change Initiative*” (MCCI) never took off despite the fact it was prominently launched in Athens on 22nd October 2010. The Greek Government, supported by the European Investment Bank (EIB) and in collaboration with leaders from across the Mediterranean had taken the initiative precisely as the first ever Mediterranean approach to deal with climate change from a regional perspective. In a Joint Declaration<sup>8</sup> released for the launch, Mediterranean leaders<sup>9</sup> expressed their intention to share best practice, experience and tools to adapt to climate change and to reduce GHG emissions by pursuing opportunities for common low-carbon development strategies. The intention was to transform the Mediterranean region, through public private partnerships, into a major hub of renewable energy generation. The aim was to increase technical capability to exploit available resources, create financial mechanisms and intensify collaboration in grid interconnections. The Mediterranean leaders acknowledged that the emergence of a strong, action-oriented

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<sup>8</sup> See text of Joint Declaration at <http://www.economicwebinstitute.org/essays/mcci01.pdf>.

<sup>9</sup> The Initiative involved: Albania, Bulgaria, Croatia, Cyprus, Egypt, the Former Yugoslav Republic of Macedonia, France, Greece, Israel, Italy, Libya, Malta, Mauritania, the Palestinian National Authority, Romania, Serbia, Slovenia, Spain, Syria, Tunisia and Turkey. The European Commission, the Arab League, the World Bank and the Intergovernmental Panel on Climate Change (IPCC) participated in the launch.

Mediterranean voice will contribute to global efforts to tackle climate change through the UNFCCC process and ensure that adaptation measures and low-carbon development opportunities for the region are explored at the international level. Shortly after it was launched, political instability in some littoral states and the economic crisis in Greece killed the initiative before it could take off. Diplomatic efforts to try and revive it have so far proved futile.

In sum, the Mediterranean states have not been successful in taking and implementing regional initiatives on climate change similarly to what the South Pacific or the Caribbean states have done. This failure sharply contrasts with their diplomatic and regulatory efforts in other fora such as sustainable fishing under the General Fisheries Commission for the Mediterranean<sup>10</sup>, action against various forms and sources of marine pollution, and the conservation of marine biodiversity, under the 1976 Barcelona Convention on the Mediterranean Sea and its related protocols<sup>11</sup>. They have failed miserably in adopting a regional approach on climate change even when one compares this situation to more arduous challenges they constantly face and their slow and painstaking efforts in promoting security, economic cooperation and democratic reform in the region by means of

the Euro-Mediterranean Partnership, alias the Barcelona Process and since 2008 the Union for the Mediterranean (UfM).

The need for a regional approach to climate change for Mediterranean is being now suggested as crucial by the UfM since the Mediterranean region will be amongst those hardest hit as a result of climate change<sup>12</sup>. The diverse political interests of the Mediterranean states and the different legal obligations under the UNFCCC and the KP, overshadow the serious concerns that they share. Some Mediterranean states are major fossil fuel exporters, whilst others are not. Some are industrialized and developed with large research budgets, whilst others suffer from political instability and serious socio-economic issues that leave little room for investment in a low carbon economy, in assessing climate change impacts and in building a sound knowledge and infrastructural base.

This paper elicits whether despite these challenges and impasses there are possible routes to develop a common Mediterranean Climate Change Policy and Legal Framework that serve to foster opportunities for cooperation and burden sharing, at least with respect to the adaptation to climate change.

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<sup>10</sup> See: <http://www.gfcm.org/gfcm/en>

<sup>11</sup> See: <http://www.unepmap.org/index.php?module=content2&catid=001001004>

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<sup>12</sup> See supra Thibault and Queflec at 7, p iv-ix.



## 2. The Feasibility of an EU and Mediterranean Partnership for Adaptation to Climate Change in the Mediterranean.

### 2.1. Focusing on adaptation to climate change.

Given that the Mediterranean states have different international obligations when it comes to the mitigation of anthropogenic climate change, it may be easier and wiser to focus on the governance of adaptation to climate change from a regional perspective. The UNFCCC and the KP require state parties to take adaptation measures against the effects of climate change, but these measures are very general in scope and states have not elaborated them into specific legal obligations as they have done in the case of mitigation. It is expected that in the coming years international norms on adaptation will be developed and will eventually come into force. They are expected to be more nationally and regionally oriented, given that states and regions have different vulnerabilities that require diverse responses.

The issues of governance and adaptation to climate change are relatively new to the EU as well. It is only recently that the EU Commission published a draft strategy on adaptation<sup>13</sup> and less than half of its twenty eight member states have formulated their own

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<sup>13</sup> The EU Commission has published an adaptation strategy package in April 2013. See: [http://ec.europa.eu/clima/policies/adaptation/what/documentation\\_en.htm](http://ec.europa.eu/clima/policies/adaptation/what/documentation_en.htm)

national strategy on adaptation. The EU, has identified the Mediterranean as the region that will mostly suffer from the effects of climate change<sup>14</sup>. Eight of its member states are located in the Mediterranean basin<sup>15</sup>. In the meantime, the EU has a formidable knowledge base on the effects of climate change<sup>16</sup>. It has extensive experience in proposing and approximating environmental standards amongst its member states through its policies and the *acquis communautaire*. The EU has also been highly influential in working with third states in the region via the Mediterranean Action Plan and its legal component. It is possible that as policy and legal adaptation measures are currently being developed at the EU level, it would well serve other Mediterranean states to participate in this process.

A regional response to address climate change adaptation would be of interest to both the EU and the Mediterranean states. It would also serve as an important step forward in consolidating a partnership, which is already established under the UfM. It would be advantageous for Mediterranean states to gain access to the EU's scientific and other expertise relating to the impacts of climate

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<sup>14</sup> See: [http://ec.europa.eu/clima/policies/brief/consequences/index\\_en.htm](http://ec.europa.eu/clima/policies/brief/consequences/index_en.htm).

<sup>15</sup> These are: Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia, Spain.

<sup>16</sup> **European climate adaptation platform (Climate-ADAPT)**. This platform was launched in March 2012 and provides several useful resources to support adaptation policy and decision making. See <http://climate-adapt.eea.europa.eu/>



change. The EU itself would also benefit from a regional adaptation strategy for its southernmost periphery, which as discussed above, is predicted to become the European region that is worst hit by climate change<sup>17</sup>. It will not be the first time where both the EU and the Mediterranean non-member states have worked together to develop a regional policy and legal framework<sup>18</sup>. Some of these instruments like the Mediterranean Action Plan have stood the test of time and have been further fine-tuned and even revised to remain effective throughout these last four decades. Some groundwork in relation to adaptation has already been made. All Mediterranean states should have submitted National Communications to the United Nations Framework Convention on Climate Change in accordance with their legal obligations under the Convention<sup>19</sup>. In their Communication, states are expected to identify any adaptation measures they are taking and also expose

various gaps and constraints that hamper public and private entities from adopting other adaptation measures.

Furthermore, all Mediterranean states already regulate to some extent, certain resources like the marine environment, fresh water resources and natural habitats, whose vulnerability will be further exacerbated as a result of climate change. Compliance with existing environmental and natural resource management legislation, would contribute to secure adaptation at least with respect to certain impacts upon these vulnerable resources. Furthermore non EU Mediterranean states may choose to emulate or use as a guide any relevant policy and legal instruments under the environmental *acquis communautaire* that may already be preparing the EU member States for adaptation to climate change. Similarly the EU would benefit from the experience of third party Mediterranean countries in their dealing with crucial issues such as water scarcity, drought and food security, issues which until recently were not prioritized.

To ensure better compliance by the State Parties such a regional legal instrument should also provide for compulsory dispute settlement for its Parties. Such a measure would facilitate enforcement at the national level and provide a legal forum to overcome any disputes regarding the interpretation of the constituent

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<sup>17</sup> See supra at 12.

<sup>18</sup> In 1975, 16 Mediterranean countries and the European Community adopted the **Mediterranean Action Plan (MAP)**. The MAP was the first-ever plan adopted as a Regional Seas Programme under UNEP's umbrella. See <http://www.unepmap.org/index.php?module=content2&catid=001001002>. Originally known as the Barcelona Process or Euro Med Partnership and now known as the Union for the Mediterranean (UFM), the Union is a multilateral partnership of 43 countries from [Europe](#) and the [Mediterranean Basin](#): the 28 [member states of the European Union](#) and 15 Mediterranean partner countries from [North Africa](#), the [Middle East](#) and the [Balkans](#). It was created in July 2008. The Union has the aim of promoting stability and prosperity throughout the Mediterranean region, economic integration and democratic reform.

<sup>19</sup> See: [http://unfccc.int/national\\_reports/items/1408.php](http://unfccc.int/national_reports/items/1408.php) and articles 4(1) (b) and article 12 of the UNFCCC.

treaty. Compulsory dispute settlement mechanisms have been tried and tested in various International legal instruments and they are a valuable tool to overcome poor compliance with international, regional and sub regional legal instruments. Under International law unless such a mechanism exists in a treaty, its State Parties are not subject to the compulsory jurisdiction of an International adjudicating body, unlike the European Court of Justice which has compulsory jurisdiction over EU member States. The establishment of a compulsory dispute settlement mechanism set up under a treaty is even more pertinent when one considers that under International law there is no equivalent body like the EU Commission, which acts as guardian for member States' compliance with EU law.

## **2.2. Scope and Methodology: Framing a Mediterranean Strategy**

Any policy and legal measures, which aim to support the formulation of an adaptation strategy, should mainly target the link between vulnerability and adaptation since the degree of adaptation required is directly related to the extent of vulnerability or risks a State is exposed to as a result of climate change. The EU adaptation strategy and the various National Communications of Mediterranean states to the UNFCCC have already identified various vulnerability and adaptation issues in individual sectors such as health, water resources, migration and demographic changes, biodiversity conservation, waste management,

the built environment, telecommunications and transport. Adaptation requirements need to take into consideration existing gaps and constraints in the current policy and legal frameworks that may also apply on a national and regional level to adaptation measures. The major challenge when dealing with adaptation to climate change is its interdisciplinary nature; and, an adaptation strategy can in reality never be entirely comprehensive. Experience by states that have drafted their adaptation strategy shows that it is counter-productive to aim at an exhaustive list of sector by sector adaptation measures from the outset. Identifying adaptation measures and the required methodologies to implement them is a learning curve process that unfolds as one addresses a list of national and regional priorities. Furthermore, recommendations must aim at integrating environmental impacts caused by climate change into socio-economic policy-making and at facilitating participation by civil society and non-Governmental Organizations in decision making, education and awareness-building.

This paper identifies some key sectors that could form part of a Mediterranean adaptation strategy and highlights the constraints and gaps of a regulatory and institutional nature that obstruct better implementation and compliance with any adaptation measures proposed. Addressing existing gaps and constraints in the policy and legal framework is symptomatic of

good governance, which in itself depends upon optimum coordination between the various sectors of society. An adequate legal framework on adaptation must address gaps and constraints both from a horizontal and a sectoral aspect. This paper considers only the sectoral aspect. Addressing these gaps and constraints may fulfill both mitigation and adaptation measures. Research and data collection, for example are essential elements to fill in gaps and overcome constraints in all the various sectors, serving both mitigation and adaptation. Even if third party Mediterranean states do not have legally binding mitigation targets<sup>20</sup>, any adaptation measures should not, unless there is no other option, lead to an increase in the generation of GHG emissions. This must be a *decisive* factor for policy-makers choosing from a range of adaptation options. It is essential to keep in mind that any adaptation options, which increase greenhouse gas emissions would prejudice the attainment of mitigation targets not only from a legal, but also from a financial and a temporal perspective.

### **3. Proposals for Action and the underlying Gaps and Constraints related to Adaptation Measures in various Sectors.**

When identifying the possible elements for a Mediterranean adaptation strategy one must

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<sup>20</sup> The only exception is Turkey see UNFCCC Annex I at [http://unfccc.int/essential\\_background/convention/background/items/1349.php](http://unfccc.int/essential_background/convention/background/items/1349.php)

focus on the major sectors that have been earmarked by Mediterranean states as requiring priority due to their vulnerability and proneness to risk. There are various types of adaptation measures for the various sectors, namely anticipatory and reactive adaptation, autonomous and planned adaptation<sup>21</sup>. Adaptation involves both the public and private sector. Preparedness must be tailor made to suit each sectoral scenario since the subjective character of adequate adaptation measures causes them to differ from one to another. Nevertheless, all sectoral measures need to be screened holistically to ensure coherence, compatibility and equitable burden sharing across them.

#### **3.1. Water Resources Management.**

Water resources will suffer the highest negative impact as a result of climate change<sup>22</sup> in the Mediterranean. A regional adaptation strategy may propose three major steps that need to be taken to adapt this sector to climate change:

- a comprehensive national/regional Water Policy, which mainstreams climate change adaptation obligations,
- a holistic approach to water management,

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<sup>21</sup> Vide Smit, B., Burton, I., Klein R.J.T., and Wandel, J., *An Anatomy of Adaptation to Climate Change and Variability*, 2000, p 223-251.

<sup>22</sup>See: [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch11s11-3.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch11s11-3.html)

- an assessment of the relationship and risks between climate change/water resources/food security/public hygiene.

The Mediterranean states may benefit from the EU's policy and legal framework on water management which is vast and holistic in the sense that it attempts to address the management of all water resources, particularly through the Water Framework Directive<sup>23</sup>. The regional adaptation strategy may suggest measures to be taken at the national level that may be lifted from the most relevant EU law that applies for this sector's adaptation to climate change. The Directive establishes “*a framework of action*” for the protection of inland surface waters, transitional waters, coastal waters and ground water. Since climate change in the Mediterranean would not only affect the quantity but also the quality of water resources, a regional strategy could do well to emulate the Directive's measures to:

- address emissions and discharges that affect water, whether via point or diffuse sources, irrespective from where they originate,
- prevent the deterioration of the status of all the bodies of water and
- implement the measures necessary to reverse any significant and sustained

<sup>23</sup> [Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=C ELEX:32000L0060:EN:NOTee). More commonly referred to as the Water Framework Directive (WFD).  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=C ELEX:32000L0060:EN:NOTee>

upward trend in the concentration of any pollutant resulting from the impact of human activity in order to reduce progressively pollution.

The strategy can also propose the Directive's approach to groundwater management, an over-exploited resource in the Mediterranean states which climate change will render more precarious. Some Mediterranean states depend on desalination for the production of water, which not only increases fossil fuel emissions but is also very costly. This puts further pressures on states to curb abuse in illegal extraction of groundwater. So a regional strategy on adaptation must ensure better protection of the quality of the resource and improve rain harvesting methods as well as other alternative sources. The regional strategy on adaptation may thus require the competent authorities in member States to establish a *programme of measures*, for each water catchment district as one finds in the Water Framework Directive<sup>24</sup>. Each programme may include a number of *basic measures*<sup>25</sup> and also where necessary, *supplementary measures*<sup>26</sup>.

The regional adaptation strategy could refer to

<sup>24</sup> *ibid* article 11.

<sup>25</sup> Under the WFD, *Basic measures* are the minimum requirements with which to comply. One of the basic measures is the establishment of controls including a requirement for prior authorization of the artificial recharge or augmentation of groundwater bodies.

<sup>26</sup> Under the WFD, *Supplementary measures* are those measures designed and implemented in addition to the basic measures.

the Mediterranean Action Plan which regulates coastal water management, a sector that is closely related to climate change adaptation both due to these areas as a habitat and as a zone of intense economic activity. Indirectly the regulation of coastal zone management is also a vital issue for adaptation to sea level rise, although this falls more under the infrastructure sector as is the case with the regulation of water catchment. This discussion on the regional strategy addressing coastal zone waters should be mainstreamed in the existing protocol to the Barcelona Convention.<sup>27</sup> It also provides an important set of legal parameters aimed at ensuring a good qualitative status for these waters. The competent authorities in member States, may be asked to take the necessary measures and ensure that the environmental objectives for coastal water management are met. Mediterranean states are legally bound to implement the measures necessary to reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order to reduce progressively pollution of coastal waters. The same principle can be applied in the case of anthropogenic activities.

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<sup>27</sup> The **Protocol on Integrated Coastal Zone Management in the Mediterranean** was adopted on 21 January 2008, in Madrid, Spain and entered into force: 24 March 2011

### **3.2. Infrastructure, Land Use and the Built Environment.**

A regional adaptation strategy must necessarily address infrastructural issues both with respect to land use in general and the need to ensure preparedness to climate change within the built environment. In the Mediterranean states there may already exist land use policies and a legal framework that to some extent regulates the adaptation of this sector to climate change. Mainstreaming climate change adaptation measures in development planning and land use policy will help identify any specific legal requirements for the building industry as a means to adapt to climate change. Any adaptation measures that need to be implemented are likely to be closely related to mitigation measures such as energy conservation in buildings. Furthermore, adaptation measures could involve the revision of civil property rights to ensure that these do not impinge on neighbouring properties and vice versa, such as for example, the right to enjoy access to renewable energy by all.

Another issue which the regional adaptation strategy must take into account, is the need for legal instruments to address socio-economic implications such as property value and insurance. If one draws upon the experience of the EU here, the Mediterranean adaptation strategy may propose some measures found in

the Floods Directive<sup>28</sup> especially as climate change is one of the issues specifically taken into consideration under this EU legal instrument.<sup>29</sup> The adaptation strategy may, like the directive, propose that Mediterranean States:

- Assess if water courses and coast lines are at risk from flooding,
- Map the flood extent and assets and humans at risk in these areas
- Take adequate and coordinated measures to reduce this flood risk.
- Reinforce the rights of the public to access this information and to have a say in the planning process.
- Carry out a preliminary assessment to identify the “*river basins*”<sup>30</sup> and associated coastal areas at risk of flooding.
- Draw up flood risk maps
- Establish flood risk management plans focused on prevention, protection and preparedness, notably by flood risk management plans and river basin management plans being coordinated,

- Synergize public participation procedures in the preparation of these plans making them available to public.

A Mediterranean Strategy on Adaptation may also assist in the mainstreaming of climate change into the relevant development planning policies of the littoral states by facilitating cooperation between the EU and third party Mediterranean states in the compilation of data and the study of observation systems. Cooperation may improve data modeling including emission and climate change impacts scenarios at a local scale as well as monitoring systems. A regional Geographic Information System (GIS) base may be set up to integrate data related to climate change, and any other data required apart from spatial information<sup>31</sup>. Even within this context the regional adaptation strategy may benefit from EU experience in the implementation of the EU INSPIRE directive<sup>32</sup>, which requires that common Implementing Rules<sup>33</sup> are adopted in a number of specific areas (Metadata, Data Specifications, Network Services, Data and

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<sup>28</sup> 2007/60/EC Directive on the assessment and management of flood risks. It entered into force on 26 November 2007.

<sup>29</sup> For more details on this aspect of adaptation to climate change vide [http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework\\_directive/guidance\\_documents&vm=detailed&sb=Title](http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents&vm=detailed&sb=Title)

<sup>30</sup> River basins in the WFM include areas where water collects and eventually drains to the sea, see supra at 23.

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<sup>31</sup> This involves the implementation of the EU’s Directive 2007/2/EC of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) directive and which came into force on 15 May 2007

<sup>32</sup> Ibid.

<sup>33</sup> These Implementing Rules are adopted as Commission Decisions or Regulations, and are binding in their entirety.



Service Sharing and Monitoring and Reporting).

The Mediterranean adaptation strategy may also rely on other legal instruments for integrating adaptation measures into land use development that already exist in some Mediterranean states namely, the Environment Impact Assessment (EIA) and also an EIA at the strategic phase of certain public plans, policies and programmes more commonly known as the strategic environment assessment (SEA). Adaptation measures to climate change should be included in the existing legal process that regulates land use, under these two types of legal instruments and introduce the required flexibility to ask developers to take into consideration adaptation measures for climate change. In this manner developers would include adaptation to climate change when identifying key issues, significant actions, alternatives and impacts to be considered in an EIA or SEA.

### **3.3 Natural Ecosystems, Agriculture and Fisheries.**

Biodiversity will inevitably suffer from negative impacts of climate change. A Mediterranean adaptation strategy therefore may suggest that tackling adaptation in this sector will involve better management by the farming and fishing communities, who must also take preventive measures to counter the impact of alien species and disease regarding

the species they harvest. Soil and water management must also feature in adaptation options for this sector. Soil conservation should identify action needed to ensure a high level of soil protection. Again EU experience<sup>34</sup> is vital in supporting third party Mediterranean states to set out common principles for protecting soils across the Mediterranean. Within a common framework, all Mediterranean states will be in a position to protect soil and use it in a sustainable way.<sup>35</sup> It is to be noted that in this context the United Nations Convention on Desertification is also a legal instrument that requires Mediterranean states to adopt certain conservation measures with respect to soils against the negative impacts of climate change.

The regional adaptation strategy may also draw upon various veterinary laws, plant health laws, fisheries and agriculture related laws that may serve to assist this sector to adapt to climate change. As agriculture is one of the sectors that is likely to register severe impacts, a revision of applicable national laws would encourage each state to examine its relevant

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<sup>34</sup> See (COM(2006) 232) Directive of the European Parliament and of Council establishing a framework for the protection of soil;  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0232:FIN:EN:PDF>

<sup>35</sup> [SEC \(2006\) 1165](#) and [SEC \(2006\) 620](#) contains an analysis of the economic, social and environmental impacts of the different options that were considered in the preparatory phase of the strategy and of the measures finally retained by the Commission.  
See:  
<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52006SC1165:EN:NOT>



legal framework that regulates the agriculture sector and to identify the most adequate legal instruments that can be used to prepare this sector for adaptation and if considered necessary, supplement it with new laws. The same applies to fisheries, where the affects of climate change upon migratory fishing patterns is relatively unknown. It goes without saying that a cost benefit exercise needs to be carried out to assess socio economic impacts upon these vulnerable sectors.

The regional strategy may also address the introduction of pests and diseases. Similarly, the introduction of alien species that may affect not only the fisheries and agro-industry but also the natural habitats may be addressed. Since climate change is likely to lead to new types of vector-borne diseases, alien species and other pests, the proper implementation of sound adaptation measures in this sector is vital. Adaptation measures may include the possibility of establishing rules for the marketing of vegetative propagating and planting material and may establish the conditions for the grant of permits for the importation and transport of any plant material, plant pest, or other organisms for the purposes of scientific research or otherwise, subject to such terms and conditions as may be established to safeguard public health, agriculture, and/or the environment. The vulnerability of biodiversity and the negative

impact which various human activities have upon natural habitats will only be further exacerbated as a result of climate change. Drawing upon the EU's expertise in the implementation of the Habitats Directive<sup>36</sup> as well as the littoral states' experience in implementing the Convention on Biological Diversity and the regional Protocol on Biodiversity to the Barcelona Convention, a sound policy and legal framework to ensure resilience in this sector can be launched.

### **3.4. Health Issues, Civil Protection and Immigration**

A Mediterranean adaptation strategy may also propose measures on immigration, civil protection and health, food safety, occupational health and safety, vulnerable groups and public health in general that would inevitably be affected by climate change. Contingency plans for adaptation would be useful to address various situations that may arise as a result of climate change and which would affect public health, immigration and civil protection in general. The formulation of contingency plans requires preliminary ground work that would serve to identify a variety of risks and ensure preparedness in order to:

- address the negative impacts envisaged as a result of climate change particularly upon vulnerable groups;

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<sup>36</sup> [Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora](http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:NOT). See: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:NOT>

- assess socio-economic implications, which increased insurance covers for risks resulting from the likely impacts of climate change;
- identify financial guarantees and incentives amongst the various stakeholders in all sectors;
- intensify awareness and promote a change in behavioural patterns to improve adaptation to climate change;
- increase awareness of climate change impacts within the government, industry, and community sectors will support cultural change transitions that are required for the adoption of more climate change friendly technologies, designs, and operations by public and private operators.

#### **4. Conclusion and Recommendations.**

Although this paper focuses on the need of a regional strategy on climate change adaptation, the success of the strategy may be further underpinned if the Mediterranean states decide to go a bit further and be the first to initiate negotiations on a regional legal instrument on climate change adaptation. Such an instrument would *inter alia* require littoral States to ensure that they have established competent authorities with over arching responsibilities and powers that coordinate the various sectors to adapt to climate change. It would also

identify these sectoral authorities and their responsibilities preferably within an Annex which could be amended and adjusted in a flexible manner. This approach could provide a legal solution to ensure integration without causing fragmentation.

At the same time, by retaining the sectoral input, one would ensure that there is no duplication of roles, that the sectoral institutions are specialized on climate change adaptation within their own field and that the any national coordinating body does not become a bottle neck. In other words, different competent authorities responsible for the different sectoral policies and obligations could be answerable to an institution that has executive powers to ensure compliance and to coordinate long term and short term planning with respect to climate change targets and impacts.


By way of recommendation therefore, a legal instrument of this sort should seek to intervene as little as possible in the daily running of the sectoral policies and only bestow powers in situations of emergency when non compliance by the different sectors stalls the fulfilment of each Mediterranean state's obligations. This would ensure for example that such a legal instrument would not duplicate the role of public entities that are regulators for various sectors on climate change. It would however empower the entity to take enforcement

measures against the said institutions if they fail to do so. National entities entrusted with the overall responsibility for climate change law and policy, must be legally empowered to ensure the implementation of national adaptation strategies and programmes. They must also coordinate the various sectors to carry out the necessary research to adopt and implement mitigation and adaptation measures. Ultimately they must be supported by a parallel capacity-building process in the various entities that run the day-to-day implementation functions. The EU and the third party Mediterranean states may enhance mutual cooperation by participating in regional capacity-building programmes.

A new Mediterranean legal instrument on climate change adaptation may promote monitoring and stakeholder engagement, particularly the involvement of NGOs and Local Authorities to increase public awareness on climate change issues. It could also take into consideration national security issues relating to climate change when formulating adaptation strategies. The new regional legal instrument may also target the development of a research programme for climate change including access to funding programmes. This will provide local industry with the necessary technology, it will generate specialized local expertise in a rapidly growing sector that is assuming a tremendous economic potential. Procrastination is detrimental on two main

fronts. First because the Mediterranean states will miss out in maintaining/securing a place in this niche-market and second because they will otherwise keep relying upon foreign technology and expertise. It is also essential to include as a regional legal obligation, the publication of information acquired as a result of research conducted or carried out locally to civil society. All sectors should be legally bound to maintain a Geographic Information System to integrate data related to climate change, and any other data required apart from spatial information.

The Mediterranean states need to show other states that they can overcome their usual political differences and lead by example when it comes to regional cooperation in the field of environmentally related issues. The Mediterranean Action Plan was the very first regional seas programme to be concluded and has served as a proto type for others. The scenarios regarding the impacts of climate change in the Mediterranean should serve as an alarm bell to prod the Mediterranean states into action on similar lines. This is an opportunity for both the EU and Mediterranean states to rise to the occasion and to be the first group of states that seek to address climate change adaptation from a regional perspective. The positive repercussions could be various. Such an initiative would be serve to strengthen the leadership role the EU strives to maintain in climate change politics, it would demonstrate



that it is possible for developing and developed states to agree on an adaptation legal and policy instruments. It could breathe life back into a multilateral negotiating process that is currently going too slow to meet with the emerging challenges that climate change presents.