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**CLICO Working Papers**

**The effectiveness of policy frameworks for addressing  
climate-induced risks to human security and conflict –  
report on stakeholder perspectives and demands**

**Christiane Gerstetter, Katriona McGlade, Rodrigo Vidaurre, Elizabeth Tedsen,  
Haran Bar-On**

**Affiliations: ECOLOGIC Institute**

**Contact person: Christiane Gerstetter ([christiane.gerstetter@ecologic.eu](mailto:christiane.gerstetter@ecologic.eu))**

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## **Abstract**

This report undertakes an analysis of the effectiveness of policy frameworks for addressing hydro-climatic hazards and their impacts on human security and conflict, which is based mainly on interviews conducted with policy-makers and experts in Ethiopia, Morocco, Israel and the occupied Palestinian Territories (oPT), as well as representatives of the EU and the UN.

## *Acknowledgement*

The authors would like to thank the interviewees who participated in this study - their contributions have been invaluable. Interviewees' contributions were in a personal capacity and not on behalf of the institutions to which they are affiliated. Furthermore, the conclusions of this report are the responsibility of the authors and do not necessarily represent the views of the interviewees. Invaluable research assistance was provided by Leah Germer and Lucy Smith.

## Executive Summary

Whether or not climate change undermines human security and/or creates conflict or cooperation over water resources depends – amongst other factors – on the institutions in place and policies adopted in these areas. The present study looks at selected country case studies in greater depth to assess policy-makers' and experts' insights of the effectiveness of existing policy frameworks for addressing these challenges and to collect perspectives on how these frameworks should develop in the future. Here, we have studied policy frameworks in Ethiopia, Morocco, Israel and the occupied Palestinian Territories (oPT) as well as at the UN and EU levels on the basis of desk-based research and more than 70 interviews conducted in the countries and over the phone.<sup>1</sup>

### *Current policy frameworks*

Whereas predicted climate change impacts are more or less similar in nature in the four case study countries<sup>2</sup> (increased incidence of droughts, increased seasonal variability, increases in floods), their expected socio-economic consequences vary strongly between countries. There were also striking differences in the level of uptake of climate change in the policy processes.

In the case study countries, the climate change impacts considered most significant are essentially an intensification of existing phenomena, such as drought. In this sense, most of the phenomena that are expected as a result of climate change are already addressed in existing policies (e.g. drought policy, disaster preparedness and reduction policy). Climate change was also generally considered as an additional stressor impinging on existing problems (such as food security, water availability), joining the ranks of other issues such as population growth and environmental degradation. Depending on the context, its importance was considered marginal in comparison to existing stressors (an opinion commonly expressed in Israel), as secondary to more important issues such as political and natural factors related to water (Palestine), as important in future but not that much at present, and taking second row to other national challenges such as development (Morocco), or as of central importance and having the potential to disrupt both huge number of livelihoods and national development efforts (Ethiopia).

In terms of policies addressing potential impacts of climate change on human security and conflict, there is notable absence of specific policies addressing this issue. This, however, does not constitute a gap in the existing framework: rather than being a self-standing political issue to be addressed through specific policies, human security is, implicitly, addressed by existing policies, e.g. on agriculture or water. Surprisingly, and independently of the degree of concern associated with climate change impacts and the efforts invested in addressing them in policy (ranging from very high in Ethiopia to quite low in Israel, due to the different dependency on natural water resources), interviewees expressed a general satisfaction with the effectiveness of

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<sup>1</sup> Case studies on Israel/the occupied Palestinian Territory, Morocco, Ethiopia, the UN and the EU will be available for download at <http://ecologic.eu/4884>

<sup>2</sup> Counting Israel and the occupied Palestinian Territories as different countries; however, both were addressed in a joint case study.

national policy frameworks in place. In regions where climate change was viewed with less urgency, the rationale seemed to be that the phenomena (e.g. drought or issues with water availability) were already known and were being mastered quite competently, with only secondary issues requiring attention. In regions where climate change was seen as posing significant threats to human security, the satisfaction seemed to be related to the recent history of serious efforts and strong improvements in addressing the main phenomena. However, many challenges and areas of support were identified by interviewees, mostly relating to policy implementation (particularly funding and human-resources and institutional capacity), but also to policy formulation (e.g. capacity for research-based input into policy).

### *Expectations and demands*

From the above result a series of observations and conclusions relating to the links between water-related impacts of climate change, human security, and conflict, current policy frameworks relevant to these links and their effectiveness, and, finally, expectations and demands as formulated by the persons we interviewed.

Concerning the links between climate change, human security and conflict, the dominant view among interviewees was that climate change was, at worst, an “add-on” to existing issues of human security and conflict. Thus, climate change was seen, in principle, as an added stressor, but not as a main factor in creating risks for conflict or undermining human security. In some settings (e.g. Israel and Morocco), this was closely related to the fact that the expected effects of climate change are not qualitatively different from climatic phenomena that those countries have known for a long time – and that they hence started addressing through policies at some stage in the past.

This translated into a situation where interviewees considered – with the exception of the very specific case of the oPT – the existing policy-frameworks in their countries to be effective in addressing water-related changes from climate change, and thus, implicitly, impacts on human security and conflict potentially associated with them. In both Ethiopia and Morocco, this position related, however, to an emerging policy-framework that yet has to be implemented fully despite its effectiveness “on paper”. Moreover, the view that policy frameworks were effective for attaining specific objectives related to climate change does of course not mean that currently there are no larger conflict or human security issues, as not all human security issues are climate change related, e.g. poverty evidently entails a host of human security issues, which are unlikely to all be addressed through climate change adaptation policies.

Demands and expectations were mostly not related to policies specifically addressing human security or conflict specifically, even though all countries face problems relating to human security or existing conflicts. Rather demands and expectations focused on improving or fully implementing different existing sectoral policies e.g. on water. Given that the issues that such policies seek to address, e.g. a lack of water or lack of income of farmers translate into human security issue and may lead to conflict, this focus is not necessarily surprising. However, there was a remarkable absence in interviewees’ comments of demands and expectations that are targeted primarily at enhancing the socio-economic status and social security of poor people vulnerable to climate change and thus enhancing their resilience. For example, no interviewee

made demands related to developing insurance schemes for drought risks, income generation schemes or the improvement of social security systems in general.

The absence of reference to human security in concrete policies to be implemented on the ground moreover points to the limited value that some interviewees attributed to the use of human security as a concept in policy-making. A marked contrast can be observed in this regard between the more discursive, “soft” parts policy-making (e.g. through high-level declarations at the international level) and the situation in the countries: Issues such as human security, environment and security or climate change and conflict do appear in a number of resolutions and debates of political institutions at the international level, and the UN has established quite a number of programmes and initiatives mandated with addressing them. However, that is largely not mirrored at the national level. Indeed, some interviewees doubted the usefulness of, e.g. the term human security, for the formulation and implementation of concrete policies. Reservations related to a range of aspects, including the difficulties of developing the kind of integrated policy-responses that the objective of enhancing human security requires, and doubts about the usefulness of broad, and regularly changing, concepts for achieving anything on the ground. The EU is an interesting example in this regard as climate change and security issues were discussed by the Council, but a reluctance of the Commission to take the issue up was noticed – i.e. at the discursive, agenda-setting stage of policy-making the climate change/security nexus was given attention, but the institution responsible for taking the initiative on proposing concrete policies did not take up the issue. Also at a more general level some interviewees expressed reservations concerning the use of political buzz-words like human security, first, because they questioned their practical value for on the ground policies, second because it required developing countries to frequently to adapt their strategies and funding proposals to such new buzzwords.

It also appears that expectations and demands are to a large extent shaped by existing agendas. In most countries, demands were in line with the existing current policy focus: in the case of Ethiopia on climate change adaptation, in Morocco on agricultural policy and development, and in the oPT on the ongoing conflict with Israel which tends to dominate the Palestinian political agenda. Israeli and EU interviewees had few demands regarding the improvement of the Israeli policy framework. The extent to which climate change adaptation is taken up in different countries also appears to be influenced by the way it interacts with existing policy agendas (in addition to the degree of vulnerability of a country). EU interviewees suggested using existing agendas (e.g. response to the economic crisis) to gaining attention and funding for issues such as water and adaptation. This could have implications for countries who want to appeal to donors at EU and UN level for funds and support

The EU and UN were considered to be particularly important in placing issues on the agenda, in the provision of capacity-building and guidance, and for the funding of initiatives.

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# 1 Introduction

The Mediterranean, Middle East and Sahel region (the MMES region) is a climate change “hot spot” and is expected to experience large changes in climate mean and variability. Warnings have been voiced that as natural resources become scarcer, new conflicts may arise in the region.<sup>3</sup>

Whether or not climate change undermines human security and/or creates conflict or cooperation over water resources depends – amongst other factors – on the institutions in place and policies adopted in these areas. This report builds on a recent ‘*Review of international and national policies and institutional frameworks*’.<sup>4</sup> The review examined ways in which national and international policies addressed climate change adaptation and water resources management and tackled the impacts of hydro-climatic hazards on human security. The present study looks at selected country case studies in greater depth to assess policy-makers’ and experts’ insights of the effectiveness of existing policy frameworks for addressing these challenges and to collect perspectives on how these frameworks should develop in the future. Here, we have studied policy frameworks in Ethiopia, Morocco, Israel and the occupied Palestinian Territories (oPT) as well as at the UN and EU levels on the basis of desk-based research and interviews conducted in the countries and over the phone.<sup>5</sup>

We begin in section 2 by outlining our conceptual framework with the presentation of our research questions, approach and methodology. In section 3, we sketch trajectories outlining the linkages between climate change, human security, conflict and policies. Sections 4 and 5 provide the core part of our analysis and are primarily based on information collected during field interviews, complemented by desk-based research. Sections 4 and 5 analyse existing policy frameworks in several countries through a policy cycle lens, based mainly on the perceptions of interviewees. Section 4 examines the effectiveness of current policy frameworks, looking at how these address the challenges that climate change presents for adaptation, water resource management, human security, and conflict. This analysis is followed by section 6, which presents an overview of stakeholder demands and expectations for a future policy framework. We finish in section 7 with a summary of our findings and conclusions.

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<sup>3</sup> Oli Brown and Alec Crawford, *Rising Temperatures, Rising Tensions – Climate Change and the Risk of Violent Conflict in the Middle East*, IISD: Winnipeg, (Winnipeg: IISD, 2009).

<sup>4</sup> Christiane Gerstetter et al., *Review of International and National Policies and Institutional Frameworks*, CLICO Working Paper (Berlin: Ecologic Institute, 2011).

<sup>5</sup> The case studies on Israel/the occupied Palestinian Territory, Morocco, Ethiopia, the UN and the EU will be available for download at <http://ecologic.eu/4884>



## 2 Conceptual framework and methodology

### 2.1 *The role of policies in adaptation*

The **two main questions** that this report seeks to answer are, first, whether current policy frameworks are effective in mitigating, within countries, water-related risks to human security<sup>6</sup> as well as preventing or reducing potential conflicts<sup>7</sup> over water that may be caused or exacerbated by climate change and second, what demands and expectations policy-makers and experts have for their improvement. Thus, we implicitly discuss one aspect of the adaptive capacity<sup>8</sup> of certain political systems to water-related risks to human security and risk of increased water-related conflicts potentially resulting from climate change, namely the systems' capacity to generate and implement policies that mitigate or fence-off certain climate-induced negative impacts on local populations.

A country's **adaptive capacity** is determined by a diverse set of factors. Technology, economic development and human and social capital, for example, have all been discussed in the literature as important determinants of adaptive capacity to climate change.<sup>9</sup> In the past decade, institutions and policies have been put forward as additional factors that can influence a country's adaptive capacity.<sup>10</sup> This is a corollary of the insight that overall adaptive capacity of societies depends, inter alia, on institutions that can manage risks associated with climate

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<sup>6</sup> "Human security" was famously defined by UNDP in 1994 in the following way: "Human security can be said to have two main aspects. It means, first, safety from such chronic threats as hunger, disease and repression. And second, it means protection from sudden and hurtful disruptions in the patterns of daily life – whether in homes, in jobs or in communities. Such threats can exist at all levels of national income and development." UNDP, *New Dimensions of Human Security*, Human Development Report (UNDP: New York, 1994), 23, <http://hdr.undp.org/en/reports/global/hdr1994/> Human security has sub-dimensions such as water security and food security that can be defined as a situation where an individual consistently has access to water/food in a sufficient quality and quantity.

<sup>7</sup> For "conflict" we use the definition by Marisa Goulden, Declan Conaway, and Aurelie Persechino, "Adaptation to Climate Change in International River Basins in Africa: a Review / Adaptation Au Changement Climatique Dans Les Bassins Fluviaux Internationaux En Afrique: Une Revue," *Hydrological Sciences Journal* 54, no. 5 (2009): 806 according to which conflict does not just encompass armed conflict between nations, but also involves "a range (of) negative interactions that encompass mild verbally-expressed discord and cold interstate relationships, as well as hostile acts or declarations of war". Indeed, only one type of conflict relevant to our study – the one between Israel and Palestine – also has a dimension of armed conflict to it. In many other cases, the conflicts we talk about in this study are conflicts where people merely express disagreement over a certain issue as a result of entrenched, long-term differences of opinion on those water related issues that Kallis (2008) included in his definition of water conflict. He defined water conflicts as conflict between individuals, groups, nations stemming from incompatible claims over water resources and ways to manage them, or from the side effects of hydrological hazards, such as droughts and floods, see Giorgos Kallis, "Droughts," *Annual Review of Environment and Resources* 33, no. 1 (2008): 85–118.

<sup>8</sup> Adaptive capacity is defined by the IPCC as "the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences", see Intergovernmental Panel on Climate Change, *Climate Change 2001: Overview of Impacts, Adaptation, and Vulnerability to Climate Change 2001, Working Group II: Impacts, Adaptation and Vulnerability, IPCC Third Assessment Report* (Cambridge: Cambridge University Press, 2001), 6, [http://www.grida.no/publications/other/ipcc\\_tar/](http://www.grida.no/publications/other/ipcc_tar/).

<sup>9</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Impacts, Adaptation and Vulnerability* (Cambridge: Cambridge University Press, 2007), [http://www.ipcc.ch/publications\\_and\\_data/publications\\_ipcc\\_fourth\\_assessment\\_report\\_wg2\\_report\\_impacts\\_adaptation\\_and\\_vulnerability.htm](http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg2_report_impacts_adaptation_and_vulnerability.htm), section 17.3.1.

<sup>10</sup> *Ibid.*, section 17.3.1.

change<sup>11</sup> and on policies to enhance the resilience of vulnerable groups within societies. Adaptation to climate change requires collective action; governance mechanisms and institutions play a very important role in enabling such collective action.<sup>12</sup> By contrast, a lack of such policies may impede adaptation or increase the vulnerability of certain groups.<sup>13</sup> There is evidence that governance settings in which government agencies cooperate with local stakeholders are particularly good at promoting adaptive capacity in natural resources management.<sup>14</sup> The protection of public goods and services is a primary government function that becomes especially important for adaptation.<sup>15</sup> Public goods like robust natural resources<sup>16</sup> and public services such as education, health care, food aid and employment programs<sup>17</sup> increase a population's capacity to, for example, access food and water, learn about climate change and adaptation strategies, maintain health and nutrition, and begin or switch to livelihoods that fit the challenges and limitations of their environments. In essence, many public goods and services help populations maintain an adequate level of opportunity and stability for sustaining their livelihoods in the face of climate variability and change.<sup>18</sup> In a more normative vein, it can also be argued that it is, above all, the government's responsibility to manage risk on behalf of all populations, especially those perceived to be the poorest and most vulnerable.<sup>19</sup> Thus, state-driven policies are an essential part of adaptation efforts.

Hence, our focus is on **policy frameworks**. By policies, we understand different types of overarching action undertaken or supported by governments or public actors such as international organizations (e.g. laws, strategic programs or long-term and consistent approaches on how to deal with certain issue). The term "policy framework" is somewhat broader than policies in that it seeks to capture if/how in a given polity different individual policies (e.g. a water law or an adaptation strategy) are adopted as well if/how they are

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<sup>11</sup> Barry Smit and Olga Pilifosova, "From adaptation to adaptive capacity and vulnerability reduction," in *Climate Change, Adaptive Capacity and Development*, ed. Joel B. Smith, Richard J. T. Klein, and Saleemul Huq (Imperial College Press, 2003), 23.

<sup>12</sup> Neil Adger, "Social aspects of adaptive capacity," in *Climate Change, Adaptive Capacity and Development*, ed. Joel B. Smith, Richard J. T. Klein, and Saleemul Huq (Imperial College Press, 2003).

<sup>13</sup> Masego Madzwamuse, *Climate Governance in Africa: Adaptation Strategies and Institutions* (Berlin: Heinrich-Böll-Foundation, 2010), <http://www.boell.de/worldwide/africa/africa-climate-governance-in-africa-adaptation-strategies-and-institutions-10914.html>.

<sup>14</sup> Tompkins, Emma L. and Adger, Neil, "Does Adaptive Management of Natural Resources Enhance Resilience to Climate Change?," *Ecology and Society* 9, no. 2 (2004): 10–24, <http://www.ecologyandsociety.org/vol9/iss2/art10/>.

<sup>15</sup> Jon Barnett and W. Neil Adger, "Climate Change, Human Security and Violent Conflict," *Political Geography* 26, no. 6 (2007): 646.

<sup>16</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Impacts, Adaptation and Vulnerability*, section 17.4.1.

<sup>17</sup> Intergovernmental Panel on Climate Change (IPCC), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, Special Report of the Intergovernmental Panel on Climate Change (Cambridge University Press, 2012), 346; Elizabeth Bryan et al., "Adaptation to Climate Change in Ethiopia and South Africa: Options and Constraints," *Environmental Science & Policy* 12, no. 4 (June 2009): 424.

<sup>18</sup> Barnett and Adger, "Climate Change, Human Security and Violent Conflict," 646; Intergovernmental Panel on Climate Change (IPCC), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, 346.

<sup>19</sup> Intergovernmental Panel on Climate Change (IPCC), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, 346 McBean (2008); O'Brien et al. (2008); CCCD (2009).

coordinated or integrated; thus, looking at policy frameworks rather than policies should lead to a more comprehensive assessment of how effectively the above issues are addressed by the responsible political institutions in a certain country. Moreover, “policy” in our definition is more specific than terms such as “governance”, “political factors” or “political system”, as we are interested in the specific interventions of the competent political institutions in a given country. Factors such as an overall governance framework may be relevant to explain why effective policies are or are not adopted– but are different to the actual policies in place. Further, while our focus is on ‘top-down’ adaptation approaches that typically rely on modelling of climate change impacts to identify suitable interventions, rather than on ‘bottom-up’ approaches<sup>20</sup>, this does not mean that adaptation efforts of other policy actors, including the bottom-up, more *ad hoc* decisions that individual or communities take in response to changing environments are not equally important for overall adaptation efforts. Some examples of bottom-up approaches are detailed in Box 1 below.

To date, there are frequent calls for enhanced adaptation policies, and at the UN level, developing countries have been requested to develop national adaptation programmes of action.<sup>21</sup> There is also an ongoing debate on how adaptation and development policies can be integrated.<sup>22</sup> However, there is little systematic research focusing on the specific role of policies in overall adaptation efforts in general, and in addressing water-related human security and conflict risks more specifically. This may, in part, be due to the widely supported insight that there are no one-size-fits-all strategies for promoting adaptation; instead, in adaptation policy-making the specific characteristics of, and climate challenges posed to each country, and even specific population groups need to be considered.<sup>23</sup>

A previous analysis of policies in 9 countries as well as at the UN and EU level has led to the conclusion that while links between climate change and conflict as well as human security are addressed in high-level political resolutions and calls, there is hardly any concrete policy that explicitly refers to human security or conflict in the context of climate change or explicitly addresses these issues.<sup>24</sup> However, the analysis also indicates that the lack of explicit mention does not mean that these issues are not addressed in substance; indeed, a range of policies do address the underlying issues in substance. These include, for example, general policies on water and agriculture, but also more specific adaptation policies. With regard to adaptation policies in

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<sup>20</sup> Suraje Dessai and Mike Hulme, “Does Climate Adaptation Policy Need Probabilities?,” *Climate Policy* 4, no. 2 (2004): 107–128, <http://www.tandfonline.com/doi/abs/10.1080/14693062.2004.9685515>.

<sup>21</sup> See “Guidelines for the preparation of national adaptation programmes of action”, UNFCCC COP decision 28 CP.7 of 21 January 2002

<sup>22</sup> OECD, *Policy Guidance on Integrating Climate Change Adaptation into Development Co-operation* (Paris: OECD, 2009), [http://www.oecd.org/document/40/0,3343,en\\_2649\\_34421\\_42580264\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/40/0,3343,en_2649_34421_42580264_1_1_1_1,00.html).

<sup>23</sup> Bryan et al., “Adaptation to Climate Change in Ethiopia and South Africa,” 424.

<sup>24</sup> Gerstetter et al., *Review of International and National Policies and Institutional Frameworks*.

general Adger<sup>25</sup> observes that existing policy documents tend to define the state's role in adaptation as comprising three activities: reducing populations' vulnerability to risk, protecting public goods and services, and providing information for stimulating adaptation. Reducing vulnerability to risk might involve insurance-related instruments for disasters<sup>26</sup>; protecting public goods and infrastructure could include species and habitat protection<sup>27</sup>; and providing information might be in the form of adaptation knowledge-transfer programs for farmers. Indeed, these categories of activities are generally reflected in the literature on state involvement in adaptation,<sup>28</sup> along with the potential of international financial and technology transfer to facilitate them.<sup>29</sup> Adaptation policies can enhance human security and reduce conflict, e.g. by improving the socio-economic situation of certain population groups and thus their capacity to adapt to changing conditions, by improving the state of the natural environment, thus limiting the impact of climate change and preventing potential conflict when such resources become scarcer, or by protecting populations against specific risks (e.g. floods) that endanger human security.

## ***2.2 Assessing the effectiveness of policies***

As described above, one of our research questions is how effective current policy frameworks are in addressing, within countries, water-related risks to human security as well as potential conflicts over water that may be caused or exacerbated by climate change and what factors influence it. The second question that we explore in this paper, by compiling the expectations and demands of policy-makers on this matter, is how these policies can be improved.

Obviously, assessing the effectiveness of policy-frameworks begs a question of how we assess the effectiveness of policy-frameworks and the factors influencing it. "Effectiveness" is a criterion often used in policy-evaluation. The Organization for Economic Co-operation and Development (OECD) uses it as one of five criteria for evaluating development cooperation. Effectiveness can be defined as a "measure of the extent to which an [aid] activity attains its objectives".<sup>30</sup> In our context, this definition needs to be slightly modified: We do not evaluate the effectiveness of policies against the stated objectives of these policies, but against other objectives that are pre-defined, i.e. mitigating water-related risks to human security and preventing new water conflicts or the exacerbation of existing ones as a consequence of climate change.

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<sup>25</sup> W. Neil Adger, "Climate Change, Human Well-Being and Insecurity," *New Political Economy* 15, no. 2 (2010): 275–292, <http://www.tandfonline.com/doi/abs/10.1080/13563460903290912>.

<sup>26</sup> Intergovernmental Panel on Climate Change (IPCC), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, 343.

<sup>27</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Impacts, Adaptation and Vulnerability* section 17.4.1.

<sup>28</sup> *Ibid.* section 17.4.1.

<sup>29</sup> *Ibid.* section 17.4.1.

<sup>30</sup> OECD DAC Network on development evaluation, *Evaluating Development Cooperation - Summary of Key Norms and Standards* (Paris: OECD, 2010), [www.oecd.org/dataoecd/12/56/41612905.pdf](http://www.oecd.org/dataoecd/12/56/41612905.pdf).

In order to assess if and how the policy frameworks identified were effective for the described purposes and where gaps and deficiencies exist, we use a simple **policy-cycle approach**.<sup>31</sup> The dominant paradigm of policy-cycles is the “stages heuristic” approach that divides the policy process into the following stages<sup>32</sup>:

1. **Agenda setting/problem definition:** Agenda setting/problem definition is the stages where the need for action is identified and framed in a certain way by different actors.<sup>33</sup>
2. **Policy formulation/decision making:** In this stage the competent bodies decide on a specific policy among several alternatives and spell out its details.
3. **Implementation:** In this stage the policy gets implemented by the competent bodies, most frequently public authorities.
4. **Impact and evaluation:** In this stage, which is sometimes discussed as two separate ones, the policy achieves a certain impact in the real world, gets evaluated – and the cycle starts all over again.

The approach is practical, because it divides the policy process into manageable components. Thus, it will allow us to see more clearly which gaps and problems there are concerning the effectiveness of current policy frameworks in addressing climate-related risks for human security, where these gaps and problems are located, and how/by whom they could be addressed. For example, if the policies that exist on paper are found to be ineffective, i.e. shortcomings exist already at the stage of policy making, different additional measures will be needed than if the problems exist primarily at the stage of implementation. Also, the policy-cycle approach is useful, because it allows distinguishing more clearly the roles of different actors at different stages of the policy-cycle, as these actors are likely to have different roles at different stages of the policy-cycle.<sup>34</sup> For the present context, this is particular relevant with regard to the influence of the EU and the UN within countries. Arguably, their influence over national policies is likely to be more indirect and diffuse at the stage of agenda-setting and policy-formulation which is – at least “officially” – the sovereign domain of national decision-making bodies, while it may be more direct in terms of funding or project implementation at the stage of policy-implementation.

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<sup>31</sup> For a good overview on different theories of the policy-process see Rebecca Sutton, *The Policy Process: An Overview* (London: ODI, 1999), [www.odi.org.uk/resources/docs/2535.pdf](http://www.odi.org.uk/resources/docs/2535.pdf).

<sup>32</sup> Charlie Jones, *An Introduction to the Study of Public Policy* (California, Belmont: Wadsworth, 1970); James Anderson, *Public Policy Making* (New York: Praeger, 1975); Guy B. Peters, *American Public Policy: Promise and Performance*, vol. 2nd edition (Chatham New Jersey: Chatham House, 1986).

<sup>33</sup> See David Dery, “Agenda Setting and Problem Definition,” *Policy Studies* 21, no. 1 (2000): 37–47 for an overview of different definitions of agenda setting and problem definition.

<sup>34</sup> This is widely acknowledged in studies using a policy-cycle approach, for one example related particularly closely to our topic see William Ascher and Robert G. Healy, *Natural Resource Policymaking in Developing Countries: Environment, Economic Growth, and Income Distribution* (Duke University Press, 1990), 159ff.

However, it should be noted that while we are using a policy-cycle approach, its function is limited to that of a heuristic tool; real-life processes are unlikely to always follow the model and will vary by polities, institutions, policy sectors and the topic addressed. Indeed, the use of the policy cycle as a tool for understanding why certain policies develop has been heavily criticised.<sup>35</sup> Nakamura (1987) for example, observes that the stages heuristic approach describes what a policy process “should” look like, but does not necessarily accurately describe what happens in real life scenarios of policy making.<sup>36</sup> Moreover it has been argued that a policy associated with a crisis that is sudden and harmful will follow a markedly different trajectory than a policy that is deemed “politics as usual”.<sup>37</sup> More importantly, scholarship on policy cycles tends to describe a process emblematic of democratic and developed countries; however, many countries in the world are developing countries and/or not democratic. Of the countries we study here, all but one (Israel) are developing countries and not all are entirely democratic (see below, section 2.3). In developing countries, Grindle and Tomas argue that policy elites are uniquely determinative actors in the policy cycle. For this reason, they emphasize the importance of understanding the preferences and perceptions of policy elites as well as the circumstances that surround the emergence of policy issues.<sup>38</sup> Moreover, developing countries experience significant levels of international intervention in their policy making process, affecting decisions and the mode of implementation. In particular, this has been observed for economic decisions, but also with regard to other policy issues – arguably with great differences by countries and policy issues.<sup>39</sup> Finally, one further limitation of the policy cycle approach is that it does not give a causal explanation for driving policy from stage to stage.

Thus, there are serious limitations of the usefulness of a policy-cycle model in *explaining* the genesis of policies. However, our objective is rather more modest: For each of the (ideal) stages of the policy cycle, we will describe whatever factors and features we could, based mainly on the interviews conducted, identify that were relevant for the effectiveness of the specific policy-frameworks we looked at for addressing and mitigating the issues described above. Thus, we do not use the policy-cycle approach primarily to analyze why certain policies were adopted in the first place, but rather as a tool to identify and summarize weaknesses of the present framework and demands made for its improvement. While we will provide some preliminary insights on what seems to have driven the making of the relevant policies in the different countries, that analysis is not the primary objective of this study.

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<sup>35</sup> One prominent example is Paul A. Sabatier, *Theories of the Policy Process* (Westview Press, 2007), 7ff.

<sup>36</sup> Robert T. Nakamura, “The Textbook Policy Process and Implementation Research,” *Review of Policy Research* 7, no. 1 (1987): 142–154.

<sup>37</sup> Thomas A. Birkland, “Agenda Setting in Public Policy,” in *Handbook of Public Policy Analysis: Theory, Politics, and Methods* (Taylor and Francis Group, LLC, 2007), 63–79.

<sup>38</sup> Merilee S. Grindle and John W. Thomas, “Policy Makers, Policy Choices, and Policy Outcomes: The Political Economy of Reform in Developing Countries,” *Policy Sciences* 22, no. 3 (1989): 213–248.

<sup>39</sup> Charles Conteh and Frank L. K. Ohemeng, “The Politics of Decision Making in Developing Countries,” *Public Management Review* 11, no. 1 (2009): 58ff.

When assessing the effectiveness of policies, the stages of agenda-setting/problem definition, policy-formulation/decision-making and implementation are more important than evaluation for our purposes, while a certain part of the impact is precisely what we seek to assess. Evaluation only has an indirect bearing on the effectiveness of policies in that it may help formulating more effective policies, but does not directly contribute to the effectiveness of a certain policy. Thus, it is not discussed in any depth in the present study.

For the other stages, we discuss potential factors for why policies were adopted and why they were or were not effective as related to the different stages of the policy-cycle; clearly, as our analysis covers different countries, these factors are not necessarily the same in all cases. However, we seek to bring out commonalities and differences between the different countries to the extent feasible. One specific feature of our analysis is that we are also interested in what role the UN and the EU play in the adoption and implementation of effective policies; thus, one aspect we will address in our analysis is if/how the UN and EU policy frameworks have contributed towards effective policies in the countries we analyse. The questions we have sought to answer for the different stages of the policy cycles are shown in the table below:

**Table 1: The policy cycle approach**

	<b>Evaluation of the current framework</b>	<b>Demands for a future framework</b>
Agenda setting/problem definition	How do climate change impacts on water-related human security and conflict feature on the political agenda?	Which issues should be placed / elevated on the political agenda?
Policy formulation/decision-making	Have effective policies been formulated and adopted?	Which policies should be formulated in order to effectively address climate-induced risks for human security in the future and to prevent/mitigate water-related conflicts?
Implementation	Are these policies being successfully implemented?	How can more effective implementation be achieved?
Impact	Have these policies led to the expected impacts and outcomes (mitigating impacts on human security and conflict)?	What should be the (most important) impacts and outcomes of future policies?

The insights presented in this report on the effectiveness of policies are mainly based on semi-structured interviews carried out in the case study countries and via phone, carried out between September 2011 and March 2012.<sup>40</sup> It is thus a strongly perception-based assessment. It should be noted that such a methodology is not unusual in policy analysis; indeed, it has been claimed that the complexity of political decision-making cannot be understood properly without taking into account the perceptions of the actors involved therein.<sup>41</sup>

The current reality served as a base-line for interviewee opinions on the adequacy of current government initiatives to improve the population's human security in the future. Thus, interviewees, in particular in the case study countries, tended to evaluate the effectiveness of policy frameworks in view of their specific national context, and not based on a common benchmark or concept. This explains why interviewees from countries with comparatively low "objective" levels of human security and development can consider their policy and efforts as "effective": the opinion is based on the government's concrete possibilities and comparing current policy results with past ones. Effectiveness in this study is not measured in absolute terms; a policy framework is not only assessed to be effective if and where it actually "fully" ensures human security or conflict in the light of climate induced changes; this indeed would be too a high a threshold given that climate change is unlikely to be the sole cause for conflicts or risks to human security. Thus, we consider a policy to be more or less effective, in principle, if it has led to or is likely to lead to reducing risks to human security or the likelihood for water-related conflicts induced by climate change.

With regard to suggested improvements of the current policy-framework, we have compiled **demands and expectations** expressed by interviewees. This approach is based on the assumption that if several experts feel that certain, specific improvements are needed, this is a strong indicator that such improvements will indeed be needed. Also, we assume that if many key actors belonging to the "elite" of a certain country, i.e. those having likely a greater influence than ordinary citizen on what policies get adopted, raise a certain demand, agenda setting and formulation of future policies are likely to be influenced in this direction. Obviously, this is not automatic, because we have spoken only with selected interviewees, and other actors may hold and push for different policies. However, if policy elites in a given society, including e.g. responsible ministries, raise certain demands, it seems more plausible to assume that this will indeed influence the shape of future policies, than that it will not.

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<sup>40</sup> Altogether, 75 interviews were conducted. Interviewees included policy-makers from institutions responsible for the environment, agriculture, development and water, among others. Moreover, representatives from NGOs working on these topics were also interviewed, as were academics working on environmental issues, climate change, water etc. A list of interviews can be found in Annex I. Interviews were based on a standard questionnaire which was, however, adapted to local circumstances and the respective interviewee. The questionnaire is contained in Annex II. On the basis of the interviews, the case studies on Israel/Palestine, Morocco, Ethiopia, UN and the EU (see Annex III) were drafted and have served as input for compiling the present summary report.

<sup>41</sup> Jesko Hirschfeld, Linda Krampe, and Christiane Winkler, *RADOST Akteursanalyse - Teil 1: Konzept Und Methodische Grundlagen Der Befragung Und Auswertung*, RADOST (Berlin: Institut für ökologische Wirtschaftsforschung, 2012).



Given that this study is primarily based on the perceptions and insights on interviewees, a brief reflection is in place on the selection of the interviewees. Generally, the selection of interviewees in the countries as well as at the UN/EU level was based on a preliminary screening of policy areas that could be relevant to the climate change – water – human security – conflict nexus; our aim was to interview at least one representative of each of the political institutions responsible (i.e. a ministry of water or a specific UN organization). In order to counter-balance the “official” perspective with other perspective, we interviewed in addition representatives of NGOs working on related issues in the case study countries, and a limited number of academics. This selection of interviewees might lead to a bias as interviewees who represent certain institutions may be tempted to portray the policies initiated by the respective institutions more favourably than someone from the outside or an addressee of the respective policies. As described, we have tried to compensate, to an extent, for this bias by not only interviewing policy-makers, but also NGO representatives and academics, and to an extent by drawing existing studies/evaluations on the relevant policies for our assessment. While it should be kept in mind that our results may be biased in this sense, we could not, from the interviews discern any trend of NGO representatives being generally more critical towards existing policies than officials.

With regard to the use of terms, it should be noted that the above concepts of human security, and conflict were included in our questionnaire. In the interviews, however, we did not explain our definition to interviewees beforehand. Thus, their use of these terms may slightly diverge from ours; also, interviewees may in substance address issues of human security or conflict without using these terms. To the extent feasible, we have tried to clarify in our own text where interviewees’ definitions and use of term diverges from ours.

## ***2.3 Selection of cases***

We studied the policy frameworks in **Ethiopia, Morocco, Israel and the oPT** as well as at the **UN** and **EU** levels. This selection of case studies was guided by the following considerations:

First, we have chosen countries at different stages of economic development: Israel is a developed country, Morocco and the oPT are lower middle income countries according to the OECD Development Assistance Committee (DAC) classification, and Ethiopia is a least-developed country.<sup>42</sup> This is relevant because of the likelihood that more developed countries have more resources and capacity to invest in formulating and implementing policies; at the same time, human security in these countries is, generally, often less at risk than in less developed countries.

Second, climatic variation and water scarcity are naturally occurring phenomena in all of the case study countries. Changing patterns of water availability are likely to be the single most

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<sup>42</sup> OECD, DAC List of ODA Recipients , Effective for reporting on 2011, 2012 and 2013 flows, [http://www.oecd.org/document/45/0,3746,en\\_2649\\_34447\\_2093101\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/45/0,3746,en_2649_34447_2093101_1_1_1_1,00.html)

important impact of climate change. In Ethiopia, droughts are expected to be the primary climate impacts, followed by floods. While experienced historically, these conditions are expected to increase in the future under climate change.<sup>43</sup> Israel and the oPT are also expected to see more and more decrease in natural water availability, which may partially be attributable to climate change impacts. However, there is a high degree of uncertainty concerning the precise effects.<sup>44</sup> For Morocco, droughts have a critical impact and are set to increase in severity and frequency. Secondary impacts include flash floods, which have led to severe damages, and sea level rise that is likely to aggravate already eroding coastlines in some areas.<sup>45</sup> Thus, policy frameworks within these countries need to address some similar physical impacts.

Third, the cases studied present differences concerning underlying political systems and governance structures. This is relevant because evidence suggests that within states that are democratic, cooperation of water is more frequent than within non-democratic states.<sup>46</sup> At the policy level, this is likely to be reflected in the adoption of policies that can be assessed as involving or leading to cooperation, rather than conflict. Moreover, a country's general governance features are likely to influence the effectiveness of its policies. Thus, we present below a characterization of the entities studied as described by certain indicators of the "Worldwide Governance Factors" dataset of the World Bank.<sup>47</sup> The two indicators shown are defined in the following terms<sup>48</sup> and have been selected because of their direct relevance for public policy-making:

- **Voice and accountability** captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. It can thus serve as a proxy for how democratic a state is.
- **Government effectiveness** captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

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<sup>43</sup> Ethiopian Ministry of Water Resources, Ethiopian National Meteorological Agency (2007): "Climate Change National Adaptation Programme of Action (NAPA) of Ethiopia". June 2007, Addis Adaba, <http://unfccc.int/resource/docs/napa/eth01.pdf>

<sup>44</sup> Emily Black, David J. Brayshaw, and Claire M. C. Rambeau, "Past, Present and Future Precipitation in the Middle East: Insights from Models and Observations," *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 368, no. 1931 (2010): 5173–5184, <http://rsta.royalsocietypublishing.org/content/368/1931/5173>.

<sup>45</sup> The Adaptation Learning Mechanism. <http://www.adaptationlearning.net/morocco/profile> Accessed 15 May 2012.

<sup>46</sup> Thomas Bernauer et al., *Water-Related Intrastate Conflict and Cooperation (WARICC) (2011): A New Event Dataset*, CLICO Working Paper, 2011, [www.clico.org](http://www.clico.org).

<sup>47</sup> Accessible at <http://info.worldbank.org/governance/wgi/index.asp>

<sup>48</sup> See for the following Kaufmann, Daniel, Kraay, Aart and Mastruzzi, Massimo, *The Worldwide Governance Indicators: Methodology and Analytical Issues* (September 2010). World Bank Policy Research Working Paper No. 5430. Available at [ssrn.com/abstract=1682130](http://ssrn.com/abstract=1682130)

The values given in the table below are for the year 2010 and indicate the rank of the respective entity among all countries in the world, on a scale of 0-100.

**Table 2: Selected governance indicators for case study countries**

	<b>Voice and accountability</b>	<b>Government effectiveness</b>	<b>Specific features</b>
Ethiopia	11.4	42.6	
Israel	67.8	86.8	
oPT	25.6	40.7	No independent state
Morocco	28.4	48.8	

As the above table shows, the cases studied present varied features in terms of voice and accountability, with Ethiopia featuring at the lower end, Morocco and the oPT in the middle range, and Israel at the upper end. With regard to government effectiveness, Israel presents considerably better values than the other countries; this is expedient for our purposes as it will allow us to see whether the kind of policies of interest here are also particularly effective in the Israeli case, as may be expected if the government is in general perceived to act in an effective manner.

In sum, while the countries we study are not the only ones with these features that could have been selected, they present key differences and similarities that allow for important insights into the making of policies concerning the water-related impacts of climate change on human security and conflict.

It should be noted that while the EU and UN are presented as separate case studies in Annex III to this report, their policy frameworks are not, for the purpose of the present report, studied in the same capacity as the country level frameworks. While a country's policy framework is likely to have direct impact on the ground and at the local level within that country, where climate change impacts occur, the EU and UN international-level policy-frameworks will not produce as direct effects at the local level, and are usually mediated by the national actors implementing these programmes at the country level. Thus, here, we are primarily interested in how the UN and EU influence the effectiveness of policies on the ground, rather than assessing effectiveness within at "UN level" or "EU level."

### 3 Climate change – water – human security – conflict and policies: identified trajectories

In this section, we present the evidence gathered on how water-related impacts of climate change affect human security and conflict.<sup>49</sup> In order to assess the effectiveness of policies in addressing climate-induced human security and conflict risks, it is critical to recognize the function and contribution of factors other than climate change. Moreover, in order to assess the effectiveness of policy frameworks, it is useful to identify causal chains along which policies might intervene. In the following, we present an overview of different **identified trajectories** in the case studies on how climate-induced changes in water availability, human security and conflict, as well as policies, are related. We use the term ‘trajectories’ rather than ‘causal chains’ to describe how certain factors have an influence on human security and conflict, while at the same time indicating that, in the real world, there are hardly mono-causal chains of events, but rather complex settings with a variety of interlinked causalities.

Similar trajectories have been identified by other researchers in different settings.<sup>50</sup> Nonetheless, this list is inconclusive, in that in other regions of the world, additional links and trajectories may be at work. Moreover, different factors and links could in many cases interact with each other. Thus, the following is a deliberate simplification for making visible in certain instances where and how policies can intervene.

We have focused, on the one hand, on existing substantive links between water-related impacts of climate change, human security and conflict (trajectories 1 and 2). On the other, we have focused on the role of policies as part of the trajectories (trajectories 3-5). This means that, to an extent, we have neglected broader political governance factors that obviously may influence the existence and effectiveness of policies – a fact that was also reflected in some of the interviewees’ comments. For example, an Ethiopian interviewee suggested that a strong government hand could quell potential conflict through allowing expression of views and disagreements while ultimately exercising firm decision-making authority.<sup>51</sup> Similarly, a Palestinian interviewee<sup>52</sup> noted that in a time period when the Palestinian authority was weakened due to a strong popular movement against the Israeli occupation, it was unable to control a rise in illegal drilling of wells in the Palestinian Territories. These illegal wells later led to conflict among Palestinian communities. In Morocco, an interviewee<sup>53</sup> offered that increasing democratization in the region might enable a new level expression and hence protest over water

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<sup>49</sup> For a more in-depth discussion of the links and sources please see the individual case studies in the Annex.

<sup>50</sup> Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (WBGU), *Sicherheitsrisiko Klimawandel* (Berlin; Heidelberg: Springer, 2007), <http://www.wbgu.de/index.php?id=111/>; Brown and Crawford, *Rising Temperatures, Rising Tensions – Climate Change and the Risk of Violent Conflict in the Middle East*, IISD: Winnipeg.

<sup>51</sup> Personal communication, Ato Abtamu Tsegaye, GIZ Ethiopia Office.

<sup>52</sup> Personal communication, Deeb Abdel Gharfour, Palestinian Water Authority.

<sup>53</sup> Personal communication, Yassir Benabdallaoui, UNDP Morocco.

and other conditions, perhaps leading to internal conflict. While these aspects carry significant insights in their own regard, our focus on policies rather than such broader political factors is attributed to the objective of developing recommendations for concrete policy interventions, but is not to be read as a statement that they do not matter.

Accordingly, we have identified the following main trajectories:

### ***3.1 Existing human insecurity > climate change > increased human insecurity/conflict***

Poverty and human security are unmistakably and deeply intertwined, whether related to or independent of environmental factors. Interviewees indicated that persons experiencing poverty, and conceivably related food, health and other insecurities, have considerably greater vulnerability to adverse climate impacts and water scarcity and also have less adaptive capacity or ability to mitigate threats. Thus, where resilience<sup>54</sup> is low, the human security of such “insecure” people is more likely to be negatively affected by climate change than those of people who already lived in a more “secure” situation. Related, when pressing development needs are present, climate change may be viewed as a more distant concern, even where it would contribute to poverty and to human security threats, which in turn may lead to an absence of adaptation-related action by individuals or communities. As one interviewee in Morocco noted: “When you are in a developing country, social problems can be much more important and need immediate attention compared to the question of climate change.”<sup>55</sup> All in all, poverty and development needs were widely acknowledged by many interviewees as being of far greater relevance to human security than climate change, although climate change was recognized as an additional risk. Conversely, where existing human security was high, for example in a developed economy such as Israel, the likelihood of climate change negatively impacting human security was low.

With regard to conflict, the picture was similar. Climate and water-related human security and conflict risks were perceived by interviewees to be closely intertwined, as a lack of human security may drive conflict. Interviewees supposed that the loss of livelihoods, socioeconomic conditions, poor health and food insecurity all reduce stability, which can in turn give rise to conflict tensions. Lack of human security was considered to be a driver for conflict by interviewees in the oPT, Ethiopia and at the international level. As one interviewee in the oPT stated: “In any setting, whether Palestine or elsewhere, if people do not get basic services, if their socio-economic situation is poor, if their health is deteriorating, this leads people to vent out

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<sup>54</sup> “Resilience” is defined here as the “amount of disturbance a system can absorb and still bounce back to a reference state; the degree to which the system is capable of self-organisation; and the degree to which the system can build and increase the capacity for learning and adaptation.” Klein, Richard J. T., Robert J. Nicholls, and Frank Thomella. “Resilience to Natural Hazards: How Useful Is This Concept?” *Global Environmental Change Part B: Environmental Hazards* 5, no. 1–2 (2003): 35–43.

<sup>55</sup> Ibid.

their frustration in any possible way.”<sup>56</sup> From this perspective, climate and water impacts are not isolated drivers, but when reducing human security, may indirectly result in conflict. The interviewee continued, “Climate change per se is not going to be responsible for leading to instability. But if you put all the puzzles together, the more people have health issues, the more people have lower standards of living, that would lead to more conflict. It will create more fertile ground for people to be violent and upset.”<sup>57</sup> Another interviewee<sup>58</sup> noted the psychological dimensions of a lack of water and poor socioeconomic conditions and how conflict may result.

A lack of climate resilience may also indirectly negatively impact human security or conflict for external groups. For instance, interviewees from both Israel and the EU reflected on the potential for climate-related human security issues or conflict to spill over into neighbouring areas, causing transboundary effects. For example, some spoke of predictions for climate-driven migration initiating competition for resources in adjacent regions. Thus, increased human insecurity or conflict resulting from climate change was seen by some interviewees as not only directly impacting affected populations, but as also causing a domino effect whereby insecure persons compete for resources or conflict and instability spread to other regions.

### ***3.2 Existing conflict > climate change > increased/prolonged conflict***

Another link identified by interviewees was one between existing conflicts that could become more intense as resources become scarcer over climate change. One example is found in Ethiopia, where long-standing intermittent conflict over water and natural resources amongst different pastoral groups dates back several centuries and resource driven conflicts tend to be more frequent in periods of drought. Resource-based disputes in Ethiopian pastoral areas are not new, although the problem may be increasing, in part due to added resource strain, but coupled with other factors. An interviewee in Ethiopia described how resource-related conflict was “intensifying. Conflict in pastoral areas has been there, but when resources availability was better, the systems worked better, the one group would host the other group and so on.”<sup>59</sup> Similarly, some interviewees in the oPT noted that they expected climate change and a resulting reduction in the amount of water available to intensify the existing political conflict with Israel over water, observing also, however, that other factors than climate change were more important in this regard. Interestingly, the expectation that climate change might exacerbate the Israeli/Palestinian conflict over water was not shared by Israeli interviewees who assumed that through technological solutions (such as desalination) any potential effects of climate change

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<sup>56</sup> Personal communication, official, Palestinian Negotiation Affairs Department

<sup>57</sup> Ibid.

<sup>58</sup> Personal communication, Nidal Mahmoud, Bir Zeit University.

<sup>59</sup> Personal communication Admasu Tessema, USAID Ethiopia

could easily be compensated. Thus, one senior Israeli interviewee noted that “water is the easiest part to solve in the [Israeli-Palestinian] conflict”.<sup>60</sup>

### ***3.3 Existing human insecurity > climate change > lack of adaptive capacity/policy response > increased human insecurity***

Where human security issues were of major concern, which is the case in many developing countries, policy responses were expected to be heavily shaped by this situation. More immediate social concerns may be pushed forward on the agenda and isolated from environmental risks. This sentiment was voiced most notably in the oPt, although interviewees working at the international level witnessed this dynamic as well. Also, from a policy standpoint, financial capacities generally constrain adaptation responses for both individuals and states; countries where human security is already an issue may lack the necessary resources to protect their population against additional threats to human security resulting from climate change. Insufficient financial capacity can leave developing countries unable to implement and manage adaptation measures, promoting reliance on external funding. Costly adaptation methods may be out of reach for communities without financial means. “It is an issue of development, if you are developed, you have the capacity – whatever happens you can manage,” said one Ethiopian interviewee.<sup>61</sup> A similar observation was made with regard to conflict; cooperative efforts were considered to be less likely where parties are experiencing insecurity. As one Palestinian interviewee commented, “If you talk about regional stability, your main concern is to make sure that people on both sides have a fair standard of living. If it is not fair this is when you cannot move forward”<sup>62</sup>. While based in political disputes, some Palestinians noted that tensions were fuelled by the image of Israelis having not only more water, but also more money and available services.

### ***3.4 Existing conflict > climate change > lack of policy response > increased human insecurity/conflict***

Existing conflicts also had negative impacts on policy responses that could address climate-induced risks to human security and conflict, which in turn influences human security and conflict. The case of Israel and the oPt illustrates this dynamic and prior mistrust between parties was seen as decreasing the potential for cooperation over water and the implementation of policies. From an Israeli perspective, this translated into Palestinians refusing implementation of certain pertinent measures in the water sector until water rights were guaranteed; Palestinians, by contrast, pointed to Israelis blocking measures the Palestinian intended to take

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<sup>60</sup> Personal communication Shimon Tal, Israel Water Union

<sup>61</sup> Personal communication Gebru Doc, Climate Change Forum for Ethiopia

<sup>62</sup> Personal communication, official, Palestinian Negotiation Affairs Department.

(e.g. drilling of new wells) due to security concerns. There was also evidence in the case of the oPT that climate change was feared as diverting attention from the Israeli occupation as the primary political issue to be addressed, thus contributing to a slowed uptake of climate change on the Palestinian political agenda. Other accounts were given of sovereignty and national security concerns barring collaborative efforts and the formulation/implementation of policies. Interviewees at the international level observed this reality in areas outside of the case studies, such as between Tajikistan and Kyrgyzstan and the Caucasus. The absence of adequate policy responses was, in turn, seen as a factor in exacerbating existing conflicts: “The government should be prepared to manage ... conflicts. Many scientists have explained that our government couldn’t meet the social demand in terms of employment, access to opportunities, protecting property, etc. Morocco can suffer maybe from political disintegration in the future if the impact of climate change is not managed efficiently or the government doesn’t develop adaptation plans to minimize impacts on society and development.”<sup>63</sup>

### ***3.5 Existing policies > human insecurity/conflict > climate change > human (in)security***

Existing policies unrelated to climate change were also considered to influence human security under conditions of climate change in that they led to improving or exacerbating the human security of parts of the population irrespective of climate change.<sup>64</sup> For example, a few interviewees felt that Ethiopia’s development policy may, indirectly, result in stresses to water resources and related threats to human security. As part of the government’s comprehensive strategy to increase development, policymakers are pushing commercialization of agriculture, including support for foreign investors and large-scale land leasing programs. Although these policies are premised on supporting food security and development, some interviewees expressed that this approach reduces available land and water for pastoralist communities whose security is contingent upon resource access. In Ethiopia, conflicts over resources were also seen to be stemming indirectly from government policies that result in strains on water and land access. Interviewees identified large-scale agricultural development programmes that often involve voluntary resettlement of communities as a relatively recent source of conflict. Conflict has also occurred because of small-scale agricultural developments in regions that traditionally have been used by pastoralists, who face barriers to resource access as a result. In the oPT, the existing political situation and policy framework were viewed as a major force in reducing water availability for Palestinians and, in return, reducing human security, a situation that exists irrespective of climate change. For Palestinian interviewees, climate change does not figure in as a primary source, but only as a potential secondary stressor to political factors and natural

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<sup>63</sup> Personal communication, Mohamed Behnassi, Ibn Zohr University. Morocco

<sup>64</sup> A similar conclusion is presented in Kate Urwin and Andrew Jordan, “Does Public Policy Support or Undermine Climate Change Adaptation? Exploring Policy Interplay Across Different Scales of Governance,” *Global Environmental Change* 18, no. 1 (February 2008): 180–191.



conditions and, the chief policy objective is attaining changes in water allocations and recognition of land rights.

In some instances, however, existing policies also played a more positive role. For example, an Ethiopian interviewee described how development programs encouraging voluntary settlement and shifts in agriculture-based livelihoods could reduce resource-based conflict and create stability.<sup>65</sup> Also, because the case study countries have already experienced climatic variability and water scarcity in the past, institutions and policies are already in place for responding to drought conditions in Israel, Morocco and Ethiopia unrelated to climate change. These can and are used or form a basis for addressing climate change impacts.

As a variation of this trajectory, it was also observed that climate change was sometimes used as a justification for supporting existing political (and sometimes controversial) agendas unrelated to climate change, leading to a prolongation of existing conflict. Interviewees cited cases where they felt climate change was used to boost arguments for seemingly unrelated purposes. For example, some Palestinians felt Israel deliberately used climate change, and concern over rising climate-related water scarcity, as an argument to counter Palestinian demands for a higher water allocation. On the other hand, it was suggested that Palestinian acknowledgment of climate change may undermine demands addressing water scarcity caused by insufficient allocations. The use of climate change arguments as a basis for pursuing certain policy agendas was also highlighted as a rationale for settling pastoralist communities, where Ethiopia was seen as pushing for permanent settlement so as to improve access to services and control. While measures like the latter may be framed as positive from a climate adaptation perspective, for example through enabling access to improved water infrastructure, impacts, such as reducing viability of traditional livelihoods, may not be positive from a human security viewpoint.

Finally, a small number of **other factors** were identified as potentially influencing the above trajectories. As they are not directly policy-related, we only mention them in a summary way, however, clearly such factors often influence to what extent policies are needed and how effective they are.

**Cultural factors** were seen to play a role in influencing adaptation, in particular at the level of bottom-up responses to climate change. Where droughts and water shortages are anticipated and accepted natural climatic conditions, communities have long histories of formulating responses. Through experience, traditional coping mechanisms and cooperative processes have naturally developed that are viewed as “part of the culture.” Interviewees from both Morocco and the oPT discussed how water conservation was integral to cultural heritage. For Bedouin and pastoralist cultures in particular, traditional lifestyles are designed for adaptation to resource scarcity and variability through migration. Although, as described later, there may be some divergence as to whether these practices continue to be sustainable in changing socio-

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<sup>65</sup> Personal communication, Fasil Reda, Ethiopian Agricultural Research Organization

political and environmental climates, some cited reluctance to give up traditional lifestyles, or land, even where considered to be no longer beneficial for the local population.

Moreover, the **social fabric** of a society also plays a role. For example, in Morocco, interviewees pointed out that in certain regions and especially in oases, people frequently make use of their extended family networks as a buffer, particularly during drought years or when water becomes scarce. Family networks also provide an important source of income through remittances from members living abroad e.g. in the EU. It was noted that when conditions worsen abroad, for instance during the recent financial crisis, this fallback mechanism may no longer be available and can aggravate the impact of drought.<sup>66</sup>

Finally, a wide variety of factors completely independent of climate change obviously affect human security and conflict. Interestingly, in our interviews **population growth** was repeatedly cited at both the national and international levels as a major stressor to human security, often considered near, equal, or greater to that of climate change. Fixed or decreasing water levels in conjunction with increasing population demand were expected to heighten resource pressures. The role of population growth in Ethiopia was heavily emphasized as a contributor to food insecurity; food production has increased, but struggles to keep up with population expansion. Increased population and economic growth have dually strained water supply within the oPT. Population growth was also considered a potential factor for conflict, through added pressure on resources. Fixed or decreasing water availability in conjunction with increasing demand to keep pace with population growth were seen to create the potential for conflict over allocations.

To conclude, our findings indicated wide consensus among people interviewed that climate change is an added risk in relation to human security and conflicts, but not the singular or primary one. Interviewees demonstrated concern for environmental risks, yet in many cases were dismissive of the comparative importance of climate change in light of existing drought and environmental conditions, socioeconomic capacities and political tensions. However, the added pressure of climate change, combined with key social (e.g. development needs, lack of financial capacity, population growth) and political (e.g. state conflict, existing resource disputes, mistrust) factors, was commonly seen as amplifying human security and conflict risks. Prior disagreements over water between users and uses are anticipated to increase the likelihood of and the basis for potential conflict under changing environmental conditions. Interviewees repeatedly expressed that “the conflict exists already,” and “climate change increases the conflict”. When conflicts and tensions already exist between parties, competing demands for water resources are more likely to result in conflict. Thus, it was expected by most interviewees that if future conflicts over water are to arise, it would be in relation to existing tensions, non-environmental conditions and forces. However, this is obviously not automatic, because measures mitigating the impacts of climate change are sometimes already in place (e.g. producing water from non-conventional sources in Israel). Also, generally, conflict is not the

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<sup>66</sup> Personal communication, anonymous interviewee, Moroccan think-tank

only possible scenario when natural resources become scarcer, as has been amply shown in academic literature.<sup>67</sup>

## 4 Overview of current policy frameworks

The previous section has discussed in a more general vein, how policies may become important in influencing the level of human security and conflicts that exist within a country under conditions of climate change. In this and the following section we discuss, whether policy-frameworks existing in the “real-world” are actually effective in having any positive impacts in this regard. Thus, this section presents an overview of current policy frameworks; section 5 will aim to present insights on the effectiveness of current policy frameworks to mitigate the impacts of climate change on water-related human security and conflict (as derived from the interviews), and provide insights into the national policy cycle, from a national and international perspective. The main focus in this analysis is on the national level (see section 2).

In the first part of this section we present the policy frameworks of the three case study countries (with the Israeli/Palestinian framework being presented jointly), including a brief summary of relevant human security and conflict aspects. Following this, EU and UN policy frameworks providing support to countries in the MMES region are detailed. Readers are referred to the case studies in the Annex for a more extensive description for each of the cases.

### 4.1 National policy frameworks

The three case-study countries present huge differences in their physical geography, the availability and use given to water resources, their socio-economic situation and degree of development. In addition, the projected impacts of climate change and the derived risks to human security also present huge differences. The following summary of policy frameworks presents for each country a brief analysis of the relevant policy addressing the nexus between climate change, conflict, and human security. Due to the above-mentioned differences, the policy that is relevant in each country varies from country to country in policy area and type, e.g. the main areas of action to address climate change may be in very different policy sectors, and cover very different actions.

#### 4.1.1 Ethiopia

The main impacts of climate change in Ethiopia pertain to food security. The vast majority of the population, between 75%<sup>68</sup> and 85%,<sup>69</sup> practice agriculture; the majority of these practice

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<sup>67</sup> See for examples from the water-related literature Aaron T. Wolf et al., “Managing Water Conflict and Cooperation,” in *State of the World 2005 - Redefining Global Security*, by Worldwatch Institute (Washington DC: W. W. Norton & Company, 2005), 80–208, [www.worldwatch.org/node/3846](http://www.worldwatch.org/node/3846); Bernauer et al., *Water-Related Intrastate Conflict and Cooperation (WARICC) (2011): A New Event Dataset*.

<sup>68</sup> Jonathan McKee, “Ethiopia Country Environmental Profile” (2007).

<sup>69</sup> United States Department of State, and Bureau of Economic, Energy and Business Affairs. *2011 Investment Climate Statement - Ethiopia*, March 2011. <http://www.state.gov/e/eb/rls/othr/ics/2011/157275.htm>

smallholder, subsistence agriculture or pastoralism. With the vast majority of smallholder agriculture being rain-fed and pastoralism depending nearly exclusively on natural pastures, both these livelihoods are very vulnerable to the onset of droughts or to higher climate variability: Ethiopia has a history of famine due to droughts, many of them resulting in large death tolls.<sup>70</sup> Floods and temperature rise are generally considered of lesser importance.<sup>71</sup>

As in many Sahel countries with pastoralism, conflicts between different groups of pastoralists and between pastoralists and farmers have a long history.<sup>72</sup> There are also separatist conflicts in some pastoralist regions with the government: several guerrilla movements exist, which from time to time attack different targets. Another more recent source of conflict is large-scale agricultural investment schemes, or “land-grabs”, happening in the country.<sup>73</sup> They tend to occur in pastoralist or agro-pastoralist areas (more sparsely populated), and often involve resettlement and “villagisation” of communities.

### **Policies addressing water-related impacts on human security**

Economic development is very prominent on the Ethiopian government’s agenda. Over the last two decades, agriculture has been seen – and continues to be seen for the future – as the key sector in the country’s development.<sup>74</sup> Smallholder farming and pastoralism have seen varied kinds of support over many years now, with the aim of increasing productivity and commercialisation of agricultural products. The extensive work that has been realised in disaster prevention and recovery (mainly food scarcity) also relates to the development agenda. This means that in the Ethiopian agricultural context, measures that address development (e.g. increasing agricultural production/value which results in an increase of household resilience, or measures aiming at diversification of income sources) are largely identical to initiatives identified as climate change adaptation measures.<sup>75</sup> Similarly, long-term initiatives addressing natural resource conservation or rehabilitation also increase resilience to climate change.<sup>76</sup> Thus, there is a very big overlap between the development measures that have been implemented in the agricultural sector over the last two decades (and which will continue to be implemented), and measures conducive to adaptation to climate change in this sector.

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<sup>70</sup> World Bank, *The Social Dimensions of Adaptation to Climate Change in Ethiopia*, Discussion Paper No 14 (World Bank, 2010).

<sup>71</sup> Ethiopian Ministry of Water Resources, Ethiopian National Meteorological Agency (2007): “Climate Change National Adaptation Programme of Action (NAPA) of Ethiopia”. June 2007

<sup>72</sup> Temesge, Tamsale A., *Climate Change to Conflict? Lessons from Southern Ethiopia and Northern Kenya*. (Fafu, 2010), 9.

<sup>73</sup> Steve Fisher, “Africa for Sale: Land and Water Grabs Spell Disaster for Rural People and Rivers,” *World Rivers Review* 26, no. 3 (n.d.).

<sup>74</sup> For instance, the strategy of the country’s current 5-year plan “Growth and Transformation Plan 2010/2011 – 2014/2015” specifically aims for agriculture to be the main source of economic growth for the next five years. P. 22- 23, Ethiopian Ministry of Finance and Economic Development, 2010.

<sup>75</sup> Personal communication, Wondwossen Sintayehu, Ethiopian Environmental Protection Agency

<sup>76</sup> Personal communication, Ato Abtamu Tsegaye, GIZ Ethiopia Office

Whereas in the agricultural sector climate adaptation fits perfectly with the already existing development agenda, in other fields (e.g. development of transport network, development of hydropower) climate change is seen as a threat to development and adaptation as the means to ensuring that development targets are not imperilled.<sup>77</sup> In this way climate change has made it to the main level on the government agenda: climate change adaptation has been mainstreamed into Ethiopia's current 5-year development plan (2010/11 – 2014/15),<sup>78</sup> into the agricultural sector policy for 2010 – 2020,<sup>79</sup> and is presently being mainstreamed into the country's water and energy policies. A second National Adaptation Plan of Action (NAPA) is in the process of being finalised.<sup>80</sup>

In summary, Ethiopia has moved very fast to incorporate adaptation into government policy, and the policy documents and programmes were widely considered by interviewees to be well thought through and well designed. The reasons for the surprising fast pace and thoroughness of uptake of climate change in the Ethiopian policy framework, as evident from the interviews and government documents, appear to be the following:

- High vulnerability of population and economy to climate change impacts. Many interviewees reported the existence of first impacts such as changes to the rain seasons and increased frequency of droughts. There is an enormous dependency on rainfall.
- Strong alignment of climate change adaptation with existing policy priorities (e.g. overlap with development), as well as perception of threat to policy and development objectives.
- Expectations of accessing funding for adaptation (and mitigation), which would include benefits for the country's development agenda.

However, interviewees highlighted that the challenges are in meeting the implementation goals of these policies; implementation occurs but is sometimes significantly slower than planned. The most frequently mentioned challenges were:

- Human resources capacity, technical capacity, institutional capacity.
- Knowledge transfer
- Financial means
- Research capacity that would support creation/revision of policy.

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<sup>77</sup> Personal communication, Ato Abtamu Tsegaye, GIZ Ethiopia Office

<sup>78</sup> Cf. the GTP's Ch. 8, Cross-cutting sectors, Ch. 8.9, Environment and Climate Change. Ethiopian Ministry of Finance and Economic Development, 2010.

<sup>79</sup> Climate change is recognised as one of four "cross-cutting issues" in Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010-2020, see Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010-2020. Draft Final Report", September 15, 2010, [http://gafspfund.org/gafsp/sites/gafspfund.org/files/Documents/Ethiopia\\_5\\_of\\_6\\_CAADP\\_Post\\_compact\\_Investment\\_Plan\\_%28PIF%29\\_0.pdf](http://gafspfund.org/gafsp/sites/gafspfund.org/files/Documents/Ethiopia_5_of_6_CAADP_Post_compact_Investment_Plan_%28PIF%29_0.pdf).

<sup>80</sup> Personal communication, official of the Ethiopian Environmental Protection Agency.

- Knowledge management and coordination among organisations, including ministries and donors.

### **Relationship with conflicts**

The unclear distinction between adaptation and development initiatives in Ethiopia means that, interviewees felt, the threat of climate change can be seen as being used to justify development initiatives that are unpopular with some population groups. The need for climate change adaptation is used (correctly or incorrectly) as a justification for the settlement of pastoralists and the uptake of agriculture in traditionally pastoralist areas. Many pastoralist communities have had to rely to some degree on food aid for many years now,<sup>81</sup> and the official government line is that climate change will worsen this situation. However, this apparently non-political adaptation and development logic supports measures that are highly controversial, because they are seen by some pastoralist communities (some of them in violent conflict with the government, whose legitimacy over they do not recognise<sup>82</sup>) as eroding their rights (e.g. to land use), restricting their resource use, and as generally making pastoralism less viable for pastoralists. Reduced viability of pastoralism has been associated with increased cattle-raiding between clans and thus increased internal conflict among pastoralists.<sup>83</sup> Rather than climate change affecting existing conflicts, in this case, it is the implementation of some measures that fly under the flag of development and/or climate change adaptation which have the potential to affect existing conflicts.

Economic development of the whole country is also seen as a means to improve societal resilience to climate change impacts. Large-scale agri-business projects or “land-grabs”, as well as smaller developments, are part of the government’s development agenda,<sup>84</sup> and can be seen as furthering economic development and thus resilience of the country as a whole. However, these developments often require the resettlement of communities: the increased country resilience comes at the price of the reduced resilience of these communities, and there are some reports of conflicts related to land-grabs.<sup>85</sup>

## **4.1.2 Israel/occupied Palestinian Territory**

Israel and the oPT have rather different characteristics regarding the extent to which the human security of their populations is currently ensured. The oPT are, in essence, a developing

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<sup>81</sup> Personal communication, Fasil Reda, Pastoralist Research Division, Ethiopian Agricultural Research

<sup>82</sup> A (possibly somewhat alarmist) version of events in these regions is the report by Internal Displacement Monitoring Centre and Norwegian Refugee Council, *Ethiopia: Human Rights Violations and Conflicts Continue to Cause Displacement*, 2009.

<sup>83</sup> Temesge, Tamsale A., *Climate Change to Conflict? Lessons from Southern Ethiopia and Northern Kenya*.

<sup>84</sup> Cf. Ethiopian Ministry of Finance and Economic Development, 2010.

<sup>85</sup> Internal Displacement Monitoring Centre and Norwegian Refugee Council, *Ethiopia: Human Rights Violations and Conflicts Continue to Cause Displacement*; Fisher, “Africa for Sale: Land and Water Grabs Spell Disaster for Rural People and Rivers.”

“country”, which ranked 114 out of 187 countries in the UN human development index,<sup>86</sup> with the Gaza Strip undergoing a prolonged humanitarian crisis. While a high percentage of households are connected to water supply networks, the supply is highly irregular in many areas of the oPT. In terms of per capita water use, Amnesty International reports that actual household use of water averages about 50-70 litres per capita and per day in the West Bank, which compares to about 300 litres in Israel.<sup>87</sup> The oPT also have a high dependency on agriculture for food supply and income generation, and approximately 24% of the population is estimated to be employed in this sector.<sup>88</sup> Nonetheless, most interviewees on the Palestinian side did not perceive climate change as a decisive risk to human security, instead stressing in this regard the limits imposed by the Israeli occupation on water allocation for Palestinians and water management by the Palestinian Authority.

By contrast, Israel is a developed state where, for example, according to official statistics, 100% of the population has regular piped water supply on premises.<sup>89</sup> Agriculture is a rather small economic sector in Israel, accounting for less than 2% to its GDP and about 2% of employment. Accordingly, climate-induced changes in water availability were not seen as a threat to human security and conflict in Israel by the interviewees. Three main arguments were made to support this claim: Israel has already developed alternative means of increasing its water supply, it has a low dependency on domestic food production, and compared to other stressors, the relative impact of climate change is marginal. Water has long been a contested topic of Israeli-Palestinian relations, while there seem to be few conflicts within either of the two entities over water at present.

When looking at the role of policy frameworks in mitigating climate-related risks, it is important to note that both Palestinians and Israelis have their own policy frameworks, even though Palestinian interviews tended to argue that in fact their space for autonomous policy-making was severely limited by the restrictions imposed by the Israeli occupation. The two separate frameworks comprise different policies, including on water, agriculture and climate change adaptation. Moreover, there is a joint policy framework, of which the only part relevant for the present context is the water-related portion. There are no policies that explicitly address human security or conflict; policies that in substance are relevant to these issues in the context of

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<sup>86</sup> International Human Development Indicators, Occupied Palestinian Territories, <http://hdrstats.undp.org/en/countries/profiles/PSE.html>

<sup>87</sup> World Bank, *Assessment of Restrictions on Palestinian Water Sector Development O* (Washington DC: World, 2009); Jonathan Lautze and Paul Kirshen, “Water Allocation, Climate Change, and Sustainable Water Use in Israel/Palestine: The Palestinian Position,” *Water International* 34, no. 2 (2009): 192 A figure of 63l day is given by ; Amnesty International, *Israel – Occupied Palestinian Territories: Troubled Water – Palestinians Denied Fair Access to Water* (London: Amnesty International, 2009), 3.

<sup>88</sup> Benjamin Görlach et al., *Analysis for European Neighbourhood Policy (ENP) Countries and the Russian Federation of Social and Economic Benefits of Enhanced Environmental Protection – Occupied Palestinian Territory Country Report* (Berlin: Ecologic Institute, 2011), [http://ecologic.eu/files/attachments/Projects/2221/opt-enpi\\_benefit\\_assessment.pdf](http://ecologic.eu/files/attachments/Projects/2221/opt-enpi_benefit_assessment.pdf).

<sup>89</sup> WHO/UNICEF, 2010b Estimates for the use of improved drinking-water sources and improved sanitation facilities: Israel. JMP for Water Supply and Sanitation. March 2010. [www.childinfo.org](http://www.childinfo.org); WHO/UNICEF, 2010: Progress on Sanitation and Drinking-Water 2010 Update

climate change include water, adaptation and agricultural policies, and in the context of Palestine, donor involvement.

On the Palestinian side, climate change is a relatively new topic. The central strategy on climate change is the “Climate Change Adaptation Strategy and Programme of Action for the Palestinian Authority”.<sup>90</sup> However, so far the Adaptation Strategy has, at most, been implemented very partially. An additional integrated climate change programme for Palestine is still under development. While measures relating to climate change have only recently become part of the Palestinian policy framework, this is different for the water sector. The Palestinian Water Authority was established in 1995 as a body with competence for regulation and implementation. A National Water Policy was adopted in 1995, a Water Resources Management Strategy in 1998 and a Water Law in 2002. In recent years, a reform plan for the sector was adopted, which is still at the initial phase of implementation. Besides the PWA, other ministries, e.g. the Ministry of Agriculture, also deal with water-related issues.<sup>91</sup> Municipalities are formally responsible for any water-related service delivery including water supply; water is received either from West Bank Water Department (WBWD) or from private or PWA managed wells. Specific utilities exist in some larger locations, such as Ramallah or Bethlehem.<sup>92</sup> Besides the activities going on at the official policy level, numerous water-related activities have also been undertaken by international donors and local NGOs, e.g. in the form of restoring water facilities in communities. It has been observed that the percentage of expenditures on water and sanitation per person by governmental and non-governmental donor organizations in Palestine is among the highest in the world.<sup>93</sup> Evaluations of the Palestinian water sector arrive at the conclusion that the water sector in Palestine is extremely fragmented, making integrated management very difficult. Moreover, a lack of investment in the sector has been noticed.<sup>94</sup>

On the Israeli side, there has been a long-standing policy on water management, which is mainly focused on supply. Israel has had to deal with water scarcity and insecure supply from its very existence, and as a consequence, it has developed means of increasing its water supply. Today, Israel is considered a global frontrunner in dealing with water scarcity – it sets the record in re-using treated wastewater, with 82% of the wastewater reused for irrigation.<sup>95</sup> In addition, Israel

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<sup>90</sup> Online at <http://www.undp.ps/en/newsroom/publications/pdf/other/climatechange.pdf>

<sup>91</sup> Tamimi, Abdelrahman, *The Strategic Water Sector Plan in Palestine, CLICO Case Study* (Ramallah: Palestinian Hydrology Group, 2011), 3.

<sup>92</sup> Simone Klawitter and Ihab Barghouti, “Institutional Design and Process of the Palestinian Water Sector: Principal Stakeholder, Their Roles, Interests and Conflicts” (presented at the Symposium on Sustainable Water Supply and Sanitation: Strengthening Capacity for Local Governance, Delft, 2006), [http://www.irc.nl/content/download/27577/293627/file/Klawitter\\_and\\_Barghouti\\_Sustainable\\_Water\\_Supply\\_and\\_Sanitation.pdf](http://www.irc.nl/content/download/27577/293627/file/Klawitter_and_Barghouti_Sustainable_Water_Supply_and_Sanitation.pdf); World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*.

<sup>93</sup> Klawitter and Barghouti, “Institutional Design and Process of the Palestinian Water Sector: Principal Stakeholder, Their Roles, Interests and Conflicts.”

<sup>94</sup> World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*; Tamimi, Abdelrahman, *The Strategic Water Sector Plan in Palestine, CLICO Case Study*, 4.

<sup>95</sup> Ministry of Environmental Protection (MoEP) 2010. The environment in Israel, indicators, data and trends 2010. The chief scientist.



supplies 300 MCM/year from desalination, almost 40% of its municipal and industrial water use. Israel further plans to increase this capacity to 750 MCM/year by 2020, supplying 80% of the municipal water use.<sup>96</sup> Coupled with the target of treating 100% of its wastewater for irrigation purposes,<sup>97</sup> Israel is expected to nearly double its water supply by 2020. In addition to supply management, in recent years Israel has conducted several institutional reforms, such as the privatization of municipal water facilities.<sup>98</sup>

The main part of the joint policy framework for managing shared water resources is the Interim Agreement signed by the parties in 1995. The Interim Agreement was initially agreed upon for a period of five years, during which the parties were meant to negotiate the terms of a permanent agreement, which however so far has not materialised. One of the core elements of the interim agreement was dividing the oPT into three areas: areas under Palestinian security control and civil administration (Area A), referring mainly to the large Palestinian cities; areas under Israeli security control and Palestinian civil administration (Area B); and areas under Israeli control and administration (Area C). The Interim Agreement included a chapter on civilian affairs, which has an article on water and sewage. The relevant article settles the terms of managing the water resources in the West Bank, which include three aquifers (Northern, Western and Eastern Aquifers).<sup>99</sup> The article also assesses the water needs of the Palestinians at the time the agreement was concluded and their future needs. Besides maintaining existing quantities of utilization, both sides commit to increasing water supply in the oPT from a variety of sources. Finally, the agreement establishes a Joint Water Committee (JWC), in charge of managing all water and sewage related issues in the West Bank.<sup>100</sup> The JWC is comprised of an equal number of representatives from each side, and all its decisions must be reached by consensus. Thus, the JWC needs to give approval for the drilling of wells and the construction of any water-related facilities (e.g. supply networks or waste water treatment plants) in the West Bank by either of the two parties. In addition, in Area C, which is about 60% of the West Bank, approval of the Israeli Civil Administration is needed for water projects.

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[http://www.sviva.gov.il/bin/en.jsp?enPage=e\\_BlankPage&enDisplay=view&enDispWhat=Object&enDispWho=News^15333&enZone=e\\_news](http://www.sviva.gov.il/bin/en.jsp?enPage=e_BlankPage&enDisplay=view&enDispWhat=Object&enDispWho=News^15333&enZone=e_news)

<sup>96</sup> Israeli Water Authority, <http://www.water.gov.il/Hebrew/WaterResources/Desalination/Pages/default.aspx> (in Hebrew)

<sup>97</sup> Israeli Central Bureau of Statistics, 2006, Environmental Data Compendium Israel. Central Bureau of Statistics: Jerusalem

<sup>98</sup> Iddo Kan and Yoav Kislev, *Urban Water Price Setting Under Central Administration* (Jerusalem: Hebrew University, 2011), [http://www.feem-project.net/epiwater/docs/d32-d6-1/CS24\\_Israel.pdf](http://www.feem-project.net/epiwater/docs/d32-d6-1/CS24_Israel.pdf).

<sup>99</sup> The Palestinian Authority already received full authority for managing water resources in the Gaza Strip, under the Gaza-Jericho Agreement (1994). However the Interim Agreement includes agreements on transfers of additional water to Gaza.

<sup>100</sup> See Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip, Annex III: Protocol Concerning Civil Affairs, Art. 40 and Schedule 8, online at [http://www.knesset.gov.il/process/docs/heskemb4\\_eng.htm](http://www.knesset.gov.il/process/docs/heskemb4_eng.htm). See for a description of the water-related aspects of the Interim Agreement: The Knesset Research and Information Center, Israeli-Palestinian Cooperation on Water Issues, 2011, <http://www.knesset.gov.il/mmm/data/pdf/me02767.pdf>.

### 4.1.3 Morocco

The heterogeneity of rainfall in time and space, coupled with a historical experience of drought has made security of water supply a priority for Morocco. For decades, the country has worked on developing infrastructure for this purpose. As a result it is unsurprising that interviewees displayed rather high levels of confidence regarding the effectiveness of Morocco's policy framework for addressing current and future challenges of water availability. A key aspect of the long-term policy framework for addressing these challenges has been the widespread construction of dams, increasing networks for water supply and large-scale irrigation systems to secure water for urban and agricultural demands.<sup>101</sup> In addition to dam construction to secure water supply, the 1995 Water Law provides a framework for integrated water resource management (IWRM) and has been recognised as one of the most developed and complete frameworks for water management in the MENA region.<sup>102</sup>

Nevertheless, water policies in Morocco have been criticised for being too limited to supply management and water transfer, and for neglecting social and environmental issues.<sup>103</sup> More recently, the Moroccan government has broadened its reach to include water demand management measures, such as campaigns to promote public awareness on water-saving and use of alternative water sources as well as developing economic instruments such as incentives for efficient water use, abstraction charges, progressive pricing, and a water pollution tax based on the polluter pays principle. However, implementation of water policies is an area of heightened concern and substantially reduces the effectiveness of the Moroccan framework. The Water Law was adopted 17 years ago, but its tools have only been applied to a limited degree and action taken against infractions has been negligible; also, collection rates for the water pollution tax, remain low in many areas.<sup>104</sup> Pollution of water resources thus remains a serious

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<sup>101</sup> One of the most iconic pillars of Morocco's water policy was a strategy devised in the 1970s with the objective of irrigating 1 million hectares by 2020 engendering wide-spread dam construction. Under its National Water Strategy (Plan National de l'Eau) of 2000, Morocco began large investments in the construction of dams, increasing networks for water supply and large-scale irrigation systems to secure water for urban and agricultural demands.

<sup>102</sup> Jackson Morill and Jose Simas, "Comparative Analysis of Water Laws in MNA Countries," in *Water in the Arab World Management Perspectives and Innovations* (World Bank, Middle East and North Africa Region, 2009), 285–334, [http://siteresources.worldbank.org/INTMENA/Resources/Water\\_Arab\\_World\\_full.pdf](http://siteresources.worldbank.org/INTMENA/Resources/Water_Arab_World_full.pdf). Key aspects of the 1995 Water Law are the definition of water as a public good and the establishment of river basins as the functioning unit of water management. The Law also allows the administration to enact temporary regulations to ensure potable water for human and livestock consumption, forbids polluting activities and enables 'water police' to take action against infractions.

<sup>103</sup> Paola Minoia and Anna Brusarosco, *Water Infrastructures Facing Sustainable Development Challenges: Integrated Evaluation of Impacts of Dams on Regional Development in Morocco*, August 2006, <http://www.feem.it/userfiles/attach/Publication/NDL2006/NDL2006-105.pdf>.

<sup>104</sup> Some Moroccans argue that these charges are against Islamic principles prohibiting water trading. Farmers also dispute these charges and delay payments claiming that they represent a high percentage of agricultural inputs. Centre for Environment and Development for the Arab Region and Europe (CEDARE), *Water Conflicts and Conflict Management Mechanisms in the Middle East and North Africa Region*, March 2006, <http://water.cedare.int/cedare.int/files15%5CFile2862.pdf>.

issue, and stakeholder involvement in water management - recognised as an important factor in conflict prevention<sup>105</sup> - is very weak.

Sectoral conflict over the allocation of water resources is also fairly common in Morocco. This is to a certain extent kept under control through an established process of prioritised water allocation which favours drinking water supply over other uses. In this way, even in times of water scarcity, water security is ensured for the population.<sup>106</sup> Nonetheless some interviewees did mention that, in the practical application, exceptions had occurred in times of water scarcity, where domestic water supply had been cut off for certain times of the day in favour of the tourist or agricultural sector.

As noted above, the key focus of Morocco's water policy framework has been to secure its water supply, and flood risk management has historically played a smaller role. The National Plan against Floods (PNI) has identified 390 priority centres for which prevention measures are to be carried out by 2020. However, there is currently a lack of effective measures to reduce exposure to flood threats to civilian populations and to businesses which are not always prevented from constructing in flood plains, on which it can be cheaper or easier to build. Insurance schemes can help to prevent risks to human security from disasters. Nevertheless, echoing the country's water policy in general, these insurance schemes cover drought but not yet floods. In addition, whilst useful, insurance schemes are focused on compensation rather than prevention and whilst this may support human security initially, such schemes are not stand alone tools nor can they provide long term support. A fully integrated flood risk management approach that takes different sectors and tools into account has so far only been developed in one river basin (Ourika) and such approaches are still to be developed for other regions.

As seen in the trajectory set out in section 3, the need for poverty reduction and economic growth are of primary concern for Morocco and currently appear to be taking priority over climate change adaptation, in terms of policy focus. For poverty reduction, Morocco aims are set out in its 2005 National Human Development Initiative (INDH) and interviewees remarked that the country is keen to reach the Millennium Development Goals and improve its ranking in the UNs Human Development Index. For economic development and food security, Morocco is focused on the development of the agricultural sector. The Plan Maroc Vert (PMV) is the key policy designed to deliver both of these aims. However it is a policy which has raised criticism for focusing on the cash crops that will provide economic growth and gains for a small number of business owners rather than supporting small-holder agriculture to ensure the food security of rural farmers. Whilst this policy may have some short term benefits for the economy and

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<sup>105</sup> Environmental Law Institute (ELI), "DRAFT Handbook on Public Participation in International Waters Management — IW:LEARN", November 2007, [http://iwlearn.net/abt\\_iwlearn/events/p2/p2-handbook.en/view](http://iwlearn.net/abt_iwlearn/events/p2/p2-handbook.en/view).

<sup>106</sup> For example, The Moroccan government places strong emphasis on access to drinking water as part of the high-profile National Initiative for Human Development (INDH) launched in 2005, and expects connection levels to reach 100 per cent by 2015. OECD, African Development Bank, "Country Studies: Morocco," in African Economic Outlook 2006/2007 (OECD, 2007), <http://www.oecd.org/dataoecd/27/14/38562905.pdf>.

employment, over the medium to long term, the intensification of agricultural production combined with the impacts of climate change may well lead to negative environmental impacts such as decreased freshwater availability, soil salination and desertification.<sup>107</sup> Indeed over the long term, if agricultural production and employment are affected by these environmental impacts, there will be a number of knock-on effects for Morocco's economic and food security.

There is an increasing consciousness of the impacts of climate change amongst policy makers and technical professionals in Morocco.<sup>108</sup> Nevertheless existing patterns of drought and flash floods make distinguishing between the root causes of these impacts less straightforward. It is perhaps understandable therefore that policies specifically addressing climate change adaptation are still very much in the initial phases. Natural reserves such as oases are being affected by lack of water and climate change adaptation interventions are currently focused on improving the resilience of these natural habitats for the benefit of local communities, rather than through a national policy framework such as a National Adaptation Programme of Action (NAPA).<sup>109</sup> Besides conserving natural habitats, the 'Adaptation au changement climatique au Maroc: Pour des Oasis résilientes' (PACC-Oasis) programme has the additional aim of securing populations' livelihoods and survival in oases rather than seeing them migrate to urban centres. Although a direct link between this policy and reduced conflict is not clear-cut, it can be interpreted as having a positive impact on human security in that it reduces pressures for jobs and resources in urban areas. Nonetheless, these initiatives are relatively small-scale and more can certainly be done in terms of climate change adaptation: Morocco has developed a high level of technical competence in water and agricultural technologies to deal with water scarcity such as drip irrigation, which should improve the ability to adapt and increase resilience with regards to economic and food security. However, there continues to be a need for greater action on their water-related impacts beyond drought, such as floods and sea-level rise, both in terms of increasing awareness of the risks that are present and in integrating prevention and mitigation activities with policy efforts on climate adaptation.

## ***4.2 International policy frameworks***

This section details EU and UN policy frameworks in relation to the nexus between climate change, water and human security, and which have an impact on, or can provide support to, the effectiveness of national policy frameworks in the Middle East and Mediterranean region.

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<sup>107</sup> Marvine Howe, Morocco: The Islamist Awakening and Other Challenges, 1st ed. (Oxford University Press, USA, 2005), 16–17.

<sup>108</sup> The PMV for example has designed a strategy for the integration of climate change through which it intends to support adaptation measures in pilot projects.

<sup>109</sup> This is primarily carried out through the 'Adaptation au changement climatique au Maroc: Pour des Oasis résilientes' (PACC-Oasis) programme supported by UNDP and the Government of Japan. Royaume du Maroc, Ministère de l'Énergie, des Mines, de l'Eau et de l'Environnement, Département de l'Environnement, "Oasis Au Maroc : L'adaptation Au Changement Climatique," *Oasis Résilientes: L'adaptation Au Changement Climatique*, <http://www.oasisadaptation.com/>.

The EU has no specific policies that address the above linkages. However, its policy approach shows a clear recognition of the likely impacts of climate change on water resources and the need for its framework to adapt to these changes. The EU has also made statements recognising the potential implications that these impacts will have on conflict and human security. However, there are as yet no policies which have been developed to address this issue. The UN's policy framework is different to that of nation states in that it does not accord legislative power to its bodies. The UN can however provide support to the effectiveness of national policy frameworks through awareness-raising, funding, support for information-sharing, coordination and network-building. Furthermore, it can provide frameworks within which states can agree to binding commitments.

## 4.2.1 European Union

While the EU has no internal policies which directly focus on the links between climate change, water and human security, several policies highlight relevant aspects of this nexus.<sup>110</sup> Future plans to reform the Common Agricultural Policy place an emphasis on food security, the environment, and adapting to climate change through water saving technologies and flood prevention and management.<sup>111</sup> The EU's 2009 White Paper on climate change adaptation notes that climate change may have security implications which should be considered and integrated into existing tools such as conflict prevention mechanisms, security sector reform and migration policy.<sup>112</sup> The White Paper also highlights particular need for adaptation in agriculture,<sup>113</sup> health<sup>114</sup> and water<sup>115</sup>, all of which contribute to aspects of human security (although this is not explicitly stated). Nevertheless, most interviewees agreed that climate change adaptation in the EU is still very much in the early stages of development and that more must be done to share

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<sup>110</sup> Interviewees found there to be little interest or political will from the Commission to take climate change, water and human security forward as an interconnected issue. What is more, there appeared to be a lack of agreement and clarity on where competence for such issues would lie as well as how such an approach would be applied in practical terms.

<sup>111</sup> European Commission, "Commission Communication: 'The CAP Towards 2020: Meeting the Food, Natural Resources and Territorial Challenges of the Future' {COM(2010)672 Final} 18 November 2010.", <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0672:FIN:EN:PDF>. Council, "Council Regulation (EC) No 74/2009 of 19 January 2009 Amending Regulation (EC) No 1698/2005 on Support for Rural Development by the European Agricultural Fund for Rural Development (EAFRD)", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=L:2009:030:0100:0111:EN:PDF>.

<sup>112</sup> European Commission, "Commission White Paper: 'Adapting to Climate Change: Towards a European Framework for Action' {COM(2009)147 Final} 1 April 2009<", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0147:FIN:EN:PDF>.

<sup>113</sup> European Commission, "Commission Staff Working Document Accompanying the White Paper - Adapting to Climate Change: Towards a European Framework for Action - Adapting to Climate Change: The Challenge for European Agriculture and Rural Areas {COM(2009) 147 Final}", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2009:0417:FIN:EN:PDF>.

<sup>114</sup> European Commission, "Commission staff working document accompanying document to the White paper - Adapting to climate change: Towards a European framework for action Human, Animal and Plant - Health Impacts of Climate Change {COM(2009) 147 final}", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2009:0416:FIN:EN:PDF>.

<sup>115</sup> European Commission, "Commission Staff Working Document Accompanying the White Paper - Adapting to Climate Change : Towards a European Framework for Action Climate Change and Water, Coasts and Marine Issues {COM(2009) 147 Final} {SEC(2009) 387} {SEC(2009) 388}", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2009:0386:FIN:EN:PDF>.

information on existing adaptation measures between Member States as well as promote and develop adequate response measures within the EU.<sup>116</sup>

The Water Framework Directive (WFD)<sup>117</sup> of 2000 does not explicitly refer to climate change; however, more recent documents such as the Common Implementation Strategy for the WFD have addressed this issue at length.<sup>118</sup> The Common Implementation Strategy highlights that the cyclical and step-wise approach of river basin management set out under the WFD makes this policy well-suited to adapting to climate change impacts. The WFD also supports a human security dimension due to its focus on ensuring the quality and long term sustainability of water for human populations.<sup>119</sup> However, one interviewee remarked on the fact that the WFD places emphasis on quality rather than quantity, and that MS' autonomy on implementation of the policy creates a risk that river basins may over-deliver water even in times of scarcity.<sup>120</sup> The Floods Directive recognises the potential that floods have to cause adverse impacts to aspects of human security, with a focus on human health, and requires MS to take climate change impacts on flooding into account.<sup>121</sup> Drought policy is somewhat underdeveloped in the EU and there is no dedicated Directive in same way as for Floods. However, the Communication on Droughts and Water Scarcity and its Follow-up Reports recognise the growing stress on water resources and the role that climate change plays in increasing this stress. The EU is aware that there are shortcomings in its water policy and is currently undertaking a large review which will lead to the proposal of a new Blueprint for Europe's Water. The Blueprint, scheduled to be published by the end of 2012, is hoped to help lead towards the creation of a more appropriate framework to deal with future water challenges. This will include climate change, but not specifically conflict or human security.

With regards to external policy, the EU has intermittently made high-level statements regarding the potential impacts of climate change on (human) security.<sup>122</sup> However, beyond these

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<sup>116</sup> Several interviewees pointed to the CLIMATE ADAPT portal with a new climate adaptation clearinghouse and information centre (launched in March 2012) which they hoped would provide a useful framework for sharing adaptation measures and lessons learned.

<sup>117</sup> European Parliament and Council, "Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0060:20090625:EN:PDF>.

<sup>118</sup> European Communities, "Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance No 24 - River Basin Management in a Changing Climate.", 2009, [http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework\\_directive/guidance\\_documents/management\\_finalpdf/\\_EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/management_finalpdf/_EN_1.0_&a=d).

<sup>119</sup> European Parliament and Council, "Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy."

<sup>120</sup> Personal communication, EU official working on environmental issues.

<sup>121</sup> European Parliament and Council, "Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the Assessment and Management of Flood Risks (Text with EEA Relevance)", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:288:0027:0034:EN:PDF>.

<sup>122</sup> European Commission and High Representative, "Climate Change and International Security" (Council Document 7249/08, March 3, 2008).; High Representative, "Climate Change and Security: Recommendations of the High Representative on Follow-up to the High Representative and Commission Report on Climate Change and International Security (S412/08)18 December 2008",

statements, no concrete policies have been adopted which tackle climate change impacts on water, human security or conflict in a comprehensive manner. The one regional project which has attempted to address these issues is the Strategy for Water in the Mediterranean (SWM).<sup>123</sup> Nevertheless, this process has stalled due to its over-politicisation, and as yet the strategy has not been adopted.<sup>124</sup> Furthermore, an interviewee commenting on this issue felt that there was little interest in continuing with these discussions, with countries in the Mediterranean currently favouring bilateral over regional forms of cooperation.<sup>125</sup> The European Neighbourhood Policy (ENP) is one of the EUs key mechanisms for this bilateral cooperation and is informed by mutual commitment to common values.<sup>126</sup> Amongst other actions, the ENP supports partner countries to mainstream climate change into policies<sup>127</sup> as well as enhancing sectoral cooperation for the environment and for improving resilience to climate impacts.<sup>128</sup> In the southern part of the Neighbourhood, the EU has offered to engage in partnership dialogues on migration, mobility and security with Egypt, Morocco and Tunisia.<sup>129</sup> However, reflecting similar shortcomings in the EUs internal policy, ENP projects were also noted to be in need of improvement in terms of their consideration of drought as well as the links between water and climate change adaptation.<sup>130</sup>

The EU has also developed a Global Approach to Migration and Mobility (GAMM).<sup>131</sup> The Global Approach considers that addressing environmentally induced migration – including by means of adaptation to the adverse effects of climate change – to be part of its approach. Although human security is not mentioned specifically, the GAMM does take a migrant-centred approach to the

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<http://register.consilium.europa.eu/pdf/en/08/st16/st16994.en08.pdf>; Foreign Affairs Council, "Council Conclusions on EU Climate Diplomacy 3106th Foreign Affairs Council Meeting Brussels, 18 July 2011", [http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/EN/foraff/123923.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/123923.pdf).

<sup>123</sup> Maria Berglund and Christoph Stefes, "European Policies Regarding Water Policy, Climate Change and Security in the MENA," in *Review of International and National Policies and Institutional Frameworks*: (Ecologic Institute, Berlin, Germany., 2011), [http://ecologic.eu/download/projekte/2700-2749/2703/CLICO\\_%204\\_1\\_main\\_report\\_plus\\_annex.pdf](http://ecologic.eu/download/projekte/2700-2749/2703/CLICO_%204_1_main_report_plus_annex.pdf).

<sup>124</sup> Global Water Intelligence, "Israel Blocks Mediterranean Water Strategy," *Global Water Intelligence*, April 2010, <http://www.globalwaterintel.com/archive/11/4/general/israel-blocks-mediterranean-water-strategy.html>.

<sup>125</sup> Personal communication, Andrew Murphy, DG Environment.

<sup>126</sup> The recent ENP review, sets out a policy of 'bilateral differentiation' ('more for more') increasing the incentives (economic integration, mobility of people and financial assistance) for countries who share the EUs values on human rights, democracy and rule of law and are willing to embark on political reforms.

<sup>127</sup> European Commission, "Communication from the Commission to the European Parliament and the Council of 12 May 2010 - Taking Stock of the European Neighbourhood Policy [COM(2010) 207 Final - Not Published in the Official Journal].", n.d., <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0207:FIN:EN:PDF>.

<sup>128</sup> High Representative and European Commission, "A New Response To A Changing Neighbourhood A Review Of European Neighbourhood Policy: Joint Communication by the High Representative of The Union For Foreign Affairs And Security Policy and the European Commission. 25 May 2011.", [http://ec.europa.eu/world/enp/pdf/com\\_11\\_303\\_en.pdf](http://ec.europa.eu/world/enp/pdf/com_11_303_en.pdf).

<sup>129</sup> Ibid.

<sup>130</sup> Personal communication, Andrew Murphy, DG Environment

<sup>131</sup> European Commission, "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. The Global Approach to Migration and Mobility [COM(2011)0743 Final]", <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0743:FIN:EN:PDF>.

design of policies in order that these respond to the aspirations and problems of the people concerned. In addition, migration and mobility are said to be embedded in the broader political, economic, social and security context and the GAMM recognises the need to accompany and protect migrants along their migratory route.

Beyond the European Neighbourhood, the EUs cooperation with third countries is primarily framed by Country Strategy Papers.<sup>132</sup> These may include adaptation to climate change, water management, human security and conflict prevention. However, the EU must pay due regard to its commitments to Aid Effectiveness<sup>133</sup>, and thus any work on these issues will only be explicit if so agreed with and requested by the recipient country.<sup>134</sup>

## 4.2.2 United Nations

Although the UN policy framework does not give its bodies legislative powers, the UN carries out other activities which are of value to national policy frameworks and can help to increase their effectiveness. These activities include awareness-raising, funding, support for information-sharing, coordination and network-building. Furthermore, the UN can provide frameworks within which states can agree to binding commitments. The UN policy framework covers a wide range of issues that are relevant for the nexus between climate change, water, human security and conflict. In addition to programmes which address these issues directly, numerous initiatives address related aspects including inter alia human development, poverty, health, food security, economic development, disaster risk reduction. The UN Development Program (UNDP) integrates climate resilience into its national planning and poverty reduction efforts. UNDP also works in conjunction with the UN Environment Programme (UNEP) on certain programmes to provide technical and financial assistance for climate adaptation, including the joint Poverty-Environment Initiative covering the nexus between development and environment.<sup>135</sup> In 2010, WHO and UNDP launched the first global project on public health adaptation to climate change.<sup>136</sup> The International Organization for Migration (IOM) considers how climate change may act as a driver for accelerated global migration and works to assist populations migrating

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<sup>132</sup> Country Strategy Papers are bilateral agreements between the EU and third countries which set out the strategic framework for cooperation under the European Development Fund (the EUs main instrument for providing aid for development cooperation) and which target three key areas on which cooperation with that country should focus.

<sup>133</sup> The Paris Declaration on Aid Effectiveness (2006) and the Accra Agenda for Action (2008) highlight five fundamental principles for making aid more effective: ownership, alignment, harmonisation, results-orientation, and mutual accountability of donors and recipients. OECD, "The Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008)", 2008, <http://www.oecd.org/dataoecd/30/63/43911948.pdf>.

<sup>134</sup> As part of the Country Strategy Paper, the country in question and the EU define and agree upon three core areas on which support and cooperation will be focused.

<sup>135</sup> UNDP – UNEP Poverty Environment Initiative. <http://www.unpei.depiweb.org/who-we-are/pe-initiative.html>. Accessed 28 February 2012; *Mainstreaming Adaptation to Climate Change into Development Planning: A Guidance Note for Practitioners*. UNDP-UNEP Poverty-Environment Initiative. 2010.

<sup>136</sup> Climate Change Adaptation to Protect Human Health. <http://www.who.int/globalchange/projects/adaptation/en/index.html>. Accessed 28 February 2012.



due to climate and environmental causes and facilitate migration as an adaptation strategy where it does occur.<sup>137</sup>

Over the past decade, climate change considerations have been mainstreamed into the work of many organisations and programmes within the UN system. The cornerstone of the UN's work on climate change is the UN Framework Convention on Climate Change (UNFCCC)<sup>138</sup> which, in addition to mitigation goals, commits Parties to preparing for and facilitating climate adaptation and to helping provide funding and technology transfer to developing countries. Through one of the UNFCCC's chief mechanisms under the Adaptation Framework,<sup>139</sup> Least Developed Countries agree to create National Adaptation Programmes of Action to assess and identify vulnerabilities, adaptation needs and priorities and to qualify for funding. Other UN institutions assist in implementation of UNFCCC and its affiliate programs and funds, as well as promote their own additional adaptation measures and initiatives.

Attempts to take up climate change as part of its security agenda through the Security Council or General Assembly have been unsuccessful; efforts to add climate change to the Security Council's agenda have largely been promoted by EU member states, but have met resistance by other states that feel the issue more appropriately falls under the remit of the UNFCCC. More successful are less politicised policies such as the Environment and Security Initiative (ENVSEC)<sup>140</sup>, a partnership between UN and external institutions that takes an integrated approach to environment and security, beyond climate change. ENVSEC seeks to reduce the likelihood for environmental change to exacerbate threats to human security, by identifying environment and conflict hotspots, raising awareness, building capacities and supporting action on security-relevant environmental problems. Programmes like the GEF Focal Area on International Waters<sup>141</sup> funds initiatives to improve collaborative management for transboundary water systems, with the aim of preventing conflicts, supporting sustainable resource use and reducing water-related cross-border tensions. The United Nations Educational, Scientific and Cultural Organisation's (UNESCO) Potential Conflict to Cooperation Potential (PCCP) programme facilitates multi-level and interdisciplinary dialogues to achieve peace and cooperation in transboundary water management.<sup>142</sup>

Water is a cross-cutting issue throughout the UN, where over 30 programmes and agencies work on water. UN-Water endeavours to strengthen coordination and coherence among UN entities

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<sup>137</sup> See for an overview the IOM's website on migration, climate change and the environment, <http://www.iom.int/jahia/Jahia/pid/2068>

<sup>138</sup> United Nations Framework Convention on Climate Change. 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992).

<sup>139</sup> Cancun Adaptation Framework. United Nations Framework Convention on Climate Change. [http://unfccc.int/adaptation/cancun\\_adaptation\\_framework/adaptation\\_committee/items/6053.php](http://unfccc.int/adaptation/cancun_adaptation_framework/adaptation_committee/items/6053.php). Accessed 28 February 2012.

<sup>140</sup> Environment and Security Initiative, <http://www.envsec.org/index.php?lang=en>

<sup>141</sup> GEF International Waters Strategy. [http://www.thegef.org/gef/IW\\_GEF5\\_strategy](http://www.thegef.org/gef/IW_GEF5_strategy). Accessed 28 February 2012.

<sup>142</sup> <http://webworld.unesco.org/water/wwap/pccp/>

dealing with freshwater and sanitation, and its Thematic Priority Area on Water and Climate Change seeks to strengthen the water-climate nexus.<sup>143</sup> The UN has promoted cooperation on transboundary water sources through high-level treaties like the 1992 UN Economic Commission for Europe's (UNECE) Convention on the Protection and Use of Transboundary Watercourses and International Lakes<sup>144</sup> and, the 1997 UN Convention on the Non-Navigable uses of International Water Courses<sup>145</sup>, which, however, has not yet entered into force. The UNECE Convention is increasingly bringing human security and adaptation dimensions into its work. Other water-related programmes, such as UNESCO's FRIEND and GRAPHIC hydrological databases, focus on scientific assessment and modelling.

The UN system has a number of initiatives addressing disaster risk reduction implications of climate change. These include the Hyogo Framework for Action Plan (2005-2015),<sup>146</sup> which aims to support countries in reducing underlying risk factors, including from climate variability, in sector development planning and programmes and post-disaster situations. UNEP's Disaster Risk Reduction<sup>147</sup> sub-programme seeks to understand and reduce the impacts of environmental degradation, emphasising the role of resource management in reducing the risk of conflict and covering integration of climate change considerations into disaster risk assessment. Other programmes under UNEP also cover emerging environmental threats and vulnerabilities, including those caused by climate change.

Throughout the UN system, there is no consistent usage of the term "human security" or position on it. The UN Office for the Coordination of Humanitarian Affairs (OCHA)'s Human Security Unit (HSU)<sup>148</sup> is dedicated specifically to human security and tasked, inter alia, with mainstreaming the concept within the UN. The definition of human security used by the HSU is broad, defined as fundamental freedom from fear and want, and there is no specific reference to water or climate change. The associated UN Trust Fund for Human Security (UNTFHS)<sup>149</sup>, founded in 1999, seeks to provide support to projects that translate the concept of human security into concrete activities, focusing on the root causes of vulnerabilities.

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<sup>143</sup> UN Water, Thematic Priority on Water and Climate Change, <http://www.unwater.org/TFclimate.html>

<sup>144</sup> UN Economic Commission for Europe Convention on the Protection and Use of Transboundary Watercourses and International Lakes. 1936 UNTS 269; 31 ILM 1312 (1992).

<sup>145</sup> Convention on the Law of Non-navigable Uses of International Watercourses, G.A. Res. 51/229, U.N. GAOR, 51st Sess., U.N. Doc. A/RES/51/229 (1997), *reprinted in* 36 I.L.M. 700 (1997).

<sup>146</sup> Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, [www.unisdr.org/wcdr](http://www.unisdr.org/wcdr)

<sup>147</sup> UNEP, Disasters and Conflicts, <http://www.unep.org/dnc/Introduction/DisasterRiskReductiondetailed/tabid/55003/Default.aspx>

<sup>148</sup> Human Security Unit, <http://ochaonline.un.org/humansecurity/tabid/2212/default.aspx>

<sup>149</sup> Human Security Unit – United Nations Trust Fund for Human Security. <http://ochaonline.un.org/HumanSecurityUnit/tabid/2212/language/en-US/Default.aspx>. Accessed 29 February 2012.

### 4.3 Summary

Whereas predicted climate change impacts are more or less similar in nature in the four case study countries (increased incidence of droughts, increased seasonal variability, increases in floods), their expected socio-economic consequences varied very strongly between countries. There were striking differences in the level of uptake of climate change in the policy processes, which could possibly be an expression of this difference in consequences of predicted impacts.

In the case study countries, the impacts considered most significant related to the intensification of already existing phenomena. In this sense, most of the phenomena that are expected as a result of climate change had policy in place addressing it (e.g. drought policy, disaster preparedness and reduction policy). Climate change was also generally considered as an additional stressor impinging on existing problems (such as food security, water availability), joining the ranks of other issues such as population growth and environmental degradation. Depending on the context, its importance was considered marginal in comparison to existing stressors (an opinion commonly expressed in Israel), as secondary to more important issues such as political and natural factors related to water (Palestine), as important in future but not that much at present, and taking second row to other national challenges such as development (Morocco), or as of central importance and having the potential to disrupt both huge number of livelihoods and national development efforts (Ethiopia).

## 5 Policy framework analysis: effectiveness and insights into the policy cycle

The following section commences with an analysis of the effectiveness of the national policy frameworks detailed above, based on interviewee statements to this purpose. In a next step the support provided by international frameworks to these national policy frameworks is analysed. We proceed to provide some insights into the national policy cycles, based on a comparative analysis, in terms of what factors can be seen to influence the uptake and development of relevant policy through the different steps of the policy cycle: the analysis loosely follows the policy cycle, covering agenda-setting in the policy process, policy formulation and policy implementation respectively. Finally, similar insights are provided for the EU and UN level. As noted above, the EU and UN frameworks are considered in this context in relation to the assistance they can potentially provide to national policy frameworks in the MMES region and their effectiveness.

This report places its focus on **policy frameworks**, i.e. overarching action undertaken or supported by governments and international organizations, which are ‘top-down’ approaches to climate change adaptation. In all case study countries, however, ‘bottom-up’ approaches for adaptation to changing environmental circumstances as well as to climatic variability, exist alongside ‘top-down’ policies. Many of these are informal, unorganised responses, originating from the affected individuals or communities, and without external support. For the sake of completeness, Box 1 (located at the end of section 5.2) presents a brief overview of some adaptation responses encountered in the case study countries.

## ***5.1 Effectiveness of national policy frameworks as perceived by interviewees***

The case study countries have been addressing hydro-climatic hazards over the last decades through different approaches, and with different intensity, and resources. Phenomena such as drought or climatic variability are new for none and policies addressing these changes have already been adopted at different stages in the past. The countries have, to varying degrees, institutions, capacity and policies to address their water-related human security issues, with differences in effectiveness according to the particular threat (e.g. more drought preparedness than flood preparedness). The uptake of climate change adaptation does not necessarily influence the extent to which existing policy frameworks are effective in addressing climate-induced risks to human security and conflict. Rather, given that climate change adaptation is a relatively new field, this so far tends to depend on the pre-existing policy frameworks e.g. on water, besides obvious other factors such as the level of economic development of a country.

Interviewees in Morocco and Israel tended to consider existing policies and approaches to be effective for dealing with droughts and with water scarcity (the primary hydro-climatic hazard) and did not identify any major requirements for new policies. Both countries have adopted approaches with a strong focus on infrastructure, with the aim of increasing their water supply in the long-term. Of the two countries, Morocco is more dependent on agriculture<sup>150</sup>, mainly relying on dams for irrigation purposes, whereas Israel's approach focuses on increasing use efficiency through technology (e.g. very high rates of wastewater reuse in its agriculture) and becoming less dependent on natural water resources by making artificial water available by using desalination plants. However, some (non-governmental) stakeholders in Israel viewed this policy to be unsustainable, because of the different trade-offs associated with desalination (e.g. high energy demand) and because it diverts attention from more efficient management of existing resources.

All in all, most interviewees of both countries did not highlight climate change as a primary water-related risk within their countries or as a driver of change for their water management activities, because they expected the current frameworks to be able to deal with the additional impact of climate change. This shows parallels to most interviewees' estimation of their countries having low vulnerability to droughts or water scarcity. Two Moroccan interviewees highlighted that the country is considered a "champion" in tackling droughts and water management. In the case of livelihoods that are strongly dependent on climate, such as rain-fed

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<sup>150</sup> Despite its relatively modest share of national GDP (around 19%), agriculture is a core sector for Morocco, providing employment to around 40% of the population (Source: World Bank, 2012 Retrieved from <http://data.worldbank.org/indicator/SL.AGR.EMPL.ZS> on 20 May 2012). In Israel, agriculture's share of GDP is around 2%, and employs around 2% of the population (see section 4.1.2).

agriculture farmers, Morocco provides support in drought periods via economic compensation and employment creation measures (such as infrastructure building).

In Ethiopia, the situation is somewhat different in that the country reacted to the threat of climate change by producing various new policies that directly address or indirectly incorporate climate change, making much of the relevant policy quite new. In recent years, the country has seen the development of varied measures and efforts to improve resilience to droughts and to climate change. The vast majority of the country's population is extremely vulnerable to climate events, due to a very strong link between livelihoods and rainfall. Policies aimed at achieving food security in this context are not restricted to water-related measures, but also include wider development approaches such as improving productivity and commercialisation of agriculture, with the aim of improving income and thus household resilience in drought years.

The country has seen strong economic development over the past decade, and there is consensus among stakeholders that there is very considerable political will to achieve progress on these issues, as climate change is seen as a very important threat on many levels (also in line with the generalised perception of the country's high vulnerability to droughts). These two facts are probably the reason for most interviewees being highly optimistic about the policy framework's (future) performance. In sum, in Ethiopia there was also a wide-spread satisfaction with the existing policy framework, which was seen as covering practically all possible areas and actions, as well as with the efforts of the government, which was considered to be "doing everything it can do". This may seem surprising given that there are major food security issues in Ethiopia. However, interviewees tended to assess the effectiveness of the policy framework in their country in terms of their existing realities and constraints, rather than in "absolute" terms.

In these three countries - Morocco, Ethiopia, Israel – flood risks only plays a subordinate role in policy-making so far. It is in this subordinate field that the interviewees from Morocco see policy gaps and potential for improvements, e.g. in flash flood risk management. In Ethiopia, flood issues are recognised and addressed, but come a distant second to the priority of dealing with droughts and food security.

The oPT present a peculiar case, in that their policy framework is not that of an independent sovereign country. As described in section 4.1, there are quite obvious water-related human security issues in the oPT. There is agreement that the existing policy framework is not effective at present in solving these issues, and there is thus an expectation, at least among Palestinian interviewees, that climate change could present an additional negative factor in this regard if the policy framework does not change. However, there are differing views, chiefly among Palestinian and Israeli interviewees, on the reasons for this. The Palestinian narrative tends to emphasise the Israeli occupation as a root cause, and oPT stakeholders presented a reluctance to using the methods of treated wastewater and desalinated water to address water scarcity, because they expected these to detract attention from their claim to rights for freshwater resources. On the other side, the Israeli narrative tends to point to a lack of political will among Palestinian policy-makers to accept technological solutions (such as desalination) as a way to increase available water and resolve human security issues.

Summarising, interviewees of Israel and Morocco tended to see their policy framework as effective and felt the countries were adequately prepared for the most important hydro-climatic hazards; hence, they tended to see climate change as only exacerbating already existing (and already managed) threats. Ethiopian interviewees tended to see climate change as an extremely significant threat, but also considered the existing policy framework as effective because of the strong improvements in the recent past (envisaged to continue in the future) in addressing the population's vulnerability to the threats. (However, this sometimes related rather to the way that the policies were formulated on paper, as these had not yet been fully implemented.) With regard to the policy-framework in the oPT, a lack of effectiveness in addressing human security issues was clearly identified, even though the reasons for that are contested and intimately related to the specific situation of the oPT and the political conflict with Israel.

### Box 1: 'Bottom-up' adaptation approaches

This report focuses on 'top-down' approaches to climate change adaptation, but it should be noted that in all case study countries, 'bottom-up' approaches for adaptation to changing environmental circumstances as well as to climatic variability, exist alongside 'top-down' policies. As described in section 2, these more *ad hoc* adaptation activities are equally important for overall adaptation efforts and interact in various ways with the more formal policies and influence their effectiveness in different ways.

Some examples from our case studies include:

**Seasonal, temporal or permanent migration:** Faced with the prospect of crop failure, farmers try to generate income by migrating to work on other farms or businesses in urban centres, often leaving their families behind. Others permanently relocate to a new location where living conditions are expected to be better. This phenomenon was referred to in the cases of the oPT, Morocco, and Ethiopia.

**Use of support networks:** Individuals, families and communities rely in bad times on social networks of support, rather than on support provided by the state. For example, in Morocco extended families were observed to support members of the family, e.g. those living in urban centres supported others in more rural areas. At the community level among pastoralist communities in Ethiopia, a system of exchange of favours in bad years exists, e.g. in the form of pasture-sharing.

**Income diversification:** Farmers will try to produce and sell alternative goods, such as charcoal from forest wood.

In the absence of effective policies and in situations where people do not want to or are not able to make use of bottom-up solutions, people were also observed to simply try to survive with less. For example, in regions with a strong history of famine in Ethiopia, food shortages are sometimes dealt with by reducing the number of family mealtimes per day. In regions with very low availability of water in the oPT, people simply consume less water. Obviously, where people seem themselves forced to reduce their consumption of basic goods as food and water, human

security is not guaranteed, pointing to the importance of appropriate policies to improve this situation.

## ***5.2 Analysis of national policy cycles***

The preceding section has presented overall insights on the effectiveness of the existing policy-frameworks, in the opinion of the interviewees. In this section, we look more in-depth at the different stages of the national policy-cycle and factors influencing the effectiveness of the relevant policy-frameworks across the different stages.

### **5.2.1 Agenda setting/problem definition**

Practically all water-related impacts of climate change in the case study countries are no new phenomena but rather changes (usually intensification) in the occurrence of historically well-known phenomena like floods, droughts, climate variability (e.g. rain patterns), invasive species, and even temperature increase. (The one major exception is sea-level rise.) In consequence, there are usually policies in place to address most of these phenomena. The same is valid for policies addressing some of the human security challenges of these phenomena, such as disaster response or food aid policies. Nonetheless, as discussed in more detail above, the case study countries exhibited different levels of uptake of climate change adaptation initiatives in their existing policy frameworks.

It must also be noted that international institutions were considered to have influenced national policy-frameworks on adaptation at the stage of agenda-setting/problem definition. In Ethiopia, various interviewees pointed out that it was an initiative of prominent individuals and donor organisations which managed to place climate change adaptation at the centre of the government agenda. OXFAM America was furthering the initiative, which managed to enlist the Minister of Agriculture as its head. Within two years after climate change adaptation had been taken up in the government agenda, several policy processes were initiated, and the Ethiopian Prime Minister has presided the African group of countries in the climate negotiation processes since August 2009. In a very similar vein, Palestinian interviewees highlighted that climate change had been brought to the political agenda in Palestine mainly thanks to external interventions, mainly the UNDP, in the face of initial reluctance among policy-makers, who saw this issue as diverting attention from the “real issues”, i.e. the consequences of Israeli occupation. The UNDP was also an important actor behind the development of the Palestinian adaptation strategy.<sup>151</sup>

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<sup>151</sup> Whereas these examples point to successful uptake of an issue thanks to external intervention, Moroccan interviewees pointed to a less successful case (unrelated to climate change): Some interviewees considered that the uptake of environmental considerations in the country’s legislation had occurred in order to satisfy international requirements (e.g. because of its being a necessary requirement for access to international funding), but had scarcely any real results on the ground.

In addition to the influence of international actors on national agenda-setting, the speed with which climate change adaptation is taken up on the agenda and incorporated into the policy frameworks seems to correlate with two main factors: first, socioeconomic vulnerability to hydro-climatic changes, and second, how climate change can be integrated into existing political agendas.

First, a correlation can be observed between the vulnerability of both the population and of the economy as a whole to the impacts of hydro-climatic events such as droughts, and the policy efforts invested. Ethiopia is very exposed to the impacts of climate change, with close to three quarters of the population depending directly on rainfall for their livelihoods, and with the agricultural products they produce (such as coffee) being a centrepiece of the economy and the country's development agenda (agriculture represents approx. 50% of GDP)<sup>152</sup>. Crop failure or cattle loss due to droughts have devastating effects on the population's food security, on the economy as a whole, and on the development process being pushed by the government through a strong impact of climate change on the country's economic output. The Ethiopian government has moved very fast in the incorporation of climate change adaptation into its policy, using available government and donor capacity to mainstream climate change adaptation into various overarching and sectoral policy frameworks. In the words of an interviewee: "The policy that is now in place in Ethiopia is extremely good, because of the direct relationship between livelihoods and climate."<sup>153</sup>

Morocco, in contrast, has comparatively high levels of water security due to its dam infrastructure. Although a significant proportion of the population depends on rain-fed agriculture, the sector does not contribute as importantly to the economy as in Ethiopia, (agriculture represents only 15% of GDP)<sup>154</sup> and the economy as a whole is therefore not as vulnerable as Ethiopia's to hydro-climatic impacts. Interviewees highlighted compensation and alternative employment schemes that are made available for smallholder farmers in drought years. The country's cash crops farms are mostly irrigated, and thus benefit from the high level of water availability provided by reservoirs. The economy as a whole is also significantly more developed than Ethiopia and average households have more economic resources to absorb external impacts on their livelihoods. This seems to correspond with the fact that there has been no significant push to address climate change adaptation in national policies. It seems that ensuring the human security of rural populations depending on rain-fed agriculture is not as strong a driver for uptake of climate change adaptation as national economic interests. In addition, Moroccan government officials highlight that economic development will bring along the means to result in the resilience of the society (due to improved resources and incomes,

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<sup>152</sup> World Bank Data and Statistics, value for 2010 (includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production). <http://data.worldbank.org/topic/agriculture-and-rural-development>, indicator "Agriculture, value added (% of GDP)". Accessed on 29/06/2010

<sup>153</sup> Personal communication, Kassu Kebede, World Food Programme

<sup>154</sup> Ibid.



presumably) necessary to come to terms with the impacts of climate change on livelihoods “on its own”, so to say. In addition, because of the difficulties in separating between “normal” climate events and those “caused” by climate change and thus the absence of figures, some Moroccan interviewees highlighted that it is hard to present a rationale for climate change adaptation measures that take up scarce public resources.

Compared to Ethiopia, Israel is at the opposite end of the vulnerability spectrum. Israel’s case is unique in that water availability is becoming less and less independent on rainfall or natural hydrological variations due to the desalination capacity installed or being constructed and high levels of the reuse of wastewater for agricultural purposes.<sup>155</sup> These facts seem to correspond with the climate change adaptation only very recently being taken up in a significant manner in the Israeli policy process; climate change was not considered very relevant as a significant threat in the Israeli context by interviewees.

The EU, with its relatively high levels of human security and economic development, also has more resilience to the impacts of hydro-climatic events, and this again correlates with the climate change adaptation agenda moving forward comparatively slowly. The rationales for addressing climate change adaptation are typically either environmental in nature (e.g. ensuring biodiversity in farmlands, ensuring water availability for fauna in drought conditions), or economic in a long-term, strategic sense (e.g. aiming to reduce economic impact of floods and droughts). However, obviously the expected physical impacts of climate change are also expected to be less far-reaching and negative within many regions of the EU, than in water-scarce countries like Morocco, Israel/oPT or Ethiopia.

To summarise, the prominence of climate change adaptation on the national agendas, and the extent and speed with which relevant policy has been formulated or is being formulated, seem to correlate with how directly exposed and how much a country or region “has to lose” (both economically and in terms of livelihoods and lives) from climate change impacts in the short to medium term. Efforts have been more sluggish in regions where climate change impacts are only considered to be significant in a longer-term perspective (e.g. Morocco, EU). Next to no movement is observed in the case of Israel, which in terms of availability, is close to unaffected by climatic changes.

Secondly, uptake of climate change adaptation in national policy frameworks also shows correlation with how climate change interacts with the established political priorities.

In the case of Ethiopia, due to the fact that initiatives that further sustainable development and those that further adaptation present huge overlaps, and because climate change adaptation is seen as means to avoid setbacks to the economic development in the country, the uptake of

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<sup>155</sup> Obviously, this kind of approach, however, comes with a price-tag (i.e. is only realistic with a certain level of economic development, which Israel has) as well as with environmental side-effects (e.g. in the form of increased CO<sub>2</sub> emissions caused by desalination plants).

climate change adaptation was comparatively quick and painless. Taking up climate change adaptation could even be the source of new funding: at the time climate change adaptation was being pushed in the country it promised to be a topic for which a significant amount of funding was available at the international level – even though nowadays there is less optimism among interviewees on this point. In Morocco there is much less alignment between government goals such as economic development and adaptation goals, and climate change adaptation has not become as prominent on the political agenda in the same way as in Ethiopia. Interviewees voiced the opinion that development is the real challenge, and that issues such as climate change adaptation are best postponed because they will be more easily addressed in the future, once a better economic situation has been achieved. In the case of the oPT, with the conflict over water resources interacting with the complex political situation in the region, the uptake of climate change on the political agenda is more complicated. Broadly speaking, the Palestinians sustain that they currently do not receive the equitable share of natural water resources from Israel that they are entitled to, and see a bigger share of natural water (e.g. groundwater) as their due rights. Thus, pushing for receiving a larger allocation of existing water is seen as a solution to water scarcity and climate-induced changes, rather than focusing on adaptation based on technical measures. The reticence of Palestinians to address water scarcity by focusing on technical approaches such as wastewater reuse and seawater desalination seems due to their perception that thus increasing their water supply would undermine their case in the negotiations for an increased share of natural water resources. Israel, on the other hand, is in favour of implementing these pragmatic solutions, and blames the oPT for not moving on this front and alleviating its population's water scarcity issues. This has led to a rather slow uptake of climate change in the agenda of the oPT, which was in addition driven by the UNDP, as well as ongoing resistance to its uptake by some actors.

To sum up this second point: climate change adaptation seems to play a secondary role in the policy agendas of the case study countries. The question of its uptake, and of the extent and form of its uptake, depends on how climate change interacts with existing agendas and priorities. Uptake appears to be fostered either by climate change adaptation having strong positive overlaps or synergies with existing agendas, or by climate change impacts being perceived as a threat to achieving existing agendas (such as certain development results). Conversely, if climate change adaptation goes against existing agendas (e.g. of achieving an equitable share of water resources for the oPT), the chances of uptake, including discursive uptake, seem slim, and climate change may be seen as an undesired distraction from the real issues affecting the country.

Generally, the agenda-setting/problem-definition stage of the policy-cycle did not seem to pose major issues (apart from in the very specific case of the oPT), in the perception of interviewees, concerning the adoption of policies to address the risks addressed in this study.

## **5.2.2 Policy formulation/decision-making**

With regard to policy-formulation/decision-making a need for improvements was seen in the area of scientific evidence for informing policy-making by interviewees from the EU, the UN and

Ethiopia in particular. Natural science baseline knowledge has been mentioned as missing for some EU policy initiatives (e.g. water accounting data). UN interviewees highlighted data issues for certain topics and regions that limit understanding of risk and development of responses to protect populations. In Ethiopia, limited domestic research capacity was mentioned as a general challenge and the need for specific research for the Ethiopian context (e.g. seed and agricultural practices performances under Ethiopian conditions) was highlighted. Various interviewees also highlighted the positive impact of economic research, which can make the case for certain interventions. In the case of Europe, interviewees highlighted that research linking water with GDP (using methodologies such as ecosystem services valuation) can be a powerful tool to enable policy uptake, by providing economic arguments or making an economic case for a certain response.

Another particular hurdle at the stage of policy formulation was mentioned both in the high-income EU and low-income Ethiopia, and qualified as a particular tough challenge: the integration or mainstreaming of water and adaptation policy into sectoral policies. The complexity of ensuring the alignment of policy objectives and of achieving the uptake of water and adaptation issues in sectoral policies was frequently highlighted. Unclear competences, such as in the case of the EU, seemed to be one particular issue in this regard.

In the Israeli/Palestinian case, problems and blockades in the decision-making process imply problems for implementation of the joint policy-framework on water, as well as policies with the oPT. Here, possible environmentally efficient water-related measures and projects often do not get implemented, because both sides are reluctant or not in a position to do so, even though for different reasons: According to the Palestinian view, the Israeli side is often unwilling to approve water-related projects and measures proposed by the Palestinian side (e.g. drilling of wells), and without that approval the Palestinian Authority cannot take these measures. On the other hand, the Israeli side holds the view that the Palestinian Authority is unwilling to take some measures that it could actually take to improve the water availability situation in the oPT (such as improving the efficiency of networks within the oPT).

Moroccan interviewees mentioned that policy formulation frequently responded to international policies and frameworks, and that in this way many national plans and programmes were produced, e.g. by the focal points of these agreements. However, interviewees also mentioned gaps between policies and their actual implementation (see sections 5.2.3 and 5.3.3). Interviewees' comments seemed to suggest that it was this kind of policy (i.e. developed in response to international obligations) that ends up seeing less than perfect implementation.

### **5.2.3 Policy implementation**

Policy implementation, in turn, posed problems in particular in Ethiopia, a least-developed country. Also, major obstacles on policy implementation existed the oPT, which is, however, at

least partially related to the lack of full sovereignty of these territories and the restrictions on policy implementation that the Israeli occupation entails.

Ethiopian interviewees provided eloquent examples of the challenges of implementing climate change adaptation policies in a low-income country. The challenges are basically related to human resources capacity of government institutions (particularly medium level officials and regional government), to their technical and institutional capacity (e.g. documentation practices, knowledge management and coordination practices) and to the financial means required to implement changes on the ground.

Similar challenges were mentioned by Palestinian interviewees. Funding limitations were mentioned most extensively, and related to the fact that the territories only have an “observer” status at the UN, and are legally not a fully-fledged state. This would prevent the oPT from accessing international funding for environmental and for climate change adaptation issues. Capacity was also highlighted as a challenge for implementation. Both topics were considered as issues where international donors could provide substantial help.

Moroccan interviewees also highlighted human resources capacity as a challenge for implementation. Rather than lacking technical capacity (which interviewees saw as available in the country), however it was soft skills (e.g. communication, conflict resolution) and planning skills (e.g. river basin management planning) that were considered lacking.

A different implementation issue in Morocco was the perceived gap between policies on paper and their on-the-ground implementation. This was mentioned as an issue for different policy areas. The enforcement of environmental regulations in the agricultural sector was highlighted as being very deficient; the cause behind this would be the unwillingness of the government to negatively affect foreign and local investors’ bottom line by enforcing policy that makes Morocco’s agricultural sector economically less attractive. A similar problem would be the construction of water treatment facilities. Here, however, the resistance to implement would come from local authorities, who would be unwilling to spend scarce resources on this issue. For these topics, it seems to be a lack of clear political will that is creating this gap between policy and its implementation.<sup>156</sup> Of all the case studies, a challenge particular to Ethiopia, but probably valid for many less-developed countries, was the coordination of international actors such as donors and international agencies. Being one of the world’s least developed countries, Ethiopia has a huge number of donors, international institutions and other international organisations such as NGOs implementing projects on the ground. The documentation of efforts, avoiding their duplication, and ensuring the exchange of experience among donors were challenges mentioned. In the country’s water sector positive results were achieved by establishing quarterly coordination meetings between authorities and all relevant actors in the water sector.

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<sup>156</sup> Interviewees from the EU / UN level also mention this gap; see section 5.3.3

### ***5.3 Analysis of international level contributions to national policy cycles***

This section summarises interviewees' opinions on the contributions that the international level (UN/EU) can provide to national policy frameworks. The analysis again loosely follows the different steps of the policy cycle.

#### **5.3.1 Agenda setting/problem definition**

Interviewees' provided concrete examples of international actors placing issues on national agendas. In the oPT, interviewees highlighted the role that UNDP played in the uptake of climate change adaptation; similarly, in Ethiopia OXFAM played a significant role in this same process. In the case of Morocco, participative approaches were mainstreamed into water management approaches thanks to the intervention of international actors such as the World Bank; however, interviewees reported mixed results ("implementation on paper").<sup>157</sup>

On the topic of the EU, interviewees felt that strong EU environmental policies have helped to impact and influence environmental policies in neighbouring countries in a positive way. The EIB has guidelines stating that the EIB does not finance projects that give rise to conflicts or intensify existing conflicts and the Bank takes into account that a number of countries where it operates face difficult post-conflict recovery and reconstruction efforts. Furthermore the ENP now emphasises a 'more for more' principle, providing extra financial support to countries that commit real meaningful policy reform, including in the areas of environment and security.

However, interviewees highlighted the tendency of both UN and EU institutions to focus on short-term issues. One interviewee at EU level identified a past tendency within the EU to focus on issues of shorter-term urgency, and on crisis management, rather than addressing the long term causes of conflict which could include climate change and its impacts on rural communities or populations movement.<sup>158</sup> Similarly, a frequently mentioned weakness of the UN's approach was a lack of consideration of long-term issues and measures. A tendency to react to short-term climatic and environmental events instead of to slow-moving, less evident changes, like drought or sea-level rise, was reported. Funding and implementation often, too, would fail to sustain needed measures and to take preventative steps.

At UN level, where the agenda is ultimately determined by its members, states that "champion" issues, pushing strongly, may be able to help drive them onto the UN agenda, such as Japan, Germany and Canada have done in the case of human security. Champions from within UN agencies were also seen as highly effective for moving issues forward. A factor considered to be useful in raising issues for policymakers was better data, thereby promoting greater certainty in

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<sup>157</sup> Cf. case study reports for Ethiopia, Israel/occupied Palestinian Territories, and Morocco

<sup>158</sup> Personal communication, Gerard Quille, DG External Policies, European Parliament

decision-making. There are parallels with the EU level in this aspect. EU Member States have different levels of interest in the issues of climate change, environment, and human security. A representative from DG Clima noted that some national players, including Germany, Portugal, and the UK, are very active on this front and are keen on driving this agenda forward. They cited in particular Germany's 2011 presidency of the UN Security Council which highlighted the issues of climate change and security, dealing with sea level rise and food security.

The UN's framework lacks coordination between bodies and thematic issues, often acting as a barrier to effectiveness and particularly when dealing with cross-cutting issues such as water or climate change. Institutions largely remain 'silo-ed' according to major sectors and it can be challenging to integrate issues such as agriculture, environment, energy and health to work towards the same goals. However, cross-sectoral integration, including for climate and water, is increasing in the UN's policy framework for human security and conflict. Inclusion of climate change in multi-sectoral policies has expanded rapidly in the last decade as the issue has climbed the policy agenda, while consideration of water-related human security and conflict concerns has a longer history but is being assisted through new efforts such as UN-Water.

Human security is offered by the HSU as a framework that can integrate interlinking issues, although the extent to which the HSU has actually managed to mainstream human security into wider UN activities seems limited. While some UN level interviewees appreciated the potential of a human security framework, most did not see human security as an emerging issue and many felt use of the term 'security' raised sovereignty concerns at the national level. The absence of agreement on human security as a guiding concept does not, however, mean that there are no activities on human security issues in substance, and UN activities otherwise address many links between human security and environmental factors.

In the EU in the past (particularly under the leadership of Javier Solana, as High Representative for the Common Foreign and Security Policy from 1999-2009), the concept of human security enjoyed a rather high level of popularity as evident from the 'Barcelona Report' (A Human Security Doctrine for Europe)<sup>159</sup> as well as specifically in relation to climate change. Despite the appearance of various positioning documents, however, there appears to be little will or movement towards developing policies to address the inter-linkages between climate change, water resources, and human security. From the point of view of an interviewee from the EP working with the Development Committee, human security is of interest, but it has not been discussed in a holistic way because there is no one from within the Committee who is pushing for it as an agenda priority, nor is there a proposal from the Commission dealing with the technicalities of how to address human security and climate change. The Commission was seen to be primarily focused on its Agenda for Change, which includes priorities for food security and climate change. However, the EP interviewee did not see any movement from the Commission

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<sup>159</sup> A Human Security Doctrine for Europe, The Barcelona Report (15 September 2004), Presented to EU High Representative for Common Foreign and Security Policy Javier Solana, Barcelona. The Barcelona Report also makes the case for creating a 15,000 strong civilian populated "Human Security Response Force" and a "Human Security Volunteer Service".

devise further proposals to tackle these issues. Indeed, the lack of initiative in policy development from the Commission may also partially be attributable to a lack of clear-cut competences.

### **5.3.2 Policy formulation/decision-making**

Several interviewees highlighted the political nature of policy formulation, and that international organisations were better off supporting this part of the policy cycle more indirectly. For instance, providing information and strategic guidance and resources, rather than policy suggestions, was considered by UN-level interviewees as less political and better tailored to individual needs. Areas of the UN's work that interviewees felt were most effective focused on scientific and technical information and capacity-building. Scientific assessment, modelling and data sharing are viewed as UN programmatic strengths, although it was noted that there is still a lack of data hindering some initiatives, particularly detailed information on water resources use and modelling for local or regional impacts. Focusing on technical aspects was also seen as a way of promoting collaboration and cooperation over resources.

One interviewee from the EU's DG Clima suggested that if political agreement on an issue is not possible, one can begin at the technical level (e.g. mapping of aquifers in Jordan) which can then act as a support once political decisions are being reached. However, the interviewee also noted that even technical cooperation could negatively impact the balance of power if, for example, it were to reveal that a country was seriously disadvantaged in terms of water supply.

For policy formulation, interviewees highlighted how selection of terminology played a key role. At this stage, decisions on which terms to use and what the implications will be (e.g. human security versus livelihoods or vulnerability) factored in. Interviewees at the UN level also discussed the necessity of not only collaborating between agencies when formulating policies for interlinking issues, but also the additional need for parallel policies to be formulated at the national level.

Where nexuses are recognised and there is momentum for action, finding solutions to interconnected problems can also prove more complicated than simpler, sectoral approaches. Broad discussions of how these themes interlink can often be unproductive as the scientifically complex relationships prove difficult to implement at a broad programme level where UN managers (usually technical staff) prefer to cooperate on finding solutions to concrete problems. In this manner, focusing often returns to development and crisis prevention activities. One interviewee suggested that development agencies prefer to address the issues in a less political, more neutral way, rather than through a human security lens. This often means either through a livelihoods framework, or by using a more piecemeal approach.

EU measures and frameworks such as the WFD were considered useful, but cannot be directly transposed due to the difference in their target audience and where best available technology may be unaffordable for most UN member countries. Although the EU has formulated policies in place, these are not directly transferable due to the wide and differing audience that the UN must address. As a group of developed countries, the issues the EU faces are different than for

developing countries in terms of making room for new urban development, financial and institutional capacities and available technologies. However, UN interviewees mentioned the usefulness of the research that comes out of various EU programmes for policy objectives.

### **5.3.3 Policy implementation**

National level policies and actors were seen as a major determinant of effective policy implementation. Without adequate national or sub-national level institutions, policies and support, implementing policies becomes impaired. At the UN level, steady and sufficient funding is seen as a perhaps obvious but crucial component.

In many cases, the ability of UN agencies to present an integrated climate change programme or policy may be contingent upon the capacity of individual countries and their respective abilities to manage assistance provided for a broad theme like climate change. When a country desires to establish a cross-cutting climate change adaptation program at the national level, coordination with the UN may prove easier. Correspondingly, if there are no country-level efforts to integrate or work in a multidisciplinary way, this can impede UN action.

As noted by interviewees, implementation can suffer from a lack of attention from policy makers resulting in insufficient funds for this aspect of the policy cycle. Further, one interviewee mentioned that some countries “do not take implementation so seriously.” Limitations at the international level exist where countries can’t be compelled to implement non-binding measures or policy programs, or where compliance mechanisms are weak or non-existent. In some cases, the best that can be done is to offer guidance and efforts.

An implementation issue recognized at the country level is that “environmental ministries tend to be fairly weak, if they exist at all.” This not only reduces the capacity to implement environmental measures, but without a strong and clear mandate, can leave crosscutting issues like water “dealt with by a separate entity or it may be lumped under another ministry.” Identifying which bodies have authority and obtaining information can be difficult under this scenario.

One difficulty identified by an interviewee from the European Parliament was that because concepts like climate change and human security are mainstreamed, it can be extremely difficult to understand exactly how these concepts are being integrated into policy and what concrete measures have been taken to implement policies in a coherent fashion. This was found to be a general problem with multi-thematic concepts of this nature.

From the point of view of an interviewee at the UN Human Security Unit, there is not always a full awareness of the human security concept amongst country staff. In the past this may have led to projects being implemented which do not fully operationalise the concept although efforts are now being made to provide more detailed support and guidance for human security projects. An interviewee from the GEF stated that if guidelines were to exist they would either be so broad that that it is questionable whether they would be useful or so specific that they would require a great deal of effort to develop. However, the interviewee from the HSU found that with a few



champion projects it is possible to illustrate how the human security concept can be implemented and operationalised as well as demonstrate its added value.

## ***5.4 Summary***

Surprisingly, and independently of the degree of concern associated with climate change impacts and the efforts invested in addressing them in policy (ranging from very high in Ethiopia to quite low in Israel, due to the different dependency on natural water resources), interviewees expressed a general satisfaction with the effectiveness of national policy frameworks in place. In regions where climate change was viewed with less urgency, the rationale seemed to be that the phenomena (e.g. drought or issues with water availability) were already known and were being mastered quite competently, with only secondary issues requiring attention. In regions where climate change was seen as posing significant threats to human security, the satisfaction seemed to be related to the recent history of serious efforts and strong improvements in addressing the main phenomena. However, many challenges and areas of support were identified by interviewees, mostly relating to policy implementation (particularly funding and human-resources and institutional capacity), but also to policy formulation (e.g. capacity for research-based input into policy).

Regarding the link with conflict, interviewees mainly mentioned hypothetical relationships (e.g. increased migration inducing conflicts over resources) and no concrete examples of conflicts (or increased conflicts) that could be linked with climate change. However, in the oPT and in Ethiopia, the choice of adaptation responses had political relevance in that they affected existing conflicts over contested resources.

At the international level, EU and UN initiatives were considered as having different relevance for the different steps of the national policy cycles. Whereas these two levels were considered particularly valuable in placing issues on the agenda, in the provision of capacity and guidance, and for the funding of initiatives, their possible role in policy formulation was viewed more critically, due to the strong political aspects.

## **6 Demands and expectations for future policy frameworks**

Having looked at the current policy framework in section 4 and examined its effectiveness in section 5, this section summarises interviewees' expectations and demands for the future development of national and international policy frameworks. Interviewees were asked firstly, what they viewed to be necessary in their respective countries to improve the effectiveness of the current policy frameworks for managing climate and water-related human security issues, and secondly, whether they expected these changes to take place or these policies to be adopted. Interviewees were additionally questioned regarding their demands and expectations from policy frameworks at the international level. 'Demands' are related to how interviewees would like to see the current policy framework develop in the future. 'Expectations' relate to how actors believe policy frameworks will develop in reality. Furthermore, the analysis emphasises

overarching demands and expectations, rather than those that were very specific to the local context and policies.<sup>160</sup> This section details actors' demands, and where these differ, expectations regarding these demands. This is done first with respect to national policy frameworks and then with respect to international policy frameworks. Actors' demands are summarised in a table at the end of each sub-section.

## ***6.1 Demands and expectations of national policy frameworks***

Interestingly, most demands of national policy frameworks related to the sectors where the impacts of climate change may be felt, rather than to climate change policy itself. Demands of national stakeholders primarily focused on policies addressing water and land management, development or agriculture and did not address the nexus between climate change impacts on water, human security and conflict.

One frequent demand was for improved awareness on climate change at the respective national levels. As identified by an Ethiopian interviewee, there is a gap in awareness among mid-level experts. To this end, capacity-building, awareness-raising and training of mid-level civil servants to **improve coordination and communication of policies** for water resource management and climate change adaptation were proposed.<sup>161</sup> He recommended that training be done in a strategic way so as to reach the high number of smallholder farmers in the country.

Several other interviewees in Ethiopia and also in Morocco remarked on the more general need to **increase public awareness** on a range of environmental issues, including climate change to improve cooperation and sustainable management and use of resources. In Morocco, this demand is in part as a result of the poor implementation of the current environmental policy framework (see section 5). One specific example was given by an interviewee who explained that people develop springs without considering the need for recharge and the sustainable use of the water source for the future, remarking that this problem needed to be incorporated into Ethiopia's policy framework.<sup>162</sup> In the oPT an interviewee highlighted the need to work with rural communities in order to help **develop coping mechanisms** for those who would be hardest hit by climate change to deal with its effects on water.<sup>163</sup> This was supported by similar comments in Ethiopia.<sup>164</sup>

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<sup>160</sup> For example, in the case of Israel/oPT interviewees saw little potential for improved water management without first concluding a peace agreement that also dealt with water rights. Thus although many Palestinian interviewees focused their demands on this point, it is nonetheless very context-specific and does not form the focus of demands detailed in this section.

<sup>161</sup> Personal communication, Gebru Jember, Climate Change Forum for Ethiopia

<sup>162</sup> Personal communication, Ato Abtamu Tsegaye, GIZ Ethiopia Office

<sup>163</sup> Personal communication, Rima Abu Middain, UNDP oPT

<sup>164</sup> Personal communication, Dubale Admasu Tessema, Pastoralist and Livestock Programs Coordinator, USAID Ethiopia Office

As detailed previously, Morocco has developed a certain capacity to address risks from drought. However, the case of Morocco shows that the lack of effectiveness of the current policy framework to address floods can present risks to human security. To **improve civil protection**, one interviewee highlighted the need for regulatory reforms, multi-sectoral approaches to integrate risk prevention e.g. in land use planning, and to carry out information campaigns to make it clear which zones present a high risk for building as well as making people aware of the existence of emergency plans and what action to take in the case that a flood event takes place.<sup>165</sup> Many interviewees in Morocco also noted the need for training of competent people to reinforce collaboration and information exchange along with capacity building to prepare authorities and citizens to enable fast responses to catastrophes and risk.

In Morocco, interviewees working within the water sector were keen to develop **more localised data** sets and information on climate change impacts as well as to provide a support system for policy makers to take informed decisions. In Ethiopia a similar desire to expand knowledge and research was expressed.<sup>166</sup> The need for **sharing information on existing approaches** and solutions was also highlighted. For example, interviewees in Ethiopia and Morocco recommended extending the use of and sharing of traditional knowledge-systems and techniques for adaptation to climate change.

In both Morocco and Israel, interviewees highlighted the potential of wastewater reuse as a way of addressing climate change and decreasing availability of freshwater. In Israel, an interviewee focused on the need for **investment in development of technologies** for alternative water sources such as greywater recycling, rainwater harvesting, and reducing reservoir evaporation.<sup>167</sup> However, in both Morocco and the oPT there was a perceived need for raising public awareness to **increase uptake and acceptance** of wastewater reuse as a viable alternative.<sup>168</sup> In Israel a non-governmental stakeholder called for more focus on reducing consumption (e.g. by increasing the number of tariff blocks). A demand-side approach to management was welcomed by interviewees in the oPT, but one person in highlighted the importance of targeting those who consume the most rather than being universally applied.<sup>169</sup>

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<sup>165</sup> Personal communication, Abdeslam Dahman Saidi, Targa-AIDE, Morocco

<sup>166</sup> Personal communication, Kassu Kebede, Agronomist, World Food Programme

<sup>167</sup> Personal communication, Youvel Arbel, FoEME, Israel

<sup>168</sup> Personal communications, Mokhtar Jaait, ONEP, Morocco

<sup>169</sup> Personal communication, Clemens Messerschmid, independent hydrologist, Ramallah

## Box 2: Demands relating to national policy frameworks

- Increase public awareness on the impacts of climate change with regards to risk (e.g. building on flood plains) as well as the need for changes in water use (e.g. alternative sources and reduction in demand).
- Carry out regulatory reforms to integrate the prevention of risk in land use planning.
- Focus on demand-side management water resources, but take care to target key users of the resource.
- Coordinate preservation of and knowledge sharing regarding indigenous mechanisms for water management.
- Increase awareness, coordination and effective use of resources and mainstreaming of flood risk into planning processes through multi-sectoral approaches to policy-making.
- Strengthen national and regional research capacity to develop precise and detailed data and climate models to understand the impacts on water and support systems for policy makers to take informed decisions.
- Build capacity and raise awareness amongst government officials at middle and regional levels to ensure understanding of key policy messages and widespread dissemination.
- Train competent staff to reinforce collaboration and information exchange along with capacity building to prepare authorities and citizens to enable fast responses to catastrophes and risk.

## *6.2 Demands and expectations from the international policy framework*

### **6.2.1 National actors' demands and expectations of the international policy framework**

National actors had a range of expectations and demands from the international community although the bodies being targeted (i.e. EU, UN,) were often left unspecified.<sup>170</sup> In contrast to the demands made of national policy frameworks, many of national actors' demands for the international policy framework were related to adaptation to climate change, water management and in the case of Israel and oPT, conflict resolution.

#### **International funding and development cooperation**

Funding and support for climate change has followed a similar path to policy, so far concentrating above all on mitigation. The key demand of national actors from the international community was therefore for **practical support for climate change adaptation**. Ethiopian interviewees were generally of the belief that industrialised nations were responsible for providing support with adaptation to climate change, particularly with regards to the 'crucial' question of **finance**. Despite this belief and the high level media coverage concerning new

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<sup>170</sup> Morocco which receives a significant amount of funding from the EU is one exception, thus interviewees in this country referred to the EU on several occasions with regards to expectations and demands.

finance for adaptation, an interviewee from Ethiopia remarked that they were sceptical as to whether additional funds would indeed be mobilised or whether these funds had simply been ‘rebranded’ and shifted from other areas of support.<sup>171</sup> Another Ethiopian interviewee noted that they had ‘no delusions’ about financial support for adaptation measures and that their actual expectations were limited in this regard.<sup>172</sup> Furthermore, in Ethiopia it was mentioned that many organisations struggle to meet the complex and expensive requirements to obtain climate finance and so may miss out on the little funding that is available.<sup>173</sup> Thus in addition to financing, there is also a need for **technical support and capacity building** from the international community. A Palestinian interviewee also highlighted the need for international actors to support their claims to access international adaptation funds.<sup>174</sup> An Israeli interviewee indicated the need to mobilise international donor funding for adaptation in the water sector to support water reuse and desalination.<sup>175</sup> This need was also highlighted by another Israeli who suggested that this support would avoid conflicts over water.<sup>176</sup> In addition, referring to flood risk reduction measures, an interviewee in Morocco remarked that international support needs to be systematised and continuous rather than focused on scattered interventions.<sup>177</sup>

### **Information exchange and guidelines**

A need for the **exchange of best-practice examples** and adaptation guidelines was also seen by some interviewees. It was suggested by an interviewee from Ethiopia that for successful action on climate change it was necessary for global deliberation to identify the best activities and initiatives to take forward. Furthermore interviewees from Israel and Ethiopia found that there should be **global level guidelines** or a manual with ‘how to’ tools for dealing with and adapting to climate change. On the other, interviewees also noted that adaptation activities needed to be specific to the local context, and thus the usefulness of guidelines produced at the international level might be limited in many instances.

### **Demands for the international policy framework in other policy areas**

Some other demands did not relate specifically to funding for climate change adaptation, but to development or economic cooperation more generally. An Ethiopian interviewee desired an **increased alignment between donors’ and recipient countries’** strategic frameworks and needs, so as to bring international cooperation in line with the Paris Declaration on Aid

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<sup>171</sup> Personal communication, Gebru Jember, Climate Change Forum for Ethiopia

<sup>172</sup> Personal communication, Wondwossen Sintayehu, Ethiopian Environmental Protection Agency

<sup>173</sup> Personal communication, Dubale Admasu Tessema, Pastoralist and Livestock Programs Coordinator, USAID Ethiopia Office

<sup>174</sup> Personal communication, Rima Abu Middain, UNDP oPT. Palestine is not a state, currently has only observer status at the UN and is therefore no party to multilateral environmental agreements such as the UNFCCC which also translates into a lack of eligibility for accessing certain funds.

<sup>175</sup> Personal communication, Baruch Nagar, West Bank Department, Israel Water Authority

<sup>176</sup> Personal communication, Valerie Brachya, Jerusalem Institute

<sup>177</sup> Personal communication, Abdeslam Dahman Saidi, Targa-AIDE, Morocco

Effectiveness.<sup>178</sup> Indeed, one interviewee favoured schemes such as the Clean Development Mechanism and REDD+, where developing countries were able to provide a service which the international community pays for, rather than simply being the recipients of aid.<sup>179</sup> In addition, the importance of the international community acting as a **role model** on issues such as action on climate change mitigation was mentioned.<sup>180</sup>

Owing to its geographic location and the level of support it receives from European partners, many of Moroccan stakeholders' demands from the international policy framework were directed at the EU.<sup>181</sup> A few interviewees noted the need for **practical support for agricultural development** in Morocco, highlighting the fact that agriculture was not simply about food production, but also about support to sell on international markets. According to one, Morocco should be given a competitive advantage from the EU for its products in order to maintain living standards and to prevent potential migration into the EU from Africa.<sup>182</sup>

Another commented related to the process of developing the Moroccan agricultural sector through the large scale policy known as the Plan Maroc Vert (PMV) (see section 4.1). One interviewee saw this policy as beneficial to the EU due to the agricultural products it provides, mainly for European markets but felt that it was not clear what the real benefits and impacts of the PMV were for Morocco.<sup>183</sup> The interviewee remarked that Spain had carried out a similar policy with serious environmental consequences and therefore highlighted the need for the EU to **share experiences of policies**, before supporting development of policies in other countries especially where similar initiatives have been less successful in their own territory.

### **Transboundary cooperation**

Finally, some expectations and demands related to the role of the international community to provide support for the management of transboundary water resources as well as for cooperation on human security issues arising from climate change.

For example, in the Palestinian/Israeli context interviewees from both sides found that the international community could play a role as a 'responsible adult' i.e. **act as a neutral party** to mediate between communities in conflict during discussions over water resources.<sup>184</sup> In the

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<sup>178</sup> Personal communication, Bateno Kabato, FAO Ethiopia Office. The Paris Declaration on Aid Effectiveness (2006) and the Accra Agenda for Action (2008) highlight five fundamental principles for making aid more effective: ownership, alignment, harmonisation, results-orientation, and mutual accountability of donors and recipients. OECD, "The Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008)."

<sup>179</sup> Personal communication, Ato Abtamu Tsegaye, GIZ Ethiopia Office

<sup>180</sup> Personal communication, Ato Beyele Sebeku, Early Warning Department, Disaster Prevention and Preparedness, Ministry of Agriculture

<sup>181</sup> Morocco is today the largest recipient of European Union funds under the European Neighbourhood Policy, see [http://ec.europa.eu/europeaid/where/neighbourhood/country-cooperation/morocco/morocco\\_en.htm](http://ec.europa.eu/europeaid/where/neighbourhood/country-cooperation/morocco/morocco_en.htm)

<sup>182</sup> Personal communication, Interviewee from academia, Morocco

<sup>183</sup> Personal communication, Meryem el Medani, WWF Morocco.

<sup>184</sup> Personal communication official, Palestinian Negotiation Affairs Department and Eyal Herovani, Betselem

view of several Palestinian interviewees, the international community should put pressure on Israel to secure access to their water rights as a key outcome from future international agreements. They suggested that international actors could contribute to a positive outcome in for water management and regional stability in the Middle East if they **highlight the benefits of joint water resource management** based on international law. An Israeli interviewee suggested that in the case where a water project takes place in a situation of conflict, donors should put forward conditions for the beneficiaries to abide by.<sup>185</sup>

Concerning **human security and migration**, interviewees in Morocco remarked upon its position as a transition country for migrants from Africa to Europe. One interviewee mentioned that if Morocco was to be expected to halt this migration, there would be a need for both **finance and additional supportive measures**, e.g. for the livelihood diversification of fishermen to avoid them facilitating illegal passage of immigrants to the EU.<sup>186</sup> Another interviewee even noted that as the ‘guardian of Europe’ it was not possible for Morocco to obtain security and that the flow of migrants was rather a global security issue for which infrastructure (e.g. to provide food and water) needed to be developed in cooperation with all countries.<sup>187</sup>

### Box 3: Demands from national actors relating to international policy frameworks

- Contribute to a positive outcome for water management and regional stability in the Middle East by highlighting the benefits of joint water resource management based on international law.
- Act as a neutral third party to mediate between communities in conflict in discussions over water resources
- Put forward conditions for beneficiaries to abide by, in the case of a water project taking place in a conflict situation.
- Provide large-scale funding for climate change adaptation.
- Provide technical support and capacity building to meet the sometimes complex and expensive requirements for obtaining climate finance.
- Systematise the support from the international community and make this continuous rather than focused on scattered interventions.
- Assist with livelihood diversification to reduce support for illegal migration and develop cooperative and transboundary infrastructure for supporting those who do migrate (e.g. through provision of food and water).
- Provide global level information-exchange and guidelines for climate change adaptation.
- Ensure aid is in line with the Paris Declaration on Aid Effectiveness and increasingly align donors’ and recipients’ strategic frameworks, wishes and needs
- International NGOs and donors should lobby for better cooperation between states over water management.

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<sup>185</sup> Personal communication, Eyal Herovani, Betselem

<sup>186</sup> Personal communication, Interviewee from academia, Morocco

<sup>187</sup> Personal communication, Mokhtar Jaait, ONEP, Morocco

- Ratify, globally respect and implement international agreements on water and climate change with equal involvement and contributions from all countries

## 6.2.2 International actors' demands and expectations

This section deals with the expectations from interviewees at EU and UN level. Their demands and expectations focus on their perceptions of how the respective policy frameworks could be improved to address climate and water-related threats to human security and conflict.

### *European Union*

At EU level, most recommendations focused on improving the current policy framework and recommendations were rarely in relation to the development of new policies.

#### **Improving water and climate change adaptation policy within the EU**

In general, few concrete demands were made with regards to improving **water policies** due to the fact that these are already being reviewed under the development process for the Blueprint for EU's waters (to be completed by end of 2012). One interviewee working at the national (EU Member State) level felt that at the national level, good coordination of the central government is quite important but that **European coordination** would also help to resolve situations where there is insufficient capacity to respond to the needs of the whole country at any given moment.<sup>188</sup> The best idea, this interviewee felt, was to share experiences within Europe. The EU could find the best way forward in relation to water issues and could produce a document to **highlight the strengths** of different Member States in water management. He noted in addition that it would be interesting to find common ways of working together on to improve cooperation and reduce conflict in water management at a European level.

As described above, the EU's **climate change adaptation** policy is still very much in an early phase of development. An interviewee remarked that regarding **financial support**, there is at times too much focus on the amount of money being contributed, rather than ensuring that countries have the capacity and governance structures to absorb the adaptation finance being provided.<sup>189</sup> Although awareness of adaptation within the EU institutions was seen as good, interviewees identified a need for increased attention and **further awareness-raising** amongst both the public and civil servants beyond the strategic level (i.e. leaders and directors involved in agenda setting) to improve action on implementation and increase understanding of the issues.<sup>190</sup> Some measures that may assist with this are already in place. Although not fully developed at the time of interviews, the European Climate Adaptation Platform 'CLIMATE

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<sup>188</sup> Personal communication, Spanish national official

<sup>189</sup> Personal communication, European Union official

<sup>190</sup> Personal communication, European Union official



ADAPT' was identified by several interviewees as a key policy tool which would allow countries to **share lessons learned**.

### **Coordination, integration, implementation and mainstreaming**

Different interviewees identified that a key priority for water and climate change issues was the need to go beyond the environmental sector. For measures on water management and climate change adaptation to be effective, **mainstreaming and coordinating their implementation** with other sectors was identified as a need, most crucially in the sectors of agriculture, energy, transport. It was suggested by one interviewee that **local stakeholder dialogue** and regional planning at the catchment level was a key way in which water and adaptation could be successfully integrated.<sup>191</sup> Some interviewees requested that DG Climate Action provide suggestions regarding standards for climate adaptation activities and improve **sectoral guidelines** for other EU bodies to facilitate easy integration of these concerns into their areas of work. Indeed, this would help, particularly in the case where policy makers are faced with scientific uncertainty, to know what the EUs recommended course of action is. In a similar way, one stakeholder suggested that more thought be given to the interplay between the issues of climate change, human security and conflict and consideration of the **practical implications of mainstreaming** broad concepts such as human security as well as how to best reduce any obstacles to this process.<sup>192</sup> The interviewee highlighted that many internal policies have an external dimension and impact, and that it would be useful to examine the complementarities between internal policies and external relations/foreign policy.

### **Agenda-setting and problem definition in climate change adaptation**

One area identified for improvement was the **framing of policy measures**. For instance, the economy and employment are high on the EU's current agenda; several interviewees highlighted the need to develop the economic dimension of policies for water management and climate change adaptation. It was suggested that this could be done by demonstrating the links between adaptation to climate change and responsible water management and their effects on GDP, in order to gain attention, in spite of the economic crisis. One interviewee noted that a clear and targeted argument in this respect could help to gain traction and support as demonstrated by the Stern Report, more so than ethical arguments which do not tend to enter into policy discussions.<sup>193</sup> This framing could also take place through a resource efficiency lens: one interviewee mentioned that they would like to see increased public awareness of available resources, and to increase the understanding that Europe's economic value and growth is based on natural assets.<sup>194</sup>

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<sup>191</sup> Personal communication, European Union official

<sup>192</sup> Personal communication, Gerard Quille, DG EXPO, European Parliament

<sup>193</sup> Personal communication, European Union official

<sup>194</sup> Personal communication, European Union official

In terms of the future development of a **human security agenda** or policies, many interviewees noted that it was not a concept which was being pushed, nor was it seen as something which would help to move effective policy actions on climate change adaptation or water management forward. No demands were made by interviewees in this regard. Interviewees from DG Environment and DG Clima remarked that if this concept was to be included as part of the EU policy framework, it would not be within their domain, but as an initiative which would need to originate from the EEAS or from DG Devco. Representatives from both these latter agencies felt that although there had been a lot of discussion on the subject of human security, they did not see any EU policies being produced and it was thus doubtful whether this would become an emerging line of policy action.

## ***United Nations***

### **Awareness-raising**

Worldwide, very few countries have developed drought policies and as yet there have been no concerted efforts to initiate a dialogue on the formulation and adoption of national drought policies.<sup>195</sup> An interviewee stated the need to impact decision-makers around the world to develop drought policies and to advocate for a common programme on integrated drought management along with global water partners and the United Nations Convention to Combat Desertification (UNCCD).<sup>196</sup>

### **Data and information-sharing**

According to interviewees, one important role that the UN could play is in encouraging **information-sharing**. One noted that UN initiatives had seen most success where the UN had provided countries with information and strategic direction rather than policy suggestions.<sup>197</sup> This was supported by others: one remarked that most countries ‘would balk’ at being told what to do by the UN.<sup>198</sup> Another interviewee felt that there was a need for the UN to be less supply driven (e.g. ‘this is what we’ve got; this is what we can offer’) and more driven by in-depth analysis of the country or regional context.<sup>199</sup> Through patience and capacity building, it was felt that the UN could help to ensure that solutions both address all the issues at hand and did not end up ‘gathering dust’ on a shelf.<sup>200</sup> It was also noted that data might, in the future, play an important role in water-related disputes.<sup>201</sup> In the past, upstream countries have been able to

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<sup>195</sup> “Rio+20 : High Level Meeting on National Drought Policy (HMNDP)”, June 13, 2012, <http://www.uncsd2012.org/index.php?page=view&type=1000&nr=9&menu=126>.

<sup>196</sup> Personal communication, anonymous interviewee, UN organisation

<sup>197</sup> Personal communication, Steve Lonergan, UNEP-DEWA (retired)

<sup>198</sup> Personal communication, Aaron Wolf, Independent Advisor

<sup>199</sup> Personal communication, Huw Beynon, Human Security Unit, OCHA

<sup>200</sup> Personal communication, anonymous interviewee, UN organisation

<sup>201</sup> Personal communication, Andras Szöllösi-Nagy: UNESCO

withhold information on water resources to strengthen their negotiating positions with regards to allocation agreements; however, remote sensing technology can now make it increasingly possible for previously privileged information to be made available in the public domain, thus evaporating asymmetries of information.<sup>202</sup>

### **Improved coordination within the UN**

The need for improved coordination between UN agencies in operations and delivery of services is broadly recognised and was supported in interviews, although some progress can be noted in this respect.<sup>203</sup> One interviewee proposed the **integrated approach** to human security developed by the Human Security Unit/Human Security Trust Fund as a way of getting out of a 'silo-ed' approach of looking at different aspects of human security e.g. food security and water security.<sup>204</sup>

### **Supporting and mediating cooperation on shared water resources**

Similar to actors at the national level, some interviewees at the international level also felt that it may be beneficial to have **alternative and neutral bodies** to support cooperation over shared water resources. One suggested that this could be provided by a quasi-academic or non-governmental actor<sup>205</sup> with another noting that such a body would need to combine moral authority with on the ground implementation capacity.<sup>206</sup> The latter interviewee noted that whilst the UN has tried to take on the moral authority, it is not clear how much they should be involved in implementation as countries hold the core responsibility for this. It was suggested that it would be useful to bring those with resources (e.g. foundations, corporations) and those with the global reach (e.g. UN, World Bank) to come together to think about a global strategy for shared water resources.

### **Box 4: Demands from EU and UN actors relating to international policy frameworks**

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<sup>202</sup> Personal communication, Andras Szöllösi-Nagy: UNESCO

<sup>203</sup> One key initiative is known as 'Delivering as One' which aims to reform its inter-agency work at the country level with more effective use of resources and more coherence. United Nations, *Delivering as One. Secretary-General's High-Level Panel on UN System-wide Coherence in the Areas of Development, Humanitarian Assistance, and the Environment.*, 2006.

<sup>204</sup> The Human Security Trust Fund for which the Human Security Unit is responsible advances 'multi-sectoral integrated approaches that take into account the people-centered, comprehensive, context-specific and prevention-oriented aspects of the human security concept'. Trust Fund for Human Security, "Guidelines for the United Nations Trust Fund for Human Security. 6th Revision.", June 2011, <http://ochaonline.un.org/humansecurity/TrustFund/ApplicationInformationandGuidelines/tabid/2109/language/en-US/Default.aspx>.

<sup>205</sup> Personal communication, Steve Lonergan, UNEP-DEWA (retired)

<sup>206</sup> Personal communication, Aaron Wolf, Independent Advisor

### **European Union**

- Climate change adaptation support should focus on capacity-building, as well as finance, to ensure that funds are absorbed by recipient country
- Frame policy measures and agendas in a way that demonstrates their relevance to current debates e.g. solutions to the economic crisis and have a clear and targeted argument in this respect.
- Integrate climate change and water issues in other sectors such as agriculture, energy and transport for effective implementation.
- Produce easily understandable sectoral guidelines on standards for climate adaptation activities so that all institutions can fully and practically integrate adaptation concerns in day-to-day work.
- Give consideration to the practical meaning and implementation of mainstreaming.

### **United Nations**

- Raise awareness amongst policy makers on drought and provide support for developing programmes in this regard.
- Provide information and strategic direction rather than policy suggestions.
- Conduct or sponsor more research on local impacts of climate change to aid decision-making
- Advocate for information to be put in the public domain and exchanged without restrictions.
- Focus on demand-driven solutions that are based on an in-depth analysis of the context to ensure effective solutions.
- Continue to improve coordination between UN agencies.
- Act as an alternative and neutral body (or support others to do so) to coordinate cooperation and action on shared water resources.

## ***6.3 Summary***

As detailed in section 5 above, the policy frameworks examined involve a number of efforts to tackle water resource management, often in connection to climate change. However, few policies directly address human security and conflict and none address these issues in connection to climate change and water. In a similar way, most demands and expectations for a future policy framework related to policies addressing climate change adaptation and management of water resources, as well as sectoral policies affected by climatic impacts on water (e.g. agriculture) as opposed to specific 'human security' or 'anti-conflict' policies. These sectoral or climate change policies may broadly address human security issues and have a role to play in relation to conflict and/or cooperation over water resources, although interviewees rarely made this link explicit in their demands and expectations. One aspect of this might be that demands are usually related to action and policies which invoke action (as opposed to broad strategies or statements) rarely address wide-ranging conceptual issues such as human security. The other aspect may simply be that human security issues are already being addressed at a more informal level through 'bottom-up' or informal approaches. Moreover, interviewees rarely focused on measures that

could be considered to improve the adaptive capacity of the local population more broadly (e.g. income generation schemes or the improvement of social security systems in general).

It also appears that expectations and demands are to a large extent shaped by existing agendas. At all national levels and at EU level, demands were made in accordance with the current policy focus. For instance, in the case of Ethiopia, the interlinked development and climate change adaptation agenda is a primary focus for the government. In this way, a number of demands were in relation to increased support for climate change adaptation. In contrast, in the case of Morocco, no link has been made to tie climate change adaptation to another policy area for the 'win-win' situation achieved by Ethiopia. In Morocco, the primary focus of the government appears to be on poverty reduction and economic growth through agriculture and thus demands were often connected to agricultural policy and human development. Finally in the case of the oPT, all aspects of the policy agenda are connected to the ongoing conflict with Israel and thus not surprisingly shaped actors' expectations and demands accordingly. In Israel and the EU, fewer demands were made concerning improving the existing policy framework. These demands were usually in relation to adjusting current policies, perhaps due to a certain recognition that these policy frameworks were largely heading in a nationally or regionally agreed direction.

At the national level, actors' demands included the development of technologies for alternatives to freshwater and of more localised data on climate change impacts as well as sharing of adaptation information (including on traditional systems). Improving coordination and communication was seen to be necessary both in terms of raising public awareness of the need to use alternative water sources and reduce demand as well as spreading understanding of policies beyond senior management level. Finally, more support and coordinated action were desired to protect groups most vulnerable to climate change impacts.

At the international level, national actors above all requested practical support for climate change adaptation, be it through finance, technical support or capacity building and information-sharing. No demands were made with regards to support for policy formulation or institution-building. Demands included that international actors lead by example as well as ensuring that their own policies and actions are in-line with internationally agreed principles and conventions. In conflict situations, international actors were seen to be able to act as a neutral party to mediate and encourage joint water resource management and indeed actors from the UN saw this as a key role they could play.

In terms of the support that the EU level can provide to national policy frameworks, it was suggested that European level coordination could help to resolve situations where there is insufficient capacity to address the water needs of a country at any given time. Another demand was for the EU to coordinate and share information on lessons learned and strengths of each country's experience in water management and adaptation. This was echoed at UN level. Requests were made by EU and national actors to both the EU and the UN to provide sectoral guidelines and advice for implementing and mainstreaming adaptation. Further guidance on how to mainstream a broad concept such as human security was requested at UN level and could indeed be provided by the Human Security Unit which according to one interviewee favoured

increased integration and a reduction of parallel work efforts. Nonetheless, no actors at any level made specific demands for a human security agenda to be pursued either alone or in conjunction with other issue areas. Finally at EU level, the desire was also raised to increase impact through integrating arguments for action on water management and climate change adaptation with those of items higher on the policy agenda such as growth and jobs.

Although adaptation policies in Ethiopia and water policies in Morocco were seen to have factors that could aggravate conflict to varying extents (more in Ethiopia, less so in Morocco), no actors made concrete demands for policies to reduce or prevent conflict. Conversely there was also little mention of the need for policies to increase cooperation. At the Israeli and Palestinian level, there is of course an ongoing conflict, and as such, one might expect to see demands regarding conflict reduction. However, as with Morocco and Ethiopia, none of the oPT demands were focused on reducing the potential negative impacts of climate change on human security and conflict and were rather focused on water management and supply. From the Israeli side one interviewee expected that the international community to intervene to resolve the water conflict with the Palestinians, but as with the other case study countries, there was no mention of the need for national policies to address conflict. Despite the lack of concrete demands in this regard however, given the trajectories outlined in section 3.1, it is issues such as the loss of livelihoods, socioeconomic conditions, poor health and food insecurity which reduce stability, and potentially increase the potential for conflict. It is therefore more apt that interviewees focused their demands on policies needed to address these more concrete issues. However, even adequate policy responses may not be developed where past conflict decreases the potential for the cooperation required for the joint management of water resources.

## **7 Concluding observations**

From the above result a series of observations and conclusions relating to the links between water-related impacts of climate change, human security, and conflict, current policy frameworks relevant to these links and their effectiveness, and, finally, expectations and demands as formulated by the persons we interviewed.

Concerning the links between climate change, human security and conflict, the dominant view among interviewees was that climate change was, at worst, an “add-on” to existing issues of human security and conflict. Thus, climate change was seen, in principle, as an added stressor, but not as a main factor in creating risks for conflict or undermining human security. In some settings (e.g. Israel and Morocco), this was closely related to the fact that the expected effects of climate change are not qualitatively different from climatic phenomena that those countries have known for a long time – and that they hence started addressing through policies at some stage in the past.

This translated into a situation where interviewees considered – with the exception of the very specific case of the oPT – the existing policy-frameworks in their countries to be effective in addressing water-related changes from climate change, and thus, implicitly, impacts on human security and conflict potentially associated with them. In both Ethiopia and Morocco, this position related, however, to an emerging policy-framework that yet has to be implemented fully

despite its effectiveness “on paper”. Moreover, the view that policy frameworks were effective for attaining specific objectives related to climate change does of course not mean that currently there are no larger conflict or human security issues, as not all human security issues are climate change related, e.g. poverty evidently entails a host of human security issues, which are unlikely to all be addressed through climate change adaptation policies.

At the country level, there seem to be no, or at most very few, policies that explicitly address broad issues such as “human security”; this, however, does not constitute a gap in the existing framework: rather than being a self-standing political issue to be addressed through specific policies, human security is, implicitly, addressed by existing policies, e.g. on agriculture. Similarly, demands and expectations were mostly not related to any policies addressing human security or conflict specifically, even though all countries face problems relating to human security or existing conflicts. Rather demands and expectations focused on improving or fully implementing different existing sectoral policies e.g. on water. Given that the issues that such policies seek to address, e.g. a lack of water or lack of income of farmers translate into human security issue and may lead to conflict, this focus is not necessarily surprising. However, there was a remarkable absence in interviewees’ comments of demands and expectations that are targeted primarily at enhancing the socio-economic status and social security of poor people vulnerable to climate change and thus enhancing their resilience. For example, no interviewee made demands related to developing insurance schemes for drought risks, income generation schemes or the improvement of social security systems in general.

The absence of reference to human security in concrete policies to be implemented on the ground moreover points to the limited value that some interviewees attributed to the use of human security as a concept in policy-making. A marked contrast can be observed in this regard between the more discursive, “soft” parts policy-making (e.g. through high-level declarations at the international level) and the situation in the countries: Issues such as human security, environment and security or climate change and conflict do appear in a number of resolutions and debates of political institutions at the international level, and the UN has established quite a number of programmes and initiatives mandated with addressing them. However, that is largely not mirrored at the national level. Indeed, some interviewees doubted the usefulness of, e.g. the term human security, for the formulation and implementation of concrete policies. Reservations related to a range of aspects, including the difficulties of developing the kind of integrated policy-responses that the objective of enhancing human security requires, and doubts about the usefulness of broad, and regularly changing, concepts for achieving anything on the ground. The EU is an interesting example in this regard as climate change and security issues were discussed by the Council, but a reluctance of the Commission to take the issue up was noticed – i.e. at the discursive, agenda-setting stage of policy-making the climate change/security nexus was given attention, but the institution responsible for taking the initiative on proposing concrete policies did not take up the issue. Also at a more general level some interviewees expressed reservations concerning the use of political buzz-words like human security, first, because they questioned their practical value for on the ground policies, second because it required developing countries to frequently to adapt their strategies and funding proposals to such new buzzwords.

It also appears that expectations and demands are to a large extent shaped by existing agendas. In most countries, demands were in line with the existing current policy focus: in the case of Ethiopia on climate change adaptation, in Morocco on agricultural policy and development, and in the oPT to the ongoing conflict with Israel which tends to dominate the Palestinian political agenda. Israeli and EU interviewees had few demands regarding the improvement of the Israeli policy framework. The extent to which climate change adaptation is taken up in different countries also appears to be influenced by the way it interacts with existing policy agendas (in addition to the degree of vulnerability of a country). EU interviewees suggested using existing agendas (e.g. response to the economic crisis) to gaining attention and funding for issues such as water and adaptation. This could have implications for countries who want to appeal to donors at EU and UN level for funds and support

The EU and UN were considered to be particularly important in placing issues on the agenda, in the provision of capacity-building and guidance, and for the funding of initiatives.



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## **Annex I: List of interviewees**

Interviews were conducted predominantly between September 2011 and March 2012.

### **Ethiopia**

Seleshi Bekele, African Climate Policy Center, UNECA

Ato Beyele Sebeku, Early Warning Department, Disaster Prevention and Preparedness, Ministry of Agriculture

Yohannes Gebremichael, Lecturer, Department of Geography and Environmental Studies, Addis Ababa University

Gebru Jember, Program Officer, Climate Change Forum for Ethiopia

Bateno Kabato, FAO Ethiopia Office

Kassu Kebede, Agronomist, World Food Programme

Mulatu Kibrit, Ethiopia Investment Agency

Fassil Reda, Pastoralist Research Division, Ethiopian Agricultural Research Organisation

Wondwossen Sintayehu, Ethiopian Environmental Protection Agency

Alemayehu Tafesse, Ethiopian Ministry of Water and Energy

Dubale Admasu Tessema, Pastoralist and Livestock Programs Coordinator, USAID Ethiopia Office

Ato Abtamu Tsegaye, GIZ Ethiopia Office

### **Israel**

Youvel Arbel, Friends of the Earth Middle East (FoEME)

Yeshayahu Baror, Chief Scientist Israel's Ministry of the Environment

Valerie Brachya, Jerusalem Institute

Raed Bustan, Sustainable Community Action for Land and People

Eran Feitelson, Professor in Geography and Public Policy at the Hebrew University of Jerusalem

Avi Heler, Ministry of the Interior

Eyal Herovani, Betselem

Mr. Meir, Professor, Ben Gurion University

Baruch Nagar, West Bank Department, Israel Water Authority

Nir Papa, Society for Protection of Nature in Israel (SPNI)

Ehud Praver, Office of the Prime Minister

Shimon Tal, Israel Water Union

Ibrahim Wakili, Head of Regional Council for Unrecognized Villages

Arye Wanger, Israel Union for Environmental Defence (IUED)

Sawsan Zahara, Adalah

Miki Zaide, Israel Water Authority

## **Morocco**

Mohamed Behnassi: Ibn Zohr University

Hasane Belguenani: EEAS EU Delegation Morocco

Yassir Benabdallaoui: UNDP (United Nations Development Programme)

Redouane Bouaicha: Secretariat of State in Charge of Water and Environment,

Abdeslam Dahman Saidi: Targa-AIDE (National NGO focusing on sustainable development)

Mohammed Rachid Doukkali: IAV (Institut Agronomique et Vétérinaire Hassan II)

Fatima Driouech: Maroc Meteo (National meteorological office)

Sahhar El Ayachi: IAV (Institut Agronomique et Vétérinaire Hassan II)

Abdelaziz El Maghraoui: FAO Morocco

Meryem El Medani: WWF (World Wildlife Foundation)

Mourad Errarhib: Friedrich Ebert Stiftung

Noureddine Filali Boubrahmi: Maroc Meteo (National meteorological office)

Mokhtar Jaait: International Institute for Water and Sanitation, Office National de l'Eau Potable (ONEP)

Abdellatif Khattabi: ENFI National School of Forestry and Engineering

Abdelkader Lahmidi: Ex-Director of National Directorate for Land Use Planning



Maria de Lope: WWF (World Wildlife Foundation)

Mohamed Raqui: Retired IAV (Institut Agronomique et Vétérinaire Hassan II)

Hassan Sebbar: Retired Ex-Minister of Tourism

Ulrich Storck: Friedrich Ebert Stiftung

Abdeslam Ziyad: Secretariat of State in Charge of Water and Environment

### **oPT**

Official, Negotiations Affairs Department, Palestinian Authority

Abdel Gharfour, Palestinian Water Authority

Nidal Katbeh, Environmental Quality Authority

Nidal Mahmoud, Institute of Environment and Water Studies

Clemens Messerschmid, independent hydrologist, Ramallah

Rima Abu Middain, UNDP

Abdul Latif Mohammad, Palestinian Agricultural Relief Committees (PARC)

Abeer Al Butmeh, Palestinian Environmental NGOS Network, PENGON -Friends of the Earth Palestine

Two Palestinian representatives of the Joint Water Committee

### **EU**

Efstathios Dalamangas: DG Development Cooperation, EU Commission

Henriette Faergemanns: DG Environment, EU Commission

Carlos Illan: DEVE Committee Secretariat, European Parliament

Andre Jol: European Environment Agency

Maria C. C. Munoz: European External Action Service

Andrew Murphy: DG Environment, EU Commission

Michail Papdoyannakis: DG Environment, EU Commission

Gerard Quille: DG External Policies, European Parliament





Hans Stielstra: DG Environment, EU Commission

Jannick Vaa: DG Development Cooperation, EU Commission

Beate Werner: European Environment Agency

Sami Zeidan: DG Clima, EU Commission

Matthais Zoellner: European Investment Bank

### ***Spain***

Two officials working on water policy in Spain (anonymous)

### **UN**

Huw Beynon: OCHA HSU

Saliha Dobardzic: GEF

Jean Marc Faures: FAO Land and Water division

Sonja Koeppel: UNECE

Steve Lonergan: UN DEWA (retired)

Patrice Quesada: IOM

Andras Szöllösi-Nagy: UNESCO

Avinash Tyagi: UN Water/World Meteorological Organisation

Aaron Wolf: Oregon State University

## **Annex II: Questionnaire**

### **Introduction**

0. The CLICO research project examines potential linkages between climate change, water management, human security, conflict and cooperation. Please describe how your work or the work of your organisation deals with any/all of these issues.

### **Awareness and problem recognition**

1. Which are, in your view, the key physical impacts of climate change on your country/regions in relation to water issues? How are these physical impacts likely to develop?
2. Which physical issues do you think present the greatest threat to human security and have the potential to exacerbate conflict? How do you think these issues are likely to develop?
3. How are the human security implications of climate change you mention addressed in national political and public debate? How much public awareness is there of these issues? Could you give examples?

### **Current policy setting**

4. Which policy options and measures are you familiar with (in your line of work) for addressing the issues you mentioned?
5. What potential do these policy options and measures have for mitigating or aggravating conflicts and improving or reducing human security,
  - a) in theory?
  - b) in practice?
6. Do you see room for improvement of current policies? How?

### **Expectations and demands from the future policy framework**

7. In your view, what is necessary in your country to successfully deal with human security issues that may result from water problems and climate change a) in the next 5 years and b) in the next 10 - 20 years?
8. Do you expect that these policies/initiatives or related measures will be adopted? If not, why not?
9. Do you expect that, if adopted, these measures will be implemented? What could be possible obstacles to their implementation?

### **International policy framework**

10. In your view, in what form and setting do human security implications of climate change and water management need to be addressed at the international level?



11. What impact does international policy have on national (and regional) policy and vice-versa?
12. Is this likely to change in the future?
13. Is there anything else you would like to add?