CHAPTER 6. GENDER-RESPONSIVE CLIMATE CHANGE ADAPTATION: ENSURING EFFECTIVENESS AND SUSTAINABILITY

6.1 The purpose of this chapter is to develop a better understanding of challenges and opportunities in climate change adaptation in Arab countries that result from gender-based differences and inequalities, and to propose policy options to address them. The chapter argues that (a) climate change impacts in this region are not gender neutral, (b) specific gender inequalities intensify vulnerability to climate change by increasing sensitivity to exposure to climate change impacts and reducing adaptive capacity, and (c) to build resilience to climate change it is essential to incorporate a holistic and gender-responsive approach to adaptation. This chapter concentrates on people who live in rural areas because, overall, they are the most vulnerable to climate change, due to their relatively higher exposure and sensitivity as a result of greater human development challenges.

6.2 Climate change is placing stress on many assets and activities, including natural resources, rural employment and income, food security, and health, within and more. In order to build resilience to climate change the existing vulnerabilities in the current environmental, socio-economic, political, infrastructural, and technological systems must be addressed. The IPCC (2001) defines vulnerability as “a function of the sensitivity of a system to changes in climate, adaptive capacity, and the degree of exposure of the system to climatic hazards.”

6.3 Gender-based vulnerabilities can be defined as inequitable access to the assets, opportunities, and decision-making power that would enable people to cope successfully with new climate conditions. Patterns of gender-based difference and persistent, structural inequality in socio-economic, political, infrastructural, and legal systems combine with other determinants of vulnerability and poverty to create different challenges and opportunities for women and men as they adapt their livelihoods to climate change. In the short and medium term, exposure to climate variability and extreme climate events such as drought or flooding, as well as to long-term incremental changes in rainfall patterns, temperatures, and ecosystems will have important gender-differentiated impacts in all aspects of human livelihoods and activities, health, and security. This affects the ability of households and communities to cope in the short term and to find sustainable adaptation solutions in the long term.

6.4 This chapter first defines key terms and concepts, explains the conceptual framework for gender-based vulnerability to climate change and adaptation, and provides a regional and global policy background for gender and climate change. The next section develops a profile of gender-based vulnerability to climate change for Arab countries. The third section provides examples of approaching adaptation from a gender perspective, with four case studies from Yemen, Morocco, Syria, and Jordan. Finally, the chapter concludes with policy proposals.

Box 6.1 Climate Change and Gender Inequality

“Gender inequalities intersect with climate risks and vulnerabilities. Women’s historic disadvantages – their limited access to resources, restricted rights, and a muted voice in shaping decisions – make them highly vulnerable to climate change. The nature of that vulnerability varies widely, cautioning against generalization: But climate change is likely to magnify existing patterns of gender disadvantage.”

Climate change exacerbates the existing vulnerabilities of individuals and households who have limited or insecure access to physical, natural, financial, human, social, political, and cultural assets (Flora and Flora 2008), which determine how they can cope and adapt. Availability of, and
access to, assets is socially differentiated, because it is shaped by formal and informal inequalities in many aspects of life (UNFPA/WEDO 2009; Otzelberger 2011).

**Climate change impacts are not gender neutral**

6.6 In Arab countries, gender is one of the most significant determinants of inequality, and is an important variable in the relationship between the environmental and human impacts of climate change.

6.7 Gender roles and relations are highly context-specific and therefore differ among and within the Arab countries. They are also flexible and change over time, and it is likely that they will undergo significant evolution as climate change continues to affect the environment and society (Resurreccion 2011; Espey 2011). This means that the gender-differentiated impacts of climate change, and the roles that men and women play in the process of adaptation, must be studied and addressed in local contexts. Despite this regional diversity, one can identify some broad trends in patterns of gender roles and relations, which determine poverty and vulnerability among men and women and shape the gender-differentiated impacts of climate change in Arab countries.

6.8 The socio-cultural gender dynamics and power asymmetries that underpin these patterns make women particularly susceptible to chronic poverty (Espey 2011) and lower adaptive capacity. In particular, the prevailing socio-cultural constructions of masculinity and the resulting economic and legal frameworks that privilege men’s roles as providers mean that female heads-of-households and their dependents—whose numbers are increasing—are one of the region’s most vulnerable groups (IFAD/FAO 2007).

6.9 Gender inequalities and perceptions of traditional roles do not only affect women: they can also result in men facing specific vulnerabilities (Otzelberger 2011; UNFPA/WEDO 2009; Demetriades and Esplen 2008). As a result, a fully gender-responsive approach to adaptation should seek to understand men and women’s respective vulnerabilities and look to both male and female roles in addressing gender inequalities.

**Specific gender inequalities intensify vulnerability to climate change**

6.10 The drivers of gender-based vulnerability to climate change can be separated into three general areas of inequality: access to resources, opportunity for improving existing livelihoods and developing alternative livelihoods, and participation in decision-making. In Arab countries it is most often women, and especially poor women, who face structural inequalities and socio-cultural norms that disadvantage them in these three areas. This intensifies their exposure and sensitivity to climatic changes. As a result, women are more likely to have lower adaptive capacity than men. Their lower adaptive capacity results in exacerbated welfare impacts on individuals, households, and communities.

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38 This socio-cultural framework has been supported by macro-economic factors that have limited women’s participation in the workforce. The kind of social contract that governments in the region have adhered to since the mid-twentieth century, which has underpinned by generous but costly welfare states, large public sectors, and generous subsidies, has reinforced women’s roles as home-makers. (World Bank 2012)
Figure 6.1 Building Resilience Through Integrating Climate Change Adaptation and Gender Strategy

Gender-responsiveness

Lose-Win Scenario
*Climate-insensitive gender strategy*
- Increased gender equality => improved capacity for building resilience
- But, missed opportunity for sustainable adaptation through not identifying specific gender-related drivers of vulnerability to climate change

Win-Win Scenario
*Highly gender-responsive approach to building resilience*
- Addresses specific drivers of gender-related vulnerability to climate change => increased resilience; increased gender equality, Opportunity for transformative and sustainable development.

Lose-Lose Scenario
*Weak attention to both building resilience and gender-responsiveness*
- Neither gender inequalities nor vulnerabilities to climate change are addressed => Resilience reduced; highly unsustainable development

Win-Lose Scenario
*Gender-insensitive adaptation strategy*
- Increased resilience
- But, missed opportunity for gender equality and sustainable adaptation through not identifying specific drivers of gender-based vulnerability

Focus on increasing resilience to climate change

6.11 Figure 6.1 depicts the two-way relationship between climate change adaptation and gender equality strategies. In the “lose-lose scenario,” where gender inequalities exist within a given community exposed to climate change impacts and neither the gender inequalities nor vulnerabilities to climate change impacts are addressed, resilience is threatened.

6.12 The “lose-win scenario” shows some of the attributes of a community that focuses on improving gender equality but does not concentrate on reducing the drivers of climate vulnerability. In such a community one could expect greater human development, but low harmonization of gender equality strategies with adaptation priorities. Overall, improved gender equality indicators will help a community build resilience, but such a community would have failed to address specific drivers of gender-based vulnerability to climate change and as a consequence would limit its potential resilience.

6.13 The “win-lose scenario” shows likely outcomes of gender-insensitive responses to climate change. Despite tackling climate change effects, this scenario may do so in an inequitable way that fails to address underlying vulnerabilities in a sustainable manner, hence undermining resilience. Improving gender-responsiveness in adaptation is not just the right thing to do, but also a very important strategy for building resilience in the long term.

39 In this case resilience can be understood as a community with low climate vulnerability and high gender equality as it relates to access, opportunity and participation.
6.14 The “win-win scenario” represents the best of both worlds. It reduces the drivers of vulnerability to climate change by reducing sensitivity and increasing adaptive capacity while at the same time eliminating specific sources of gender-based vulnerability borne from inequality. Such a scenario is an opportunity for transformative and sustainable development and a path to building resilience to climate change.

6.15 In looking at gender and climate change adaptation, it is important to recognize that building resilience requires two types of adaptation actions:

- designed to adjust and protect livelihood systems from specific climatic change impacts, and
- that focus on reducing the underlying drivers of climate and gender-based vulnerability.

6.16 The first is an impact-specific response that deals directly with the immediate impact from a given climate change event, while the second is in line with broader sustainable development practices (with a particular focus on factors that drive gender-based vulnerability to climate change.) Addressing the underlying causes of gender-based vulnerability to climate change—the economic, political and socio-cultural mechanisms that maintain gender-based inequalities—is a prerequisite for building resilience. The two approaches to climate change adaptation are mutually inclusive and beneficial. Therefore, a main policy proposal for this chapter is to make adaptation gender-responsive. That is, to ensure that adaptation projects, whether nationally- or sub-nationally-driven, are responsive to women and men’s different needs and roles; utilize women and men’s specific knowledge; and work toward reducing inequalities in access to resources, opportunities for improving existing livelihoods and developing alternative livelihoods, and participation in decision-making. This chapter also stresses the need to continue to invest in gains made in these areas in Arab countries in order to create a more enabling environment for women as agents of change and leaders in adaptation and to increase community resilience at all levels.

Gender and Climate Change: Global and Regional Policy Background

6.17 The intersection of gender and climate change adaptation is a relatively new field in climate research and policy. Women’s roles in conservation were first recognized in the Beijing Platform for Action adopted at the Fourth World Conference on Women in 1995, and then in the Convention of Biological Diversity. The vulnerability approach to building resilience, with an emphasis on gender mainstreaming and women’s empowerment, has been valued in the area of disaster-risk reduction from an early stage (Schipper 2007). However, only recently has the emphasis on “women’s participation” and “women’s roles” begun to widen. Indeed, although globally many National Adaptation Programmes of Action (NAPAs) acknowledge that women are among the most vulnerable to immediate and longer term climate change impacts, few link this to broader social, economic and political mechanisms of gender inequality or emphasize the importance of empowering women as critical stakeholders in adaptation (UNFPA/WEDO 2009).

6.18 The last few years have seen the development of a more holistic understanding of the linkages between climate change impacts and adaptation—as well as mitigation—and gender, with greater focus on equality. Meetings such as the 2002 Johannesburg World Summit on Sustainable Development, the 2007 UN High-Level Event on Climate Change, the 2007/2008 International Women Leaders Global Security Summit and the special sessions at the Commission on the Status of Women (CSW) in 2002 and in particular 2008, as well as meetings of bodies like the UN Human

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40 See paragraph 253 (c) under Strategic Objective K.1.
Rights Council and statements such as the 2007 UN Declaration on the Rights of Indigenous Peoples have highlighted the issues on the global stage (UNFPA/WEDO 2009; CSW 2008).

6.19 This growing momentum and advocacy has brought wider recognition of the need to integrate gender and adaptation strategies, and gender mainstreaming has been adopted as a tool by development and climate change bodies. In 2007, twenty-five United Nations and civil society organizations formed a partnership, the Global Gender and Climate Alliance (GGCA), which aims to ensure that global climate change policies are gender-responsive. The IPCC assessment reports recognize that gender is one of the factors that shape vulnerability to climate change impacts. In 2008, the Conference of the Parties approved “The Gender Plan of Action under the Convention on Biological Diversity.” In 2010, the Cancun Agreements included eight references to women and gender, and recognized women and gender equality as integral to effective adaptation. However, overall, gender-related concerns are still not sufficiently addressed under the UNFCCC framework (Otzelberger 2011; WEDO 2010a and 2010b) and women continue to be conspicuously absent from all levels of climate change-related decision-making processes (Demetriades and Esplen 2008).

6.20 The discourse of gender and climate change adaptation was relatively slow to reach Arab countries. However, the work of gender and climate change experts in the region has begun to put the issues on the agenda. The first Arabic language gender and climate change training manual was made available in 2010 with the translation by IUCN Regional Office for West Asia of the Global Gender and Climate Alliance manual. Gender-based vulnerabilities, and the role of women in building resilience and in adaptation, are acknowledged in the report of the Arab Framework Action Plan. This significant step demonstrates the Arab climate policy community’s recognition of the human face of climate change in the region.

6.21 At the national level, Jordan is the first Arab country both to mainstream gender in adaptation policy and in which the national women’s strategy incorporates awareness of climate change and the linkages between gender, gender equality, and adaptation. Other countries are now beginning similar initiatives, and some women’s associations are taking an interest in climate change. In addition, references to gender in climate change adaptation have been incorporated into some UNFCCC national communications. However, most NAPAs do not yet specifically incorporate a gender perspective on adaptation (Osman-Elasha 2010). Many Arab countries are now developing national climate change strategies, and as understanding of the social dimensions of climate change develops in Arab countries, opportunities arise to ensure a more holistic approach to adaptation that addresses critical gender-related issues.

6.22 The lack of a gender perspective in climate change planning across much of the region can be partially attributed to the limited collaboration between institutions dealing with climate change and gender-related issues. In many Arab countries, for example, the women’s commissions are barely engaged in the activities of the Ministry of Environment, and vice versa. However, the GGCA, with the International Union for the Conservation of Nature (IUCN) and the Council of Arab

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41 (Forthcoming) The Arab regional framework includes specific programs on adaptation (including water, land and biodiversity; agriculture and forestry; industry, construction and building; tourism; population and human settlements; health; and marine and coastal zones), mitigation (including water, land and biodiversity; agriculture and forestry; industry; energy; transport; and construction and building) and cross cutting (including awareness; behavior; media; legislation; disaster risk reduction; private sector initiatives; and financial tools) to be implemented over a period of ten years through National Committees on Climate Change on the national level, and the Arab Council on Climate Change, assisted by a subsidiary advisory body, on the regional level.

42 As GIZ researchers point out (GIZ n.d.), “pure” climate projects explicitly pursuing climate change adaptation are still in the development stage or started only a short time ago”, which means that this is truly a timely opportunity to offer ways to make such projects gender-sensitive and inclusive.
Ministers Responsible for the Environment (CAMRE), has begun work in recent years to raise awareness of international instruments for gender mainstreaming in climate action, and to integrate a gender perspective in countries’ participation in UNFCCC negotiation meetings and COPs. Efforts are being made at all levels to build knowledge about the linkages between gender and climate change, to support the global advocacy teams, and to propose policy measures and an advocacy strategy. The focus is on government partnerships and introducing gender into the UNFCCC process to enhance the human perspective in climate change negotiation. Furthermore, mainstreaming gender into all aspects of climate policy can build on Arab countries’ existing efforts and experience of gender mainstreaming in poverty reduction, for example in agriculture ministries (FAO 2005).

**GENDER HELPS SHAPE RESPONSES TO CLIMATE CHANGE IN ARAB COUNTRIES**

6.23 In the context of changing cultural landscapes in increasingly globalized Arab countries, lively debates about a variety of gender-related issues are taking place. Women and men are contesting and negotiating their roles and identities in ways that place notions of gender in constant flux. Broad-based social, economic, and political forces and processes are the engines of change that shape much of the context within which gender roles and relations are dynamically defined and redefined. In particular, the transformations and popular movements for political change and a more inclusive path of development taking place in a number of Arab countries may present opportunities for new frameworks of participation for women—and for rural communities more broadly—as well as for the negotiation of existing gender-based inequalities.

6.24 Increasingly, the process of adapting to a changing climate will constitute an opportunity for the negotiation of gender roles and relations. This section looks at the current gender context in Arab countries, and outlines how specific gender roles and inequalities relate to adaptation to changing climatic conditions.

### Table 6.1 Basic Gender Indicators for Arab Countries

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Maternal mortality (deaths per 100,000 live births)</th>
<th>Literacy rate (% population ages 15 and above)</th>
<th>Ratio of female to male primary enrollment (%)</th>
<th>Labor force participation (% of population ages 15-64)</th>
<th>Proportion of seats held by women in national parliaments (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Females</td>
<td>Male</td>
<td></td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>Central</td>
<td>367.50</td>
<td>58.88</td>
<td>76.33</td>
<td>90.76</td>
<td>29.27</td>
</tr>
<tr>
<td>Gulf</td>
<td>93.07</td>
<td>68.75</td>
<td>86.44</td>
<td>90.61</td>
<td>25.19</td>
</tr>
<tr>
<td>Maghreb</td>
<td>121.26</td>
<td>58.23</td>
<td>77.74</td>
<td>94.17</td>
<td>33.52</td>
</tr>
<tr>
<td>Mashreq</td>
<td>60.44</td>
<td>76.46</td>
<td>89.51</td>
<td>91.14</td>
<td>18.66</td>
</tr>
<tr>
<td>All Arab countries</td>
<td>201.70</td>
<td>63.93</td>
<td>81.09</td>
<td>91.65</td>
<td>27.59</td>
</tr>
</tbody>
</table>

| Low & middle income countries, globally | 290.00 | 74.87 | 86.01 | 95.98 | 55.53 | 83.11 | 17.60 |
Gender Roles in Rural Livelihoods

6.25 Women and men have different roles in rural societies in Arab countries. Women traditionally have responsibility for tending the land and livestock, keeping them occupied outside the dwelling for most of the day, and tend to household chores in the evening. Men typically handle the finances, trade in the market, and, if needed, migrate. Since natural resources are directly affected by climate, women in rural areas are often the most sensitive to climate change. Changes in rural livelihoods across Arab countries represent major challenges, but also offer potential opportunities for flexibility and long-term change in the economic, political, and socio-cultural mechanisms that maintain gender inequalities. Gender roles can be less rigid than they might appear (Resurreccion 2011; Obeid 2006), and climate change may present an opportunity for them to evolve in rural areas.

Women play a key role in managing natural resources and sustaining livelihoods

6.26 Across Arab countries, the division of labor in poor rural households is such that women undertake a large proportion of the labor required to sustain natural resources and rural livelihood systems. Women’s roles in agriculture are particularly significant (Figure 6.2). They typically work long hours, engaged mainly in non-mechanized, labor-intensive, non capital-intensive activities (FAO 2005). Women also have primary responsibility for the husbandry of small animals and ruminants, as well as for taking care of large-animal systems, herding, providing feed and water, maintaining stalls, and milking (Osman-Elasha 2010; FAO 2005).

Figure 6.2 Women and Men Engaged in Agriculture, as a Percentage of Total Female and Male Economically Active Population (2004)

6.27 The agricultural work traditionally performed by women in Arab countries has long been “invisible,” as a crucial but seldom acknowledged contribution to household and national income (FAO 2005). Women work on their own farms and as laborers on other farms, but most of them are not paid for their efforts. About 75 percent of women working in agriculture in Yemen are unpaid, as are 66 percent in Syria, 45 percent in Palestine (FAO 2005), and 70 percent in Egypt (Egyptian
Organization for Development Rights 2011). But the female role in livelihood and natural resource systems is crucial; the work women perform is central to ensuring food security for the family and community and maintaining adequate levels of productivity among the rural labor force (FAO/IFAD/ILO, 2010; FAO 2005; IFAD/FAO 2007).

6.28 This traditional role of women as natural resource managers in rural communities in Arab countries makes them especially vulnerable to climate change for two reasons. First, these systems are highly reliant on the climate for their productivity, which makes them highly exposed. Second, because women are often not paid for this work and have less access to and control of land, they have less capacity to adapt. Women, for example, are the largest group of direct water users, but they do not normally have an equal voice in managing the use or distribution of water.

Women are the primary caregivers in rural families

6.29 Women perform vital, but economically unrecognized and unremunerated, activities that contribute to the overall well-being of the household. These activities, which act as a social safety net in the absence of public service provisions, include functioning as caretakers and sometimes as contributors to household income. Caretaking activities are particularly demanding in areas where birth rates remain high and families are large, such as in a number of lower-income Arab countries, including Yemen, Mauritania, Palestine, and Oman. The problem is further exacerbated when women suffer poor access to reproductive health services (FAO 2005).

6.30 These roles make women highly vulnerable to climate change for three main reasons. First, when climate hazards occur, women play a vital role in maintaining the functioning of the home. Second, the increased burden of illness as a result of climate change will fall primarily on women who are responsible for taking care of sick family members. Third, in the face of climate change impacts, men typically migrate first and most frequently. This means that women often remain in the affected community, with the burden of assuming the former duties of male household members in addition to their already heavy workload.

Migration decisions are heavily influenced by gender roles

6.31 Gender norms, roles, and inequalities play an important role in determining who migrates, when, and where. Migration is not necessarily an equally viable option for all members of the household; those with limited resources or who are responsible for care—often women—are less likely to migrate (Demetriades and Esplen 2008). In Arab countries, men are normally the first to migrate (Osman-Elasha 2010). Both women and men face vulnerabilities from migration, as well as potential opportunities.

6.32 In Syria, a major drought in 2006 led to a massive migration from rural areas to the outskirts of urban centers nearby or to Damascus and Aleppo. Over 300,000 families left the northeast of the country, either permanently or semi-permanently. In a region in which men are

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43 While the relationship between climate change impacts and migration cannot be reduced to simplistic causality, the impact of climate change will likely be an important determinant of migratory behavior in the future.
attributed primary responsibility as income earners, male family members in particular were expected to leave the community to find alternative sources of income (Osman-Elasha 2010).

6.33 This type of migration has contributed to the increase in the number of female-headed households in many areas. Other contributing factors are greater numbers of disabled males (caused by conflict), widowhood, and higher divorce rates (FAO 2005; IFAD/FAO 2007, UNDP 2005). In Egypt and Morocco, female-headed households are estimated at 17 percent of all households, though the true numbers are likely to be higher, due to male out-migration (FAO 2005).

6.34 While male migration can lead to increased power for decision-making by women, it can also contribute to vulnerability. Some female-headed households show improved well-being in some indicators (especially if the woman’s situation is out of choice) (UNDP 2005). However, most households headed by women are poorer than the small proportion of households headed by unmarried men (UNDP 2005). Among women heads of households in Egypt, roughly 80.5 percent have no landholding, which leaves them without an independent source of income. Dependence on male relatives for access to land and other assets connected to land ownership makes female-headed households particularly vulnerable. Also, the illiteracy rate for rural female heads of household is 73 percent, roughly 10 percent higher than the rate for all rural women (IFAD/FAO 2007). Illiteracy leaves women with less capacity to improve and diversify their livelihoods.

**Gender-based inequality and adaptation**

6.35 Gender inequality makes women and men vulnerable to climate change in different ways. Gender-based vulnerabilities are shaped by the interactions of gender with other factors; not all women or all men are able to draw equally on the resources needed for adaptation. The poorest socio-economic groups are typically the most affected and the least able to adapt. In rural areas in the Arab countries, women make up a large proportion of some of these groups, including small farmers and the unemployed (IFAD/FAO 2007).

6.36 Countries in the Arab region have achieved great advancements on key gender indicators. Investments in girls’ and women’s education, health, and some advances in women’s civil and political rights have made major inroads in closing the gender gap in these fundamental human rights. These significant improvements in the status of women have resulted in observable progress on important social indicators. Women’s life expectancy has increased and fertility rates and maternal mortality rates have decreased. Arab countries have made significant strides in female literacy and education, largely catching up with other low- and middle-income countries (UN/LAS 2010; IFAD/FAO 2007; UNDP 2005) (see Table 6.1).

6.37 But challenges remain, and these improvements have not necessarily translated into gender equality in other domains. Women continue to suffer legal and socio-cultural constraints to their agency both within and outside the household (World Bank 2012). Women continue to have much less access to land, economic or other livelihood opportunities, and lower civic and political participation rates. Arab countries have some of the lowest rates for women in the world on indicators related to these areas (see Table 6.1). However, data on such indicators do not necessarily represent women’s economic or social and political roles accurately: much of women’s work—especially in rural areas—is “invisible” in national statistics, and their roles in social and political development are often underestimated (Box 6.5).

44 Households headed by women in the absence – whether temporary or permanent – of adult males who otherwise supply the main source of income for the household.
The paucity of sex-disaggregated data on indicators that are essential for addressing gender-related concerns in climate change adaptation in Arab countries is a fundamental challenge. First, the general availability of socioeconomic data is limited across the region, especially for rural areas. Where general data exists, sex-disaggregated data is typically only available for the most basic indicators. The tools necessary for collecting sex-disaggregated data need to be incorporated into existing data collection processes.

In addition, innovative data collection methods that capture information not measured by traditional methods and standard indicators are needed to understand gender-related challenges and opportunities in climate change adaptation. These need to include qualitative methods such as time-use surveys, focus groups, direct observation, and informant interviews. This is crucial for capturing a better picture of the application of women’s capabilities in their roles in sustaining livelihoods and human welfare. These roles are significantly undervalued in national accounts across the Arab region, which mostly ignore informal markets and unpaid family labor and production. Indicators on decision-making also do not capture the informal and indirect influence women in particular may have in the household and in political processes. Women’s vital roles in agriculture, as household managers, and as managers of natural resources and ecosystems are not accounted for in national accounts systems and statistical tools. Since these derive from models of human production that measure contribution in terms of goods and services exchanged in the market and their cash values, they do not reveal the significance of the unremunerated work carried out by so many women in Arab countries. It is essential that the significance of these roles be identified through such innovative data collection strategies.


Women’s access to resources is limited

6.38 Many people lack secure access to property, land, and resources in rural areas in Arab countries. But, women’s access to productive assets, especially fertile agricultural land, is further limited by socio-cultural practices that reinforce male control and ownership of those resources, despite the role women often play in their management.

6.39 Overall, women make up a small proportion of total landowners: 24 percent in Egypt, 29 percent in Jordan, 14 percent in Morocco, and only 4 percent in Syria. There are even fewer female landholders: 45. In 2000, showed that Algeria and Egypt had the lowest proportion of female landholders out of all African countries surveyed, just 4.08 and 5.22 percent respectively (FAO Agriculture & Gender Toolkit 2009). When women do own land, they tend to own smaller plots (IFAD/FAO 2007).

6.40 There are few formal regulations prohibiting women from owning land. Historically, Islamic law has protected the rights of women as independent legal persons entitled to own land, property, and money in their own names, regardless of marital status. However, a combination of a lack of awareness among women of processes of land acquisition and titling, customary discrimination, and the persistence of the cultural idea that land is owned by men (Obeid 2006) has weakened this protection. It is common for women to lose their formal rights to land due to informal practices that exclude them in order to avoid the division of land or to keep land in the family: delaying or controlling women’s marriages, giving women cash compensation in place of land, or employing customary laws to ensure that land cannot be divided up are all practices that limit land ownership for women (Obeid 2006). In some countries there is a lack of land ownership records, and particularly of related sex-disaggregated data, which compounds the problem and constrains analysis (see Box 6.5).

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45 Landowners may not live on or work the land they own. Landholders live on and work the land they own. Many middle class female landowners—who often inherit land—rent their land to others, mainly men. (IFAD/FAO 2007).
6.41 Lack of land ownership has serious implications for women’s adaptive capacity including:

- **Difficulty in accessing credit**—Land tenure and property rights are usually required as collateral for loans. This seriously constrains women’s options for improving agricultural productivity and sustaining their livelihoods in the context of climate change;

- **Insecure access to water, since land and water rights are closely related**—This lack of water rights also precludes women from membership in water user associations; and

- **Limited membership in rural organizations, since membership is often restricted to heads of household and named landowners**—This can cut women off from decision-making processes, support systems, new technology or techniques, and training.


**Opportunities for women to improve and diversify their livelihoods are constrained**

6.42 Women lack opportunities to improve or diversify their livelihoods, making them more vulnerable to climate change (UNDP 2005; FAO 2005; IFAD/FAO 2007). A limited labor market, restricted mobility, occupational segregation, a mismatch between skills acquired in school and labor market demands, and the strongly gender-based division of labor constrain both men’s and women’s ability to improve existing livelihoods or to find alternatives. However, women’s opportunities are particularly limited because they tend to be poorer than men and have lower levels of human development. Poverty lowers a person’s capacity to seek, train, or engage in alternative livelihoods, while low human development leads to decreased skills and productivity in existing livelihoods. Rural women face additional challenges to improving existing livelihoods—by increasing agricultural productivity, for example—because they have less access to extension services and credit (FAO 2005, IFAD/FAO 2007, Kaisi and Alzoughbi 2007).

6.43 The overall rate of female participation in the labor force for the region is only 26.7 percent; this is well below the global average for low- and middle-income countries, which is just over 50 percent (see Table 6.1). Women represent approximately 50 percent less of the labor force than men in Arab countries overall. It is not that women do not work; it is that they are often not paid for their labor and it is not always recognized as work (FAO 2005). Because women perform the majority of agricultural labor (see Figure 6.2), they often have fewer skills to apply to other types of work. In most Arab countries, however, rural men are expected to maintain their status as breadwinner for the family, and they will typically seek alternative employment when faced with unsustainable rural livelihoods.

**Human development challenges are different for men and women**

6.44 Challenges to human development, especially those related to health and education, are often different for men and women. These challenges are exacerbated by continued population growth (IFAD/FAO 2007). Maternal mortality rates are 367 per 100,000 births in the central sub-region, higher than global developing country averages (see Table 6.1). While data is lacking, there are clear indicators that there are other health problems that disproportionately affect rural women and children. This is often due to the inadequate provision of primary health care. Significantly, rural children are 1.7 times more likely to be underweight than urban children in Arab countries, and child mortality rates remain high in the region’s least developed countries (IFAD/FAO 2007). Although Arab countries have made progress in education for women, there are also still gender gaps in literacy and education in the Arab world; on average, literacy rates are over 15 percent lower for
women in Arab countries. This is particularly troubling in terms of people’s capacity to adapt to climate change, since illiteracy rates are strongly correlated with poverty (IFAD/FAO 2007).

6.45 During the prolonged drought in northeastern Syria in 2006, up to 80 percent of those severely affected lived mostly on a diet of bread and sugared tea. Obviously this is not enough to meet daily nutritional needs for a healthy life. In addition, women, unless pregnant, were expected to forego a meal during food shortages. School dropout rates were high, and enrolment in some schools in northeastern Syria had decreased by up to 80 percent. This was partly due to families migrating, and partly due to children being sent to work to supplement family income (UNDP 2009). According to local reports, girls were often the first to be taken out of school. These inequalities in human development, worsened by the impacts of drought, reduce women’s resilience and capacity to adapt.

6.46 The result of women’s lack of opportunities to develop alternative livelihoods is a growing untapped potential in Arab countries. Despite having increased women’s productive skills and earning capacity through education, the region is not benefiting fully from its investment. The low rate at which women transition from school to the labor market is a major obstacle to development in the region. Simulations using household survey data show that the benefits of enhanced participation of women in the labor force are positive for the entire household; raising average household incomes by up to 25 percent (World Bank 2004).

Limited participation by women in decision-making weakens a country’s overall ability to adapt

6.47 Low female participation in decision-making at household, community, and national levels is a major obstacle to sustainable adaptation. Women’s participation in parliament ranges from 5 to 15 percent in the Arab region, averaging just over 9 percent (see Table 6.1). This puts Arab countries significantly below the world average of 18 percent, and behind all other regions. The next lowest regional average is for South Asia, where women hold 14 percent of seats in parliament (World Bank 2009b, 2007 figures). At the community level, women’s agency to participate and organize in formal and informal groups, become members of rural organizations, and to act independently is limited. Though more research is needed to understand fully why this is the case (FAO 2005), traditional restrictions on women’s mobility and autonomy, socio-cultural norms that strengthen men’s decision-making power, women’s daily burden of labor, and their lack of access and rights to livelihood assets help explain the problem.

6.48 Women’s roles in decision-making and social and political development are sometimes underestimated. Gender roles and norms are not impervious to change, and many women in Arab countries do play significant roles in decision-making at all levels. Within the household, women wield more power in decision-making in areas in which they are central to the process of production; for example, in some regions women have significant power over the management of dairy and poultry production (Obeid 2006; IFAD/FAO 2007; FAO 2005). Gender dynamics in decision-making about rural livelihoods have sometimes been subject to significant change, typically to the detriment of women’s authority, with the introduction of new technologies and mechanization that reduce the need for the time-consuming contributions of women (Obeid 2006; Chatty 1990, 2006). In terms of wider social and political action, in many areas women were instrumental in leading and organizing the popular movements for political change in 2011 (The Guardian 2011).

6.49 Further activating women’s roles as leaders in planning and implementing adaptation options will empower women to address the issues that affect them the most. In addition, it will allow women to contribute their valuable knowledge to adaptation decision-making. For example, in the southern region of Syria, women have specific local knowledge of indigenous plants and their uses for food or medical purposes. This can help reduce the risk of illness in the wake of exposure to climate change impacts (Kaisi and Alzoughbi 2007). Overall, women’s knowledge can contribute to
biodiversity protection (and lower sensitivity to climate change impacts), community resilience, and the increased effectiveness of adaptation projects (Demetriades and Esplen 2008).

6.50 Finally, it should be noted that 65 percent of the population in Arab countries are below 30 years of age and that this demographic change will certainly alter current gender dynamics. The youth are likely to have been raised in smaller families (both with fewer children and in households more separated from the extended family than has generally been the norm in the past), where gender disparities are often less pronounced (World Bank 2004). Tapping the full potential of youth will be essential for building resilience in the region.

REGIONAL CASE STUDIES DEMONSTRATE HOW GENDER MAKES A DIFFERENCE IN ADAPTATION

6.51 This section explores three case studies on key sectors: water scarcity in Yemen, agricultural livelihoods in Morocco, and drought in the northeast region of Syria. A fourth case study looks at the development of a gender-responsive approach to adaptation governance in Jordan. These case studies give contextualized examples of some of the gender-related issues in adaptation in the region which can help to understand the gendered determinants of vulnerability, resilience and adaptation and how they interact (Ford et al. 2010).

Managing Increasing Water Scarcity in Yemen

6.52 Water scarcity, caused by overexploitation and climate change, and water quality problems are very tangible in poor Yemeni communities, which lack the means to manage local water resources efficiently and sustainably. Low household income is strongly correlated with difficulty in obtaining sufficient water. Higher-income families are able to buy water, which often means that water becomes a man’s responsibility, weakening women’s otherwise significant role and influence in water management (Pelat 2006). In addition, qat-growing competes with domestic and agricultural water use because of its profitability as a cash crop (Assad/GTZ 2010).

6.53 In Yemen, many rural communities that depend on family-based traditional farming respond to climate change mainly with sensitivity-reducing strategies rather than long-term adaptation. The adaptation strategies that are employed are restricted to migration to urban areas or overseas. Other possible strategies, such as migration within rural areas, home-garden agriculture, increasing market activities and sales, and handicraft projects are rarely adopted (World Bank 2011a).

6.54 In areas of Yemen with little or no access to piped water or energy sources (such as gas stoves), women are predominantly responsible for providing clean water and fuel for the household. This daily task can be very time-consuming in the arid climate of Yemen. Research in Yemen has found that men believe that helping the woman in these activities will undermine their position within the society (Assad/GTZ 2010). One survey found that 58.4 percent of women surveyed reported spending time in water collection, compared to just 7.8 percent of men (Koolwal and van de Walle 2010).

46 Qat leaves contain a mild stimulant and are chewed by most Yemeni men, women and children. The cultivation of qat plays a major role in the economy—accounting for around 8 percent of GDP and 40 percent of agricultural GDP. Nearly 15 percent of the workforce is employed in its production and marketing, and it uses 25 percent of Yemen’s irrigated land and 30 percent of annual water usage. Many poor people consume it at the expense of their basic needs, and incur social and health costs as a result. Qat results in the loss of huge numbers of working hours on a daily basis and represents a major challenge to Yemen’s development and food security. (IFAD/FAO 2007).
The persistence of this gender-based division of labor means that women are forced to spend more energy and time providing water as the distance to clean water increases; water scarcity affects women most directly. Despite women’s role in water management, their participation in decision-making processes at the household and community level remains weak (Assad/GTZ 2010).

Yemen’s water crisis is a serious issue for women and their communities. Firstly, clean water is a direct determinant of health: inadequate access has led to the spread of diseases such as malaria, bilharzia, and diarrhea (World Bank 2011a; Assad/GTZ 2010), and water scarcity has implications for food security and malnutrition, which often disproportionately affect women and children. Child health indicators for Yemen show that there are already serious health issues that could be further exacerbated by increasing water scarcity: 57.7 percent of children under the age of five are stunted and 43.1 percent of children of the same age are underweight—only 4.5 percent less than a decade earlier (WHO 2011). These are some of the highest figures among all Arab countries.

Water scarcity also affects communities by worsening women’s “poverty of time;” the amount of time women will need to spend coping with the impacts of climate change can be seen as a good measure of their severity (Awumbila and Momsen 1995). The ramifications of water scarcity include:

- **Female education:** Increased time spent by women in providing water (and also fuel) can exacerbate existing constraints to girls’ education. An already large gap between male and female educational enrollment is widening because girls are increasingly needed to help collect water (World Bank 2011a; Assad/GTZ 2010; Hemmingsgapihan 2011; IRIN 2009).

- **Income-generating activities:** In one study of two communities with no access to piped water or gas stoves, on average less than 25 percent of a family’s time was devoted to productive activities. By comparison, for one family with a gas stove, the women spent an average of 46 percent of their time in productive activities. In communities with access to piped water and gas stoves, the average percentage of time devoted to productive activities was between 38 and 52 percent. (Hemmingsgapihan 2011).

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48 Constraints to girls’ education in Yemen also include the need for segregated classrooms and sometimes some resistance on the part of male family members, with whom the final decision normally rests. The youth female literacy rate is 24 percent lower than the rate for male youth (72 percent versus 96 percent), and the ratio of female to male primary enrollment is 80 percent.
49 Some research has found that boys and men may assist or accompany girls and women in the collection of fuelwood in Yemen where they have to travel long distances or where it is dangerous for them to go alone. Energy poverty can therefore affect male community members also. (El-Katiri and Fattouh 2011) This may be the case for water scarcity in some areas as well.
• **Health:** Caring for children and other household members becomes a heavier burden. A one hour reduction in the time it takes to collect water each day has been found to improve both child health and education—especially for girls, but also for boys (Koolwal and van de Walle 2010).

• **Participation in water management and decision-making:** Less time is available to take part in water management organizations and projects that could increase adaptive capacity and women’s status.

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**Box 6.7 Community-Based Water Management in Yemen: Improving Climate Change Awareness, Water Management, Child Health, and Empowering Women**

A community-based water management project implemented in Amran district in Yemen by GTZ had a strong focus on gender. In particular, it concentrated on:

- Building women’s capacity to strengthen their effective participation in water management-related decision making
- Raising women’s awareness of methods to conserve and purify water to mitigate the potential health risks of drinking contaminated water

Project components included strategies to empower women:

- Literacy classes for over 800 women, which were taught by selected young women from the community who received training in adult teaching techniques.
- Thirty-eight Village Water Committees (VWCs) were established and led by community members, with effective female participation.
- Sand-filters were distributed to schools, mosques and local NGOs. The Yemeni Women’s Union (YWU) played a leading role in raising awareness of the health benefits of sand filters. Local women were trained in filter usage, cleaning, and maintenance, with more than 7,000 residents participating in training programs.

Positive results for:

- **Water management:** Female VWC committee members noted that women’s participation in the committees meant that they were more able to address the real needs of the water sector in villages and to raise awareness about village cistern management and use.
- **Health:** Local women reported reductions in water-borne diseases affecting children, and decreased expenditures on health services.
- **Attitudes to women:** The effective participation of women in the project and in the VWCs helped to sensitize men to gender inequalities in the impacts of climate change, by increasing religious and community leaders’ recognition of inequalities that adversely affect women.
- **Women’s empowerment:** Some female committee members noted that women’s experience as members encouraged them to take part in elections for the local council.

*Source: Assad/GTZ 2010, Field notes.*

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**Sustaining Agricultural Livelihoods in Morocco**

6.58 Rural communities of small farms in the High Atlas region of Morocco are largely self-sufficient in food, fuel, fibers, fodder, nutrients, and herbal medicines. They also feed a large proportion of the urban population (Messouli and Rochdane 2011). However, the mountains and steppes of Morocco are considered among the regions that are most vulnerable to climate change in Arab countries. Communities in the High Atlas Mountains are already experiencing changes in temperature and rainfall patterns.

6.59 Gender and adaptation to changing climatic conditions in agricultural societies in Morocco can best be understood by addressing the connections between climate change, agriculture, and rural poverty. In rural communities, the division of labor between men and women is unequal, with women undertaking all domestic tasks and many agricultural tasks, including gardening, milking,
harvesting, olive collecting, and work in the fields. They are also heavily involved in cattle breeding and cultivating cereals, legumes, and industrial crops. Overall, the agricultural sector employs approximately 92 percent of economically active rural women, 32 percent of whom are under the age of 19. They contribute more than 50 percent of agricultural labor (Messouli and Rochdane 2011).

6.60 Conversations with farmers about how they are coping with the changing conditions make it clear that men and women have different stories to tell. Men speak of migrating while women talk about new activities taken on at home. These accounts suggest that gender roles shape the actions of farmers in response to climate change. Men frequently undertake seasonal migration for herding and trading, leaving women to manage natural resources in the fragile mountain ecosystem. (Messouli and Rochdane 2011) Overall, agriculture has become increasingly managed by women (FAO 2005). At the same time, however, gender-specific challenges faced by the women remaining in rural areas make coping strategies more accessible than long-term adaptation strategies. Without addressing these gender-related challenges, the feminization of agriculture can lead to reduced resilience of agricultural livelihoods to the impacts of climate change.

Box 6.8 Perspectives on Addressing Gender-Related Challenges in Adapting Agricultural Livelihoods in Morocco

In response to growing rural poverty, the 2020 Rural Development Strategy of the Moroccan Ministry of Agriculture emphasizes the multifunctional role of agriculture, the importance of empowering women farmers, and the need to recognize them “as producers and managers of ecosystems.” The government priorities on gender are also reflected in the launching of the National Initiative for Human Development as an efficient and ambitious approach for eliminating poverty and gender discrimination.

The Moroccan government, with international assistance from the World Bank, FAO, the Japan International Cooperation Agency, and UNDP, has initiated projects to teach women essential skills such as technical supervision. Improving women’s skill-mix, reducing the use of wood for fuel, promoting biogas and solar energy, and digging wells equipped with manual pumps improves agricultural practices and alleviates the time and energy women spend carrying out household chores. As a result, women living in rural agricultural areas in Morocco have begun to boost their incomes through farming.

In the semi-arid regions in southern Morocco, around the town of Sidi Ifni, known for being Morocco’s cactus capital, every family has its own plot. With backing from the Ministry of Agriculture, the program to transform small-scale production into a significant industry is underway. People used to grow prickly pear cactus to halt encroaching desertification, as a wind barrier, to enhance soil structure, and to provide water and feed for animals. Previously consumed as a fruit, today the cactus is creating a small economic miracle in the region: thanks to new health and cosmetic products being extracted from the ubiquitous plant. Beside techniques for cactus cultivation, children and women in all families are receiving training to use cactus in cooking, and in the production of cosmetics.

Many women work in factories a short distance away where the fruit is peeled and then the pulp is separated and used to make jam. The seeds which are ground to produce oil are the most lucrative part of the plant. The oil is used in more than 40 cosmetic products and sells at a very high price as pure skin oil.

As demand for these plant products has grown, investment in cactus has become part of the Green Morocco Plan, whose target is to cultivate 25,000 hectares of cactus every five years.

Members of the cactus cooperative say that women’s status has increased and their lives have been transformed by growing this plant. They stressed that: “We could never have imagined that we could get such a good income from it. You don't have to be educated to work in the factories. Our children are feeling the benefits. There is much more money to be made out of cactus and it is women who are earning it.”

Adapting to drought in northeast Syria

6.61 From 2006 to 2009, the northeast region of Syria, home to roughly 60 percent of the country’s poor, was affected by a multi-year drought cycle that forced adaptation or abandonment of traditional livelihoods (World Bank 2011b), exacerbating already increasing poverty rates (Laithy and Abu-Ismail 2005). The most visible effect of the drought is the massive migration that has occurred since its onset, with over 300,000 families having migrated out of the region, either permanently or semi-permanently. Climate variability and change is one factor in the growth of poverty in the area, since most livelihoods are dependent on rainfed agriculture. Agricultural laborers in the region—a significant proportion of whom are women and children—generally have low skill levels and undertake seasonal work.

6.62 Men and women consider different response options, and at different stages. No formal survey has yet been conducted among the migratory population, but anecdotal evidence suggests that men have tended to travel south to work as farmers and herders among nomadic tribes near the Jordanian border. By contrast, where entire families have migrated due to the severe circumstances, women have chosen to travel west to the coastal zone, where greenhouse production of vegetables near Aleppo provides an opportunity for employment (ACSAD).

6.63 The separation of the core family unit is a breach with the customary family structure and has immense impacts on men, women, and children. Unfortunately, little is yet known about the situation of migrants. Yet, new evidence is emerging that suggests that the impacts are both adverse, including isolation and an increase in divorce rates, and opportune, such as women gaining greater social and financial independence through new economic opportunities (ACSAD).

6.64 As men and women transition from rural livelihoods to urban livelihoods dependent on informal safety nets, remittances, and public services, traditional gender roles come under pressure to conform with the demands of a new environment, and women and men are faced with different challenges and opportunities to sustain and strengthen their roles and authority. One of the most significant factors triggering a renegotiation of gender relations is change in day-to-day activities. With urban resettlement, women’s roles are often reduced to attending to daily chores, while the loss of their control over natural resources can diminish their status. Meanwhile, men still handle the finances, and are likely to make daily visits to the market. In addition, interviews with Bedu communities reveal an increase in domestic disputes as a consequence of having no full-time occupation (Box 6.9).

6.65 Migration also provides new opportunities. In a Bedu community settled near Palmyra, children—both boys and girls—who previously attended to the sheep and undertook daily chores, are now enrolled in primary education. Families also often report better nutrition and improved access to health care services (Box 6.9). Opportunities for employment in the service or production industry may also play a role, though this pull factor is rather complex and may only be realized by the next generation. In areas where men’s skill-sets are low and economic inequalities are great, migration is not necessarily empowering: men may be vulnerable to exploitation, harsh working conditions, and low pay. It is common for young male members of the family to work outside Syria, often in Lebanon, and send home remittances. Among some families it is also acceptable for a young woman to take up work. However, the already high levels of unemployment, particularly among young people, and especially young women, and general lack of technical skills in demand in urban employment, may mean that increased migration as a result of extreme climate events such as drought does not easily yield such opportunities.
Box 6.9 Interviews with Bedu Communities Near Palmyra, Syria

The community consists of 20 families of the Sba’a tribe, who in 2008 were forced to sell their 200 sheep due to the increasing cost of forage. They left the Badia rangelands and settled on the outskirts of Palmyra and are now supported by relatives. The impact of the drought has changed the fabric of the community and affected their nutrition, education, and gender relations. Today their diet has improved as they shop daily in the market. The government has sent a teacher to their settlement, so children attend school rather than tend to sheep and other chores. In addition to housekeeping and childrearing, the women used to be responsible for managing the sheep, but now they spend all their time at home. These changes have placed increased stress on the traditional community dynamics, making coping difficult and increasing the incidence of intra-communal fighting. The community has no plans for the future. Yet, given the chance, they would consider going back to the Badia rangelands with 20–30 sheep as the pasture is greener today and the price of sheep has increased.

Source: authors’ interview with local communities in April 2010.

6.66 Among those remaining in the northeast, there has been a sharp rise in female-headed households. Some female heads of households left behind may have fallen into poverty. Others, benefitting from remittances, may have gained increased autonomy and authority. The impact on nutrition, health, and education in northeastern Syria was devastating at first. Women, unless pregnant, are typically expected to forego a meal during food shortages. School dropout rates were high, and enrolment in some schools in the region has decreased up to 80 percent; partly due to families migrating, and partly due to children being sent to work to provide an income (UN 2009). Local reports state that girls are often the first to be taken out of school. It is crucial that such trends are documented and analyzed in the design of appropriate policies to support those most vulnerable to extreme climate events such as droughts, as they strive to adapt their livelihoods.

Instruments for Gender-Responsive Climate Change Adaptation in Jordan

6.67 Integrated, gender-responsive frameworks are needed to address the challenges and identify the opportunities explored in this chapter. Such frameworks have been developed in the global sphere and are being implemented by donors, development agencies, NGOs and national governments. Building on the integration of gender concerns in disaster risk reduction, gender mainstreaming has been an important tool for increasing the gender-responsiveness of many development efforts. Gender mainstreaming is a process for making gender a routine concern in the governance and implementation of all development processes in all areas, at all levels. This means developing and incorporating gender-sensitive indicators in all stages of a policy’s or project’s life cycle, including design, implementation, monitoring and evaluation (UNEP 2009). More than simply adding women’s participation onto existing strategies and programs, gender mainstreaming is intended to bring the diverse roles and needs of women and men to bear on adaptation and development processes. It aims to transform unequal social and institutional structures to make them more responsive to gender differences and inequalities, with the overall aim of promoting equality.

Box 6.10 Equity in Adaptation is Crucial

“For adaptation measures to be effective and sustainable, it is very important to consider the dimension of equity in the planning and implementation of activities. Equal involvement of men and women in adaptation planning is important not only to ensure that the measures developed are actually beneficial for those who are supposed to implement them, but to ensure that all relevant knowledge … is integrated into planning.”

Source: Osman-Elasha 2009.

6.68 Jordan was one of the first Arab countries to engage with global climate change bodies such as the UNFCCC. Early on, the country formed the basis of a national framework for adaptation...
and mitigation actions, but this framework did not consider the socioeconomic dynamics or gender-differentiated impacts of climate change in the country. Recently, however, Jordan, in partnership with IUCN, has become the first Arab country to launch a program for mainstreaming gender into climate change efforts.\(^{50}\) Jordan now has a framework for action for the period 2011–2016, including practical policy guidelines (see Box 6.11), and is taking steps toward a more integrated and sustainable approach to adaptation. Given the linkages between gender, climate change, and poverty reduction, attention to the gender-related dynamics of adaptation has been recognized as critical to the fulfillment of development goals, particularly the MDGs.

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<tr>
<th>Box 6.11 Overall Objective of the Jordanian Program to Mainstream Gender in Climate Change Policy</th>
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<td>To ensure that national climate change efforts in Jordan mainstream gender considerations so that women and men can have access to, participate in, contribute to and hence optimally benefit from climate change initiatives, programs, policies and funds.</td>
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<td>Source: Fidaa Haddad, Gender Focal Point, IUCN Regional Office for West Asia.</td>
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6.69 The government of Jordan is a signatory to a number of key international agreements that already commit the country to gender mainstreaming\(^{51}\). It ratified the Convention for the Elimination of All Forms of Discrimination against Women (CEDAW) in 2007 to guarantee men and women equal opportunities in terms of economic, social, cultural, civil, and political rights.\(^{52}\) Furthermore, the Jordanian government recognized that gender equality and women’s empowerment are means for promoting both development and resilience to climate change, and has adopted a participatory approach in improving local governance for sustainable and equitable management of scarce natural resources.

6.70 The process of mainstreaming gender in climate change policy and action in Jordan began in 2008–2009. National assessments were developed to examine the status of women and gender equality, the nature of climate change impacts, and how these issues are correlated in local contexts. The assessments also identified specific projects and policy options and outlined potential advocacy strategies. With support from the League of Arab States, GGCA/IUCN aimed to combine advocacy and awareness-raising in pilot projects developed for Arab countries, in partnership with governments and national and regional civil-society organizations. The aim has been to encourage gender mainstreaming in the Arab Framework Action Plans on Climate Change, which recognize specific vulnerable groups and acknowledge the importance of community participation and women’s involvement as positive contributors to adaptation strategies.

6.71 Recognizing the important role played by women in this context, the Jordanian government plans to mainstream gender perspectives into its Third National Communication. This is to be achieved by carrying out a systematic gender analysis, collecting and utilizing sex-disaggregated data, establishing gender-sensitive indicators and benchmarks, and developing practical tools to support increased attention to gender perspectives in the plan of action.

6.72 Informed by field visits and research, the gender mainstreaming program was based on the current national priority sectors concerning climate change identified by the Jordanian Government.

\(^{50}\) The program was launched in November 2010. See www.iucn.org/ROWA.

\(^{51}\) These include chapter 24 of Agenda 21 (United Nations Conference on Environment and Development, 1992); the Johannesburg Plan of Implementation (World Summit on Sustainable Development, 2002); paragraph K of the Beijing Platform for Action (Fourth World Conference on Women, 1995); the World Conference on Human Rights (1993); the International Conference on Population and Development (1994); the World Summit for Social Development (1995); the Millennium Declaration (2000); and the requirements and agreements set out in CEDAW.

\(^{52}\) Article 2(a).
A workshop attended by stakeholder representatives from women’s organizations—including the Jordan-based Arab Women Organization, the ministries of environment, water and irrigation, agriculture, finance, planning, and health, UNDP, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), academic institutions, and the National Center for Agriculture Research and Extension also constituted an important part of the process. The program elaborates the role of women as agents of change and emphasizes the importance of their knowledge for adaptation.

Box 6.12 Institutional Framework and Strategies for Mainstreaming Gender in Climate Change Adaptation in Jordan

1. Intergovernmental coordination for supporting the mainstreaming of gender in climate change efforts
   - Include a permanent gender expert on the National Inter-ministerial Committee on Climate Change.
   - Address climate change in the new National Strategy for Jordanian Women to ensure an important participatory role for the National Commission for Women.

2. Ensure that gender criteria are incorporated in the development of climate change projects in Jordan
   - The National Inter-ministerial Committee on Climate Change should play a key role in ensuring that gender considerations are fully integrated into projects.
   - Establish a Gender Consultative Support Group to the gender expert in the Inter-ministerial Committee. Members and expertise can be drawn from gender focal points from international organizations, the Jordanian National Commission for Women, women organizations and donors, among others.
   - Establish gender-sensitive reporting, monitoring and evaluation systems.

3. Strengthen capacity of the institutions implementing the program
   - Develop a common understanding of the main issues related to gender and adaptation in the country context.
   - Carry out systematic and ongoing gender training workshops and courses on specific issues for all staff, policy advisors, and senior managers—adapted to their specific responsibilities—to build capacity to incorporate gender issues throughout the project cycle and promote gender equality through their roles.
   - Adopt a learning-by-doing approach to training, to distil lessons from the field, and support bottom-up policy development. This approach will help overcome the failings of traditional training approaches in this field.
   - Build awareness of climate change issues among women’s organizations to enable them to identify opportunities for their full participation in the relevant processes.
   - Develop a specific training protocol to form an integral part of the national mainstreaming program. Seek support of international institutions in Jordan, such as IUCN and UNDP.
   - Establish gender-budgeting systems to ensure adequate resources are channeled to gender-responsive adaptation projects

4. Secure ongoing funding to support the gender mainstreaming program
   - Undertake an intensive campaign for fundraising, starting with donor meetings, for full implementation.
   - Pursue bilateral dialogue with important international funding mechanisms, such as the GEF, using opportunities such as the COPs and associated negotiating meetings.

5. Evaluate progress
   - Involve the gender expert in the preparation of national communications and climate change negotiations.
   - Circulate the program at national government level, NGOs, donors and civil societies for feedback.
   - Consider other measures of progress: In Jordan a key measure is that in May 2011 the Jordanian National Committee for Women’s Affairs’ National Strategy for Women in Jordan (2010-2015) included specific
MULTIPLE APPROACHES ARE NEEDED TO INCORPORATE A GENDER PERSPECTIVE IN ADAPTATION

6.73 The exact impacts of climate change in Arab countries are uncertain. What is certain, however, is that adaptation to the new realities will demand the full energy and potential of entire societies. This means that adaptation efforts must include and empower those who face the most barriers to developing their potential, and ensure equality of opportunity in the options for adapting to the changing climate in the coming years. At the same time, the current and future impacts of climate change add to the urgency of addressing the underlying causes of poverty and gender-based inequality and vulnerability, which represent significant challenges in Arab countries. Persistent gender inequalities are already putting huge strains on Arab countries’ political and socio-economic systems—strains that climate change threatens to exacerbate.

6.74 Both gender-responsive adaptation actions designed to adjust and protect livelihood systems from specific climate change impacts and actions that focus on reducing the underlying drivers of gender-based vulnerability to climate change are needed to meet the gender-related challenges in adaptation in Arab countries.

6.75 Adaptation strategies in Arab countries must act on the following:

- The impacts and responses to climate change in all sectors (including energy, water, agriculture, fisheries, health, industry, human settlements, disaster management, conflict, security, and others) are not gender-neutral.
- Women are important agents of change as managers of natural resources and as the household’s primary caretakers. They are key stakeholders and leaders in adaptation.
- Women are more likely than men to suffer adverse consequences from climate change due to persistent gender inequalities in Arab countries. Impacts include increased workloads, injury and health problems, reduced human development, and income loss.
- Women in Arab countries—especially female heads of households and their dependents—are more likely to be poor than men; and they lack access to resources, opportunities for alternative livelihoods, and participation in decision making structures. These gender-based inequalities intensify other drivers of vulnerability to climate change.
- Climate change constitutes a threat to development achievements and progress toward the Millennium Development Goals, including gender equality (MDG 3), because it threatens to deepen gender inequalities and worsen poverty.

Improve the Collection and Use of Sex-Disaggregated Data

6.76 One of the most important policy options for reducing gender inequality and improving gender responsiveness in adaptation is the institutionalized, accurate, and sustained collection of data on key indicators and its consistent use in all areas of research and policy making on adaptation. Such data collection serves to make visible what is otherwise invisible, enable comparisons between communities, regions and countries, assess change over time, and measure the effectiveness of policies and projects (Aguilar 2002) and is invaluable to improving adaptation strategies in both national and community level interventions.
6.77 Quantitative data, such as on disasters and extreme weather events, as well as qualitative data, such as on rural women and men’s use of time, can enable researchers to understand the impacts of climate change better and provide policymakers with the tools necessary for informed and gender-responsive decision making. The capture of relevant data to reveal the gender-related dynamics in all aspects of adaptation demands non-traditional methods of research. These need to be based on human welfare models that broaden the standard approaches traditionally taken at the national level to measure development (UNDP 2005). It is important to strengthen capacities and promote an enabling environment for qualitative research. Research methods need to include: time use surveys, focus groups, direct observation, and informant interviews.

6.78 Adaptation programs and activities should include local data collection for the establishment of a gender baseline, development of targeted and effective indicators, and transparent and participatory monitoring and evaluation systems. Collectively, this will help ensure awareness of underlying gender patterns, accurate assessment of women’s and men’s different needs for assistance and capacity building, and strengthening the voice of the most vulnerable groups, including women.

6.79 Some of the key indicators for which sex-disaggregated data are required are:

- Development indicators on health, literacy, education, employment, and political participation
- Household-level data on micro-economic impacts of long-term environmental change
- Time use
- Relationship to natural resource collection and use
- All aspects of impacts of, and responses to, extreme climate events, including injury and mortality, and factors surrounding choice of adaptation response
- Participation and leadership in all types of agricultural/water/land organizations
- Participation rates in training programs
- Differentiated access to credit and technical assistance
- Sex of household-head/main income earner(s)
- Numbers of households headed by men, women, or couples; those with access to improved water and sanitation; those who own land
- Ownership of land and property

Build Resilience to Climate Change through Increasing Gender Equality

6.80 Tackling the specific drivers of gender-based vulnerability to climate change is critically important for building resilience. Holistic development is vital for reducing vulnerability, and cannot be achieved without tackling gender inequalities. Investment in broader development goals will build communities’ capacity to adapt and reduce sensitivity to climate change. If harmonized with the adaptation needs of the region, this is a “no-regrets” approach to climate change adaptation.

6.81 Arab countries need to continue to address gender inequalities in all aspects of life by tackling the socio-cultural, political, and economic mechanisms that maintain them. Priority areas for the region are improving: access to resources and assets, economic and alternative livelihood opportunities, and participation in political and decision-making processes. Adaptation projects need to identify women’s and men’s specific needs through a framework of gender mainstreaming. However, it is also essential to continue the broader progress achieved in gender equality, including in health, education, economic participation, agency and political participation at all levels, as well as to reform any discriminatory laws and customary practices that affect women’s civil rights, autonomy, and capacity to adapt, in order to build resilience.

6.82 The most important goals are to:
• strengthen and deepen recent gains in gender equality, such as in education, health, employment, and political participation;
• improve awareness of climate change and adaptation, particularly among rural women;
• focus on improving women’s access, resources and mobility to take part in decision-making processes on policies and practices affecting their livelihoods at both the national and local level;
• develop gender-inclusive extension services to build women’s capacity to manage natural resources sustainably and increase agricultural productivity;
• provide skill-development, knowledge-building opportunities, and better access to credit, for rural women to improve and diversify their livelihoods and secure the welfare of their families;
• reform areas of law and customary practice that limit women’s ownership of land and property and access to natural resources, including reform to social institutions that privilege men over women as providers for their families;
• develop targeted safety nets and subsidies for the most vulnerable;
• increase awareness of the drivers of gender-based vulnerability to climate change among women’s organizations to encourage them to take action to address these specific issues.

6.83 Continued progress on development for both women and men is needed both to facilitate these aims in terms of increasing gender equality, and to build resilience. In particular, it is essential to address the drivers of vulnerability to climate change among rural populations in general, including for men. As outlined in Chapter 4, Arab countries need to invest in their rural economies and develop social protection frameworks that benefit the most vulnerable, including, but not exclusively, women. Improving opportunities for men who choose or are forced to remain in rural areas is needed, since solutions for poor men must be a part of policy to promote women’s rights, knowledge, power and assets (da Corta and Magongo 2011).

Develop Gender-Responsiveness in Adaptation Strategies and Projects in all Sectors

6.84 New frameworks, principles and capacity-building efforts are needed for developing and implementing gender-responsive adaptation. There is no one-size-fits-all set of policies for addressing all the issues explored in this chapter. Standardized solutions from other contexts—if imported without modification—could lead to the erosion of local methods for increasing resilience (Magnan et al. 2009). The methodological tools developed by international institutions, and in other regions, for building a gender-responsive approach to adaptation are essential, but they should be adapted to fit the local socio-cultural context. They should be targeted at women and men and aim to activate the full potential of gender-specific knowledge in adaptation.

National and institutional level: mechanisms to integrate gender concerns in adaptation

6.85 The overarching set of tools for building the capacity of institutions to integrate gender-responsiveness in all aspects of adaptation planning and management is encompassed within gender mainstreaming. An institutional framework and guideline of strategies for implementing a gender mainstreaming project at the national government level, based on the Jordanian experience, is outlined in see Box 6.13 Since the launch of this project, a number of other Arab countries, beginning with Egypt and Bahrain, have also begun to work on similar projects. Other countries need to start the process of systematically integrating a gender perspective into their adaptation strategies.
6.86 The major steps are to:

- establish coordination between all relevant government bodies and other institutions through the formulation of a network of gender and climate change experts or focal points;
- develop understanding of what the main gender and adaptation priorities in the local context;
- incorporate gender-based criteria in climate change strategies and programs;
- strengthen the capacity of institutions implementing the mainstreaming program to conduct the required research and restructure project planning, implementation and evaluation frameworks;
- secure on-going funding to ensure the continuation of the program;
- evaluate progress regularly and update program priorities, methods, and training materials accordingly.

6.87 One key problem with gender mainstreaming, as experienced in other areas of development, is that it can be seen as an end in itself, instead of a tool and a process; the inclusion of female participants, or the requirement to conduct training sessions on gender can become the goal, regardless of their actual impact. The translation of national-level policies to effective and consistent implementation of gender mainstreaming at the project level requires strong political will, capacity, and expertise, both in national governments and among the managers and staff of relevant institutions.

*Project level: planning, implementing and evaluating gender-responsive projects*

6.88 In order for adaptation projects to be gender-responsive, they must integrate instruments to identify the specific local gender- and adaptation-related issues, raise awareness of them, and develop strategies to address them – as a matter of routine. Key steps in this process include an initial gender analysis at the planning stage, which is essential for ensuring the project is genuinely gender-responsive in the communities in which it will be implemented, and evaluation during and after projects and policy implementation.

6.89 Adaptation projects in all sectors should address both the immediate, practical needs of women and men, and women’s strategic needs through working to empower them and build their capacities. Addressing women’s strategic needs in particular will help tackle the underlying drivers of gender-based vulnerability in the long term. In Arab countries, particular attention should be paid to strengthening women’s participation in decision making – both quantitatively and qualitatively – and leadership. In addition, there needs to be a focus on the potential effects of women’s lower access to resources and opportunities for alternative livelihoods.

6.90 A key concern is to move away from a sole focus on vulnerable women to more inclusive gender analysis in adaptation that emphasizes power relations within society and makes other forms of socioeconomic inequalities visible as well. Gender analysis should isolate who holds the power to identify priorities and solutions and to shape debates and make decisions, and who does not, by looking at broader axes of inequality that reveal other forms of insecurity that also affect men (Demetriades and Esplen 2008).

53 Practical gender needs are the specific immediate needs of individuals, usually used in reference to women, to ensure their survival and well-being in their existing roles and within existing social structures (typically concerning living conditions, health, nutrition, water, sanitation). Strategic gender needs are needs whose fulfillment requires strategies to challenge male dominance and privilege, through addressing gender-based inequalities, for example in the gender division of labor, control of resources, and participation in decision-making. Often practical and strategic gender needs overlap, but it is helpful to use this framework for ensuring strategic gender-responsiveness in adaptation projects and policies for building resilience in the long term. (Reeves and Baden 2000).
Finally, in responding to climate change related disasters, Arab countries need to incorporate a gender perspective into all stages of planning and implementation of disaster risk management. This is necessary for building inclusive and resilient adaptation responses to extreme weather events before they turn into natural disasters. To minimize the impact of extreme climate events on the most vulnerable populations, action is necessary at three stages: (a) pre-disaster, to build local resilience by identifying sustainable adaptation options to keep affected livelihoods from further deteriorating; (b) during a disaster, by implementing a gender-sensitive response through systematic gender analysis at all stages; and (c) post-disaster, by identifying those most affected and targeting efforts to address their immediate needs and promote new livelihood opportunities. The box below provides a checklist for the formulation and implementation of gender-responsive adaptation projects and policies in all sectors.

Box 6.13 Checklist: Gender Mainstreaming in Climate Change Adaptation Projects and Policies

Have adequate financial and human resources been allocated for developing and implementing gender-responsive projects and policies?

Have surveys and analysis of gender roles, norms, power relations, and gender-specific constraints been carried out? Has attention been paid to other determinants of inequality, aside from gender?

Have women and men participated effectively in formulating the project concept and plan/policy?

Have the associated risks and opportunities for men, women, boys, and girls been adequately assessed?

Have men’s and women’s needs (practical and strategic) and preferences been identified?

Have differing vulnerabilities of men and women along other differences such as age, wealth, and ethnicity been identified?

Are the results of these analyses reflected in the formulation of the project/policy?

Have measures to address women’s specific constraints (e.g. increased time poverty and restrictions on their mobility) been incorporated?

Does the project/policy build on both women’s and men’s local practices and indigenous knowledge?

Is there an equitable sharing of benefits between men and women?

Have gender-sensitive indicators in monitoring and evaluation been included to measure the impact on both female and male beneficiaries?

Source: Adapted from UN joint programs – UN Agenda 25/ integrated gender issues in food security, agriculture and rural development 2010, Otzelberger 2011, Authors.
<table>
<thead>
<tr>
<th>Table 6.2 Summary of Policy Options</th>
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<tbody>
<tr>
<td><strong>Table 6.2a</strong></td>
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<tr>
<td><strong>Improve the collection and use of sex-disaggregated data</strong></td>
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<tr>
<td>Proposed policy options</td>
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<tr>
<td><strong>Address the underlying causes of vulnerability and differential poverty: Increase gender equality in assets, economic opportunities and inclusion in political and decision-making processes</strong></td>
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<td>Action</td>
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<tr>
<td>Train female community leaders to raise awareness</td>
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<tr>
<td>Link to general literacy and education initiatives</td>
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<tr>
<td><strong>Reform discriminatory laws and practices surrounding land and property ownership</strong></td>
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<tr>
<td>Joint spousal titling of land and property—amend marriage legislation to stipulate that property acquired during marriage belongs to both spouses</td>
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<td>Review and reform inheritance laws and practices</td>
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<td>Simplify and disseminate knowledge on land laws</td>
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<tr>
<td>Enforce land ownership laws</td>
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<tr>
<td>Reduce significance of marital status for legal status and land/property ownership</td>
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<tr>
<td>Improve existing land access programs, especially by increasing emphasis on gender issues in access to land</td>
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<tr>
<td>Support women’s collective schemes for securing land access rights</td>
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<tr>
<td><strong>Reform regulations for accessing credit</strong></td>
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<tr>
<td>Analyze gender differences in access to credit</td>
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<tr>
<td>Remove criterion of being a named land-owner</td>
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<tr>
<td>Design credit schemes specifically for women</td>
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<tr>
<td><strong>Reform membership practices of rural/land/water organizations</strong></td>
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</tbody>
</table>
| Analyze gender differences in participation  
Remove criterion of being a named land-owner | NGOs |  |
| --- | --- | --- |
| **Promote inclusive extension services,**  
**focusing on improving women’s access**  
Train female extensionists  
Promote good practices in rural extension services to ensure relevant knowledge and skills are transferred to women | National government – ministry of agriculture  
NGOs | Increased resilience to climate change  
Increased female agricultural productivity |  |
| **Increase women’s skill-development and capacity building opportunities**  
Training in community and political participation skills  
Business-related training  
Link to general literacy and education initiatives | National government  
Agricultural and other rural organizations  
NGOs  
Educational institutions | Incorporation of all community members makes adaptation more locally-effective and sustainable  
Sustain rural economies |  |
| **Promote and invest in innovative new areas of business in rural economies**  
Emphasize improving opportunities for women  
Conduct gender-sensitive value-chain mapping; foster women-centered value chains | National government  
Private sector | Sustain rural economies |  |
|  |  | Provide income generation opportunities for poor rural populations, especially women  
Sustain rural development |  |
<table>
<thead>
<tr>
<th>Solution Area</th>
<th>Implementers</th>
<th>National Adaptability</th>
<th>Global Impact</th>
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</thead>
<tbody>
<tr>
<td><strong>Tailor infrastructural development to reduce women’s domestic burden</strong></td>
<td>National government, Private sector</td>
<td>Increase resilience to climate change</td>
<td>Reduce women’s domestic burden</td>
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<tr>
<td>Improve roads</td>
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<td>Improve non-natural resource-based options for adaptation</td>
<td>Improve health and education indicators for women and children, especially girls</td>
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<td>Increase access to butane gas for heating and cooking</td>
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<td>Improve water access</td>
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<tr>
<td><strong>Targeted social protection frameworks</strong></td>
<td>National government</td>
<td>Increase resilience to climate change</td>
<td>Reduce women’s gender-specific vulnerabilities</td>
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<tr>
<td>Protective insurance mechanisms</td>
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<td>Enable female-headed households and their dependants to access the same resources as other households</td>
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<td>Subsidy schemes that target the sources of vulnerability for the poorest and most vulnerable</td>
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<tr>
<td>Targeted schemes to support female household heads and their dependants specifically</td>
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<td>Rural pension systems</td>
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<tr>
<td><strong>Sensitize men to new demands on women’s time and energy, and other gender-specific vulnerabilities to climate change</strong></td>
<td>NGOs and other institutions implementing adaptation projects</td>
<td>Greater potential for sustainable adaptation</td>
<td>Strengthen men’s roles in increasing gender equality</td>
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<tr>
<td>Include men in all women’s empowerment and gender and adaptation projects</td>
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<td></td>
<td>Move towards greater flexibility in roles and responsibilities for mutual empowerment</td>
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<tr>
<td>Raise awareness of detrimental effects of women’s increased time poverty on household and community and importance of finding solutions to this inequality</td>
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<td>Increase partnership approaches to adaptation challenges</td>
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<tr>
<td><strong>Base adaptation projects and policies on women’s and men’s local knowledge</strong></td>
<td>NGOs and other institutions implementing adaptation projects</td>
<td>Improve adaptive capacity</td>
<td>Women as key stakeholders in adaptation</td>
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<tr>
<td>Extensive local data collection</td>
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<td>Women’s traditional roles are valued</td>
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<td>Document and preserve local knowledge and</td>
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<td>Table 6.2 c</td>
<td><strong>Proposed policy options</strong></td>
<td><strong>Implementation</strong></td>
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<tr>
<td><strong>Gender-responsive adaptation</strong></td>
<td><strong>Intergovernmental coordination</strong></td>
<td>National government / national climate change committee</td>
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<tr>
<td><strong>Implement gender mainstreaming in national climate policy</strong></td>
<td>Appoint permanent gender expert on national climate change committee</td>
<td>National women’s organization(s) and committees/ gender units</td>
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<td>Establish cross-sectoral network of gender and climate change adaptation experts</td>
<td>NGOs and civil society, women’s organizations</td>
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<td><strong>Address climate change in national gender/women’s strategy</strong></td>
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<td>Establish cross-sectoral network of gender and climate change adaptation experts</td>
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<td><strong>Incorporate gender criteria in national climate change strategies</strong></td>
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<td>Establish gender consultative support group, drawing on wide range of parties</td>
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<td>Establish gender-sensitive reporting, monitoring and evaluation systems</td>
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<td><strong>Build capacity of the institutions implementing the program</strong></td>
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<td>Develop common understanding of what gender considerations are associated with climate change in the context.</td>
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<td>Carry out systematic and on-going gender training on specific issues for all staff – adapted to their specific responsibilities</td>
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<td>Adopt a learning-by-doing approach to training</td>
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<td>Build awareness of climate change issues among women’s organizations</td>
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<td>Develop a specific training protocol to form an integral part of the national mainstreaming program.</td>
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<td>Seek support of international institutions</td>
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<td>Establish gender-budgeting systems</td>
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<td><strong>Secure on-going commitments from funders to support the gender mainstreaming program</strong></td>
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<td>Intensive fundraising campaign for fundraising, starting with donor meetings</td>
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<td>Pursue bilateral dialogue with important international funding mechanisms. Use opportunities like COPs and negotiation meetings.</td>
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<tr>
<td><strong>Project level: planning, implementing and evaluating gender-responsive projects</strong></td>
<td><strong>Evaluate progress</strong></td>
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<tr>
<td>- Involve gender expert in preparation of national communications and negotiations</td>
<td>Allocate adequate financial and human resources</td>
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<tr>
<td>- Circulate program at national government level, NGOs, donors and civil societies for feedback</td>
<td>Carry out surveys and analysis of gender roles, norms, power relations and gender-specific constraints</td>
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<td>Ensure equal and effective participation of women and men in project/policy formulation and planning</td>
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<td>Identify and address risks and opportunities for men and women</td>
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<td>Identify women’s and men’s needs and preferences. Distinguish practical and strategic gender needs.</td>
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<td>Identify differing vulnerabilities of men and women along other differences (age, wealth, etc.)</td>
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<td>Integrate results of these analyses in project aims and planning</td>
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<td>Develop measures to address women’s specific constraints</td>
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<td>Study, document and build on women’s and men’s local practices and indigenous knowledge</td>
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<td>Ensure equitable sharing of benefits between men and women</td>
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<td>Develop and implement gender-sensitive indicators in monitoring and evaluation</td>
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Researchers and program officers of national and international development organizations/NGOs
KEY MESSAGES

- Climate change impacts are not gender neutral.
- Gender inequalities intensify vulnerability to climate change by increasing sensitivity to exposure to climate change impacts and reducing adaptive capacity.
- In Arab countries, women are among those least able to adapt to the impacts of change because: they are more likely to be poor than men; they are often responsible for natural resource and household management; they lack access to resources and opportunities for improving and diversifying livelihoods; and they have limited participation in decision-making.
- Women are key stakeholders in adaptation, and important agents of change. Arab countries need to focus on further empowering women to be effective leaders in adaptation.
- Climate change constitutes a threat to development achievements and progress towards the Millennium Development Goals, including gender equality (MDG 3), because it threatens to deepen gender inequalities and worsen poverty.
- To build resilience to climate change, Arab countries need to:
  a. improve the collection and use of sex-disaggregated data on relevant indicators;
  b. increase gender equality in all domains, particularly in access to resources, opportunities for improving and diversifying livelihoods, and in participation in decision-making and political processes;
  c. develop mechanisms to improve the gender-responsiveness of adaptation policies and projects at both a national- and project-level.
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