



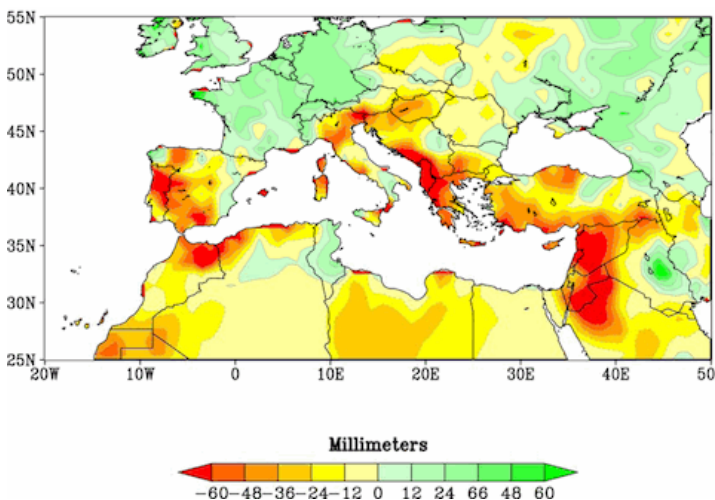
What does the analysis of WESS 2016 suggest for the ESCWA region? climate change and inequalities

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There is consensus in the scientific community that climate change is increasing frequency, intensity, spatial extent, duration and timing of extreme weather events at the global level. The ESCWA region is no exception. Over the last 25 years or so, the Arab region faced 276 natural disaster events, killing nearly 100,000 and affecting 10 million (UNISDR, 2015). National Oceanic and Atmospheric Administration (NOAA; 2011) of the USA concluded that (man-caused) climate change is a major factor in more frequent Mediterranean droughts that have been observed in recent decades (see the map below). Droughts adversely affect lives and livelihood of all people, but its impacts are uneven among people, with most damaging and lasting effects on the poor or the vulnerable. In a worst case, droughts erode the social fabrics among the people and the social contract between the people and the government. Droughts have often been considered as a cause for the on-going conflicts in Syria.

Figure: Observed change in cold season precipitation for the period 1971-2010, relative to the period 1902- 2010 in the Mediterranean region^a



Source: Hoerling et al. (2012), p. 2147.

^a Cold season corresponds to the period November – April. Reds and oranges highlight lands that experienced significantly drier winters during the period 1971-2010.

Needless to say, climate change is not the sole reason for the human crisis in Syria. The disaster results from a complex interaction of the natural and human “systems”, including climate

Summary

Climate change is a major factor increasing the frequency of droughts in the Mediterranean. Droughts adversely affect the livelihood of all people in the region, but their impact is uneven among them. People in rural areas suffer most not only because their livelihood is more dependent on climate conditions, but also because they do not possess assets to buffer climate shocks and social protection is not readily available. Policies designed to build climate resilience needs to pursue the reduction of immediate exposure and vulnerability as well as lead to way to the kind of transformative socio-economic change needed for achieving more equal societies.

change, land or, or more generally, environmental management, economic and social governance and demographic dynamics among other things. Climate change affects livelihood of people all over the world through complex interactions between the natural and human systems. On the other hand, with an effective water management, drought preparedness and social safety net in place, climate change, including droughts, does not necessarily lead to human disasters.

WESS 2016: Climate Change Resilience and Reduction of Inequalities

The *World Economic and Social Survey (WESS) 2016*, entitled *Climate Change Resilience: An Opportunity for Reducing Inequalities*, seeks to advance our understanding between climate and development, with a particular focus on impacts of climate change on the poor and vulnerable on the one hand, and economic and social inequalities on the other hand. Governments can build climate resilience for the poor and the vulnerable with a combination of transformative and incremental policies which, in turn, provides an opportunity for the nation as a whole to create a more equal society. WESS 2016 seeks to contribute to the debate on the implementation of the 2030 Agenda for Sustainable Development, as both climate change and equality constitute the core issues of the Agenda.

For the member States of ESCWA, planning for strengthening social and environmental resilience is not a new exercise.

According to FAO and UNISDR (2008), many countries in the region have developed anti-drought plans that seek proactive strategies; they can be implemented before, during and after drought to increase societal and environmental resilience and strengthen their capacity to respond to and recover from droughts. The Government of Egypt, the League of Arab States and UNISDR also organized a conference on disaster risk reduction in September 2014, in which the participants identified challenges and gaps remaining to reduce disaster risk before the third World Conference on Disaster Risk Reduction held in Sendai, Japan in 2015.¹

What distinguishes the WESS 2016 from other reports in this field is to argue that strengthening climate resilience requires a combination of climate-related plans and socio-economic policies to address long entrenched inequalities that prevail in our societies, particularly, for the benefit of people afflicted by poverty and socio-economic vulnerability. The effects of drought produce complex impacts that span various segments of the society and several industries of the economy. It affects not only the physical environment, but also the lives and livelihoods of people, and can induce social conflicts over limited water and other natural resources. It can also push emigration out of the area, spreading the effect to the neighbouring areas and beyond.

That is, building climate resilience needs to be an integral part of national strategies for sustainable development. This is very relevant for the ESCWA region since many studies predict that water stress and drought will increasingly challenge the region; climate change will increase water evaporation, reduce precipitation and change the timing of precipitation. In particular, temperatures, one of the most recognizable indicators in the region, are most likely to be affected by climate change, due to elevated solar radiation and heat-absorbent soils in the region (UNEP, 2015). These changes will affect yields of rain fed crops by declines in water availability, shorter growing seasons and wider degraded lands.

Uneven impacts on the poor and the vulnerable: case in the 1999-2001 droughts in Syria

It may be not difficult to imagine that the poor and the vulnerable are likely to be disproportionately affected by climate change because they are least equipped for dealing with any types of shocks. The difficulty is to access the extent and magnitude to which a climate event affects these groups of people, particularly relative to the richer segment of the population. Assessing drought impacts on different segments of a country is complicated by the availability of data and, even if data are available, the difficulties of attributing drought solely to observed data. To address at least some of these difficulties, a model-based approach can be useful in examining climate-related impacts on different segments of the country. An example is a case of the 1999-2001 droughts in Syria (Al-Riffai et al., 2012).

The 1999-2001 droughts lasted three years, about the average drought period over the past 50 years in the country. The drought led to yield reduction and, in some areas, to complete crop failure; yields for irrigated wheat dropped from 3.1 - 3.8 tons per hectare in 1998 to 2.7 - 3.1 tons per hectare in 1999, and; for non-irrigated wheat from 0.8 - 2.3 tons per hectare in 1998 to between 0 (complete crop failure) - 1.0 tons per hectare in 1999. Barely in non-irrigated areas experienced similar drops. For livestock which was more than 5% of Syrian GDP, the drought has largest impacts on sheep and goats with significant losses of 3.3 - 9.0% per year during 1999-2001, while the production of camels, which are known to be most water-stress resistant, has shown steady flows.

Droughts in general adversely affect macroeconomic conditions through reduction in agricultural production, declines in private consumption driven by a loss of income, and increased demand for imports, particularly substitutes for domestically produced foods. The 1999-2001 droughts are estimated to have reduced up to 0.8 percentage points of annual GDP from the base-line scenario in the first year and up to 1 cumulative percentage point during 5 years after the end of the drought.

The economy-wide impacts affected different groups of people. The number of people living below the poverty line is estimated to have increased by 0.69% in 1999 from the base-line in rural areas, compared with 0.30% in urban areas. Among the rural population, non-farmers are estimated to have suffered most, with more than a 1% increase in poverty rate. The largest increase among non-farmers is mostly owing to greater impacts experienced by Bedouins, a minority ethnic group, who account for a large share of the non-farmer category in Syria.

These model-based estimates show that impacts of drought are uneven among different groups of people and greater among rural population. Among the rural population, Bedouins making a living herding sheep and goats, suffered most, because their livelihoods heavily depend on weather and climate conditions. At the same time, people living in the rural area do not possess financial and non-financial assets to buffer climate “shocks”, and social protections are not readily available when they suffer. WESS 2016 calls these inequalities the *structural inequalities*. As a result, disparities between urban and rural areas and between minorities and the majority ethnic groups widened.

From improving the resilience to drought impacts to sustainable development

The 1999-2001 drought analysis above covers only a few aspects of differential impacts on economic, social, geographical and ethnical groups. But it points out the fact that those groups whose livelihoods depend on climate-sensitive resources and who do not possess the capacity to shift their activities into climate-resilience livelihoods are more exposed and vulnerable to climate hazards. Those vulnerable groups are at greater risk of falling below the poverty line than less vulnerable groups, owing to their ways of life and the existence of structural inequalities. If issues

¹ For detail, visit <http://www.preventionweb.net/events/view/36370?id=36370#documentation>.

of structural inequalities are left intact, increasing in frequency and intensity of climate change expected in the future are likely to increase social inequality, poverty and marginalization.

Policies designed to build climate resilience need to pursue, simultaneously, the reduction of immediate exposure and vulnerability, and incremental and transformative changes for achieving a more equal society. The underlying logic of such policies is compatible with approaches for managing risks of climate change through adaptation, as proposed by IPCC (see UN (2016), table A.II.1.). Table below shows a simplified version of the IPCC approach in the context of the drought experience in Syria for the period 1999-2001.

Building climate resilience through managing climate risks involves wide ranging economic, social and infrastructural building policies, beyond disaster preparedness. It focuses on those who are most exposed and vulnerable to climate change, and provides a unique opportunity to tackle the institutional deficits that perpetuate inequalities. To design and implement a consistent policy response, policy makers, together with all other stakeholders, have to create interactive and flexible policy decision-making processes as a means to inform and assess policy implementation. Policies to build resilience must be coherent to take into account the interactions among the various dimensions of development and to be consistent through time to make sure development results are achieved.

It should be noted that the Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR), a common platform for addressing and responding to climate change impacts on freshwater resources, is an important step forward to building climate resilience beyond disaster preparedness. The Initiative aims at identifying the socio-economic and environmental vulnerabilities caused by climate change with the intention of building capacity and institutional strengthening of the Governments in the region (UNEP, 2015). This initiative is expected to provide Governments with much needed data on climate impacts and assessment methods, as an integral part of the process of building climate-resilience. WESS 2016 proposes assessment tools useful for decision making and examines several examples of coherent and integrated climate-resilience-building policies.

Table: Approaches to managing the risks of climate change through adaptation

Category	Examples
Human development	Nutrition and health programme
Poverty alleviation	Microfinancing, social safety net and social protection, insurance schemes
Disaster risk management	drought management, vulnerability mapping
Structural/physical	Efficient irrigation, mapping and monitoring, early warning system
Institutional	Representation of gender organization within national platforms,
Social	direct transfer, cash-for-work

Source: UN/DESA.

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