

Executive summary

The *World Economic and Social Survey 2016: Climate Change Resilience – An Opportunity for Reducing Inequalities* contributes to the debate on the implementation of the 2030 Agenda for Sustainable Development.¹ In addressing the specific challenge of building resilience to climate change, the *Survey* focuses on population groups and communities that are disproportionately affected by climate hazards, whose frequency and intensity are increasing with climate change. It argues that, in the absence of a continuum of policies designed to reduce the exposure and vulnerability of people to climate change, poverty and inequalities will only worsen.

Climate change and inequalities, as addressed in the 2030 Agenda for Sustainable Development

In 2015, world leaders took significant steps towards forging sustainable development pathways to fulfil the promise to eradicate poverty, reverse environmental degradation and achieve equitable and inclusive societies:

- In June 2015, the General Assembly endorsed the Sendai Framework for Disaster Risk Reduction 2015-2030,² recognizing the primary responsibility of Governments to reduce disaster risk and loss of lives, and preserve livelihoods.
- In July 2015, the Third International Conference on Financing for Development adopted the Addis Ababa Action Agenda,³ including a global framework for mobilizing resources and facilitating policy implementation for sustainable development.
- In September 2015, Heads of State and Government, in the high-level plenary meeting of the General Assembly, made a commitment to reach the Sustainable Development Goals as part of the outcome document “Transforming our world: the 2030 Agenda for Sustainable Development”.
- In December 2015, the Conference of the Parties to the United Nations Framework Convention on Climate Change, at its twenty-first session, adopted the Paris Agreement,⁴ through which countries committed to reduce greenhouse gas emissions and to support adaptation efforts.

These historic agreements are all part of a global consensus on the need to address the inextricable linkages between the human development and environmental agendas as a necessary condition for sustainable development.

¹ General Assembly resolution 70/1.

² General Assembly resolution 69/283, annex II.

³ General Assembly resolution 69/313, annex.

⁴ See FCCC/CP/2015/10/Add.1, decision 1/CP.21.

The *World Economic and Social Survey 2016* identifies key challenges to implementing the 2030 Agenda for Sustainable Development, building upon the recognition that climate hazards have a differential impact on people and communities. It argues that, in the absence of far-reaching transformative policies, the goal of building climate resilience will remain elusive and poverty and inequalities will likely increase.

Climate change exerts uneven impacts across countries and population groups

According to the scientific evidence, climate change is likely to result in surface-water scarcity, increased frequency of storms and precipitation extremes, coastal flooding, landslides, wildfires, air pollution and droughts. This will cause loss of life, injury and negative health impacts, as well as damage to property, infrastructure, livelihoods, service provision and environmental resources.

In the period 1995-2015, there were 6,457 weather-related disasters registered, claiming the lives of more than 600,000 people and affecting an additional 4.2 billion people in other ways. Not all countries experienced the effects of climate hazards on their human and natural systems in the same way: low-income countries suffered the greatest losses, including economic losses estimated to have accounted for about 5 per cent of their gross domestic product (GDP).⁵

The global average annual cost of climatic disasters, including floods, storms, droughts and heat waves, is estimated to have risen substantially, from \$64 billion during the period 1985-1994 to \$154 billion in the period 2005-2014. A more complete estimate of global costs, taking into account the losses associated with slow-onset climate events (e.g., sea-level rise and desertification), is likely to be much larger. Climate scenarios predict unambiguously that tropical areas will be at higher risk of climate hazards, including countries in Africa and South and South-East Asia, small island developing States and the countries where livelihoods depend on climate-sensitive natural resources such as agriculture, fisheries and forestry. It is in these countries where there is a lesser capacity to prevent (or even cope with) most adverse impacts.

If left unaddressed, these manifestations of climate change are likely to make it more difficult to achieve many development goals as they disproportionately affect poor people and communities, causing an increase in poverty incidence and inequalities. They are likely to slow down economic growth and exacerbate food insecurity, health problems and heat stress of the most vulnerable populations. They may also induce significant displacements of people and involuntary migration.

Climate change and structural inequalities are locked in a vicious cycle

Evidence suggests that the impacts of climate change and structural inequalities are locked in a vicious cycle. Vulnerability and exposure to climate hazards are closely linked to existing underlying inequalities. Differences in access to physical and financial assets; unequal opportunities to access quality health services, education and employment; and

⁵ Centre for Research on the Epidemiology of Disasters and United Nations Office for Disaster Risk Reduction (2015).

inequality with respect to voice and political representation, as well as the perpetuation of discrimination under cultural and institutional norms, are the structural underpinnings of an aggravation of the exposure and vulnerability of large population groups to climate hazards.

The area of residence and the livelihood of people at disadvantage often expose them to mud slides, periods of abnormally hot weather, water contamination, flooding and other climate hazards. Groups whose livelihoods depend on climate-sensitive natural resources are exposed and vulnerable to land degradation, water scarcity, landscape damage, deteriorating ecosystems and other hazards. This is the case particularly if they do not possess the capacity to diversify into climate-resilient livelihoods.

When hit by climate hazards, people afflicted by poverty, marginalization and social exclusion suffer great losses in terms of lives and livelihoods. The disproportionate impact of climate hazards further aggravates existing socioeconomic inequalities and may actually undermine the capacity of people to cope and adapt.

Addressing the root causes of inequalities enables adaptation and the building of resilience to climate hazards. It requires a continuum of policies which include: i) immediate assistance in the wake of climate hazards and interventions for disaster risk reduction, for example, through early warning systems, creation of shelters and infrastructure improvements; ii) policies for adaptation to a changing climate entailing, for example, introduction of new crop varieties and water management techniques; iii) policies centred on ecosystem management and on income diversification; and iv) sound development policies focused on reducing inequalities to achieve poverty eradication and social inclusion. These specific measures will be most effective in reducing climate change vulnerability when they are part of longer-term transformative strategies which embrace coherent policies across the economic, social and environmental dimensions of sustainable development.

Bringing inequalities to the forefront of climate assessments

Environmental concerns, in general, and the impact of climate hazards on people's livelihoods, in particular, require policymakers to improve policy frameworks and analytical capacities, so that they can design and implement coherent policies. Integrated climate impact assessments assemble different modelling frameworks to help policymakers understand the challenges posed by climate hazards. Effective climate impact assessments assist policymakers in better understanding policy options aimed towards adaptation and climate change resilience with a sharper focus on inequalities.

However, this makes for a complex task. The construction of policy options with regard to achieving climate resilience for sustainable development requires good information systems for identifying people at risk in their (often very local) geographical contexts. The construction of policy options also requires sound integrated assessments to improve understanding of the interlinkages across the economic, social and environmental dimensions of development, including the impact of climate hazards on people and their livelihoods.

The present *Survey* shows how the improved use of integrated modelling frameworks will contribute to the assessment of the impacts of climate hazards and policies relating to:

- Climate-sensitive natural resources upon which livelihoods rely
- Distribution of income on the basis of ownership and employment of production factors such as land, capital and labour

- Human capital and access to basic public services and resources (education, health, sanitation and infrastructure)
- Vulnerabilities of disadvantaged groups based on their socioeconomic characteristics

Engaging different stakeholders (including policymakers, experts and communities) is essential to obtaining the detailed information and critical feedback required to improve the design of model-based scenarios and the interpretation of results. Meaningful participation of stakeholders assures the input of local political and expert judgment. The feedback of vulnerable population groups and communities is particularly important in facilitating an understanding of the factors that exacerbate people's vulnerability and exposure to climate hazards. It is also important when assessing adaptation options to ensure that adaptation policies are relevant to building climate resilience among people and communities.

Greater efforts to improve the production of the data and statistics necessary to document the socioeconomic impacts of a changing climate are urgently needed, along with the building of capacity to construct and use integrated assessments at the country level. Building scenarios illustrating possible impacts of climate hazards and assessing policy options for building resilience can yield sound scientific evidence for application to policy decisions. Institutionalizing the use of integrated analytical frameworks and of scenario results can both strengthen the policymaking processes by mobilizing technical expertise across sectoral ministries and contribute to improved policy coordination within the government, and in close collaboration with relevant stakeholders and researchers.

Coherent, participatory and adaptive policymaking for climate resilience

Better understanding of the impact of climate change on lives and livelihoods will lead to better-informed policymaking. Public policies have an important role to play in addressing people's vulnerability and building climate resilience. Disadvantaged groups typically possess few options for diversifying their income sources, gaining access to insurance and financial markets and improving their education and health status.

Breaking the vicious cycle in which inequalities and vulnerability to climate hazards are locked requires well-integrated and coherent policies designed to reduce current well-known vulnerabilities, including policies targeting poverty eradication, income diversification and improved access to basic social services such as education, health, and water and sanitation, among many others.

Reducing exposure and vulnerabilities as part of a process to strengthen people's capacity to cope with and adapt to climate hazards in the present and in the medium term requires a continuum of development policies strategically crafted to reduce the multiplicity of inequalities that make people vulnerable. A continuum of well-integrated economic, social and environmental policies for building climate resilience would also help harmonize present adaptation efforts within short-term political and funding cycles with longer-term development objectives. Policies designed to close the development gaps that leave people vulnerable to climate hazards are sound development policies and are essential to reducing the risk posed by climate change. Investing, for example, in prevention to halt the spread of malaria and other debilitating diseases, so as to improve the quality of life of the most disadvantaged population groups, is both a sound development policy and part and parcel

of a sound adaptation policy, given that healthier and potentially wealthier people will be more resilient to future climate hazards.

In the continuum of policies, addressing the root causes of inequalities requires transformative policies that generate change in the fundamental attributes of systems, particularly the existing governance systems and norms that perpetuate inequalities. Transformative policies should aim, for example, towards generating shifts in behaviours to encourage sustainable consumption and production practices, in line with the goals set out in the 2030 Agenda for Sustainable Development.

This *Survey* argues that policy processes based on the principles of coherence and integration, participation and flexibility should help address underlying inequalities by identifying vulnerable populations, particular intersecting inequalities, and concrete actions for strengthening resilience.

Policy coherence is important for achieving climate resilience, particularly because of the need to integrate, or mainstream, adaptation objectives into longer-term development processes across the different dimensions of sustainable development.

Direct consultation with and participation of multiple stakeholders in policy decision-making improve understanding of specific risks and vulnerabilities at the local level. Further, a better understanding of risks and priorities achieved through the engagement of local communities and stakeholders improves policy design, policy implementation and policy outcomes.

Within the context of a changing climate and greater weather variability, uncertainty must be fully embedded in policy decision-making processes. This requires a flexible policy process, capable of incorporating lessons derived at each step of the process, with a view to improving knowledge and outcomes. Within the context of uncertainty, no-regret and low-regret policies constitute a good starting point for adaptation, as they can address immediate vulnerabilities and structural inequalities, without compromising the foundations of future resilience.

Enhanced cooperation for climate-resilient development

Delivering on the commitments set out in the 2030 Agenda for Sustainable Development will be critical to strengthening resilience to climate change among the most vulnerable countries and population groups. Improving access to stable and adequate sources of finance for adaptation and contributing to the building of the information systems needed to guide policymaking for climate resilience are two concrete undertakings for which greater international cooperation is required.

A strengthened Global Partnership for Sustainable Development has an important role to play in supporting countries' efforts in building climate resilience. The historical agreements adopted by the international community in 2015, including the 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, provide a unique opportunity to solidify effective global cooperation and coordination in support of global, regional and national efforts towards achieving sustainable development in general and climate-resilient development more specifically.

The imperative of limiting global warming together with the task of effectively reducing the impact of climate hazards on vulnerable populations requires a profound

transformation of international cooperation. Much of the previous focus of climate action has been on mitigating the effects of anthropogenic activity so as to limit the rise in global temperature. In addition to this effort, unprecedented levels of cooperation in a number of critical development areas are needed for the specific purpose of achieving climate change adaptation.

Two types of international support are discussed in the *Survey*: (a) support for the provision of stable, predictable and sufficient sources of financing for climate-resilient development; and (b) support for improving capacities needed to produce and utilize large and complex sources of data and information so as to facilitate identification of population groups particularly vulnerable to climate hazards.

In December 2015, the Conference of the Parties to the United Nations Framework Convention on Climate Change committed to mobilizing at least US\$ 100 billion per year for climate change mitigation and adaptation activities in developing countries.⁶ While there is no central accounting mechanism for climate finance flows, adaptation activities are clearly underfunded: the Climate Policy Initiative estimates that funding for mitigation efforts is 16 times greater than that for adaptation projects. This gap in financing for adaptation—the “adaptation gap”—is a cause for concern, particularly given that climate hazards have a disproportionate impact on the poorest countries and on vulnerable population groups within countries.

According to the IPCC Fifth Assessment Report (2014), adaptation costs will range from \$70 billion to \$100 billion per year by 2050 in the developing countries alone. An updated review conducted by the United Nations Environment Programme indicates that these figures are likely to be an underestimate. Yet, the \$100 billion climate finance pledge is for both mitigation and adaptation. Put simply, climate finance streams need to far exceed the target under the Paris Agreement if climate change-related needs are to be met.

Given that many adaptation efforts, such as the creation of levies and the installation of weather monitoring systems, support the public good, there is a strong case to be made for support from the public sector. Increased funds from public domestic and international efforts are required to fill the gap in areas where the private sector is unlikely to invest adequately, in particular in projects aimed at the most marginalized areas and population groups. Adaptation efforts are successful only when they integrate the needs of the disenfranchised and are responsive to the inequalities that underpin exposure and vulnerability. While in some cases (such as that of philanthropy) the private sector will aim for redistributive outcomes, in most, an adaptation agenda will require public funding.

Mobilization of resources and actions to build resilience and adaptive capacity will also entail meeting the challenge of identifying those vulnerable to climate hazards, understanding the risk they incur and monitoring the effect of interventions in reducing that vulnerability. Production of statistics on the impact of climate hazards requires the development of consistent concepts and classifications as a component of official national and international programmes. Understanding the interlinkages between vulnerability and climate hazards requires intensive collaboration, harmonization and integration across a range of disciplines and among a wide range of data programmes, including official statistics of population, its main characteristics and its distribution in different ecological areas.

Understanding the socioeconomic attributes of vulnerable groups and further assessing the potential impacts of climate hazards and policies on their livelihoods require sound statistics at the lowest possible geographical resolutions. This is critical for enabling

⁶ See FCCC/CP/2015/10/Add.1, decision 1/CP.21, para. 53.

policymakers and population groups and communities to be better informed and to acquire an understanding of the true nature of the problems to be confronted, as well as the expected impact of policy alternatives. When such disaggregated data and information are missing, rigorous climate impact assessments and the capacity of policy systems to respond are seriously challenged.

In building the information systems needed for climate resilience, a wide range of official data developers beyond the national statistical offices and across sectors (including agriculture, water, sanitation, energy, mining and environment) will need to engage in intensive collaboration and adequate coordination. At this point in time, the institutional experience, capacity and responsibility needed to generate statistics for analysing climate change and its impact on exposed populations are diffused across Governments and international organizations, with little communication among the different specialties.

These challenges have been recognized in the 2030 Agenda for Sustainable Development and are being taken up by international organizations led by the Statistical Commission. Efforts in this direction will require unprecedented levels of cooperation at the global and national levels. Strengthened international cooperation is needed for a new form of data development and to support the building of capacity to use data effectively, including within the context of integrated climate impact assessments.

