

CLIMATE SMART GOVERNANCE

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Department of Science and Technology



SECTOR - 9

**CLIMATE CHANGE AND INDIGENOUS COMMUNITY
TRAINING MODULE
(2017-2020)**



CLIMATE CHANGE AND INDIGENOUS COMMUNITY

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1. CLIMATE CHANGE & INDIGENOUS COMMUNITIES

Indigenous peoples are among the first to face the direct consequences of climate change, owing to their dependence upon, and close relationship with the environment and its resources. Climate change exacerbates the difficulties already faced by vulnerable indigenous communities, including political and economic marginalization, loss of land and resources, human rights violations, discrimination and unemployment (United Nations Permanent Forum on Indigenous Issues, 2007).

The close relationship of many indigenous peoples and some minorities to their environments makes them especially sensitive to the impacts of climate change – and also to the cultivation of biofuels, which are being presented as part of the ‘solution’ to global warming. Indigenous peoples tend to live close to nature, in relatively natural environments, rather than in cities, growing and making much of the food and other products that they need to survive. This gives them an extraordinarily intimate knowledge of local weather and plant and animal life.

Traditional wisdom on matters such as when to plant crops or where to hunt for food has been accumulated over many generations, but now that the climate is shifting, some of those understandings are proving to be no longer valid. Climate change, and the rapidly increasing amount of land being converted into plantations of biofuel crops, threatens the very existence of some cultures (Baird, n.d).

It is important to highlight that the risks that climate change poses for indigenous peoples differ from the risks that it poses for other groups in society, including the poor (in their entirety). This is because

indigenous peoples share six characteristics that, in combination, are not present in any other group. Thus they are especially vulnerable to the direct impacts of climate change; to the impacts of environmental destruction that leads to climate change; and to mitigation and adaptation measures.

- i. indigenous peoples are among the poorest of the poor, the stratum most vulnerable to climate change.
- ii. they depend on renewable natural resources most at risk to climate variability and extremes for their economic activities and livelihoods.
- iii. they live in geographical regions and ecosystems that are most exposed to the impacts of climate change, while also sharing a complex cultural relationship with such ecosystems.
- iv. high levels of exposure and vulnerability to climate change force indigenous peoples to migrate, which in most cases is not a solution and can instead exacerbate social and economic vulnerabilities.
- v. gender inequality, a key factor in the deprivation suffered by indigenous women, is magnified by climate change.
- vi. and lastly, many indigenous communities continue to face exclusion from decision-making processes, often lacking recognition and institutional support. This limits their access to remedies, increases their vulnerability to climate change, undermines their ability to mitigate and adapt to climate change, and consequently poses a threat to the advances made in securing their rights (International Labour Office [ILO], 2017).

The vulnerability factors which are thought to have a direct influence on the social and biophysical vulnerability of traditional and indigenous communities to global climate change are illustrated below:

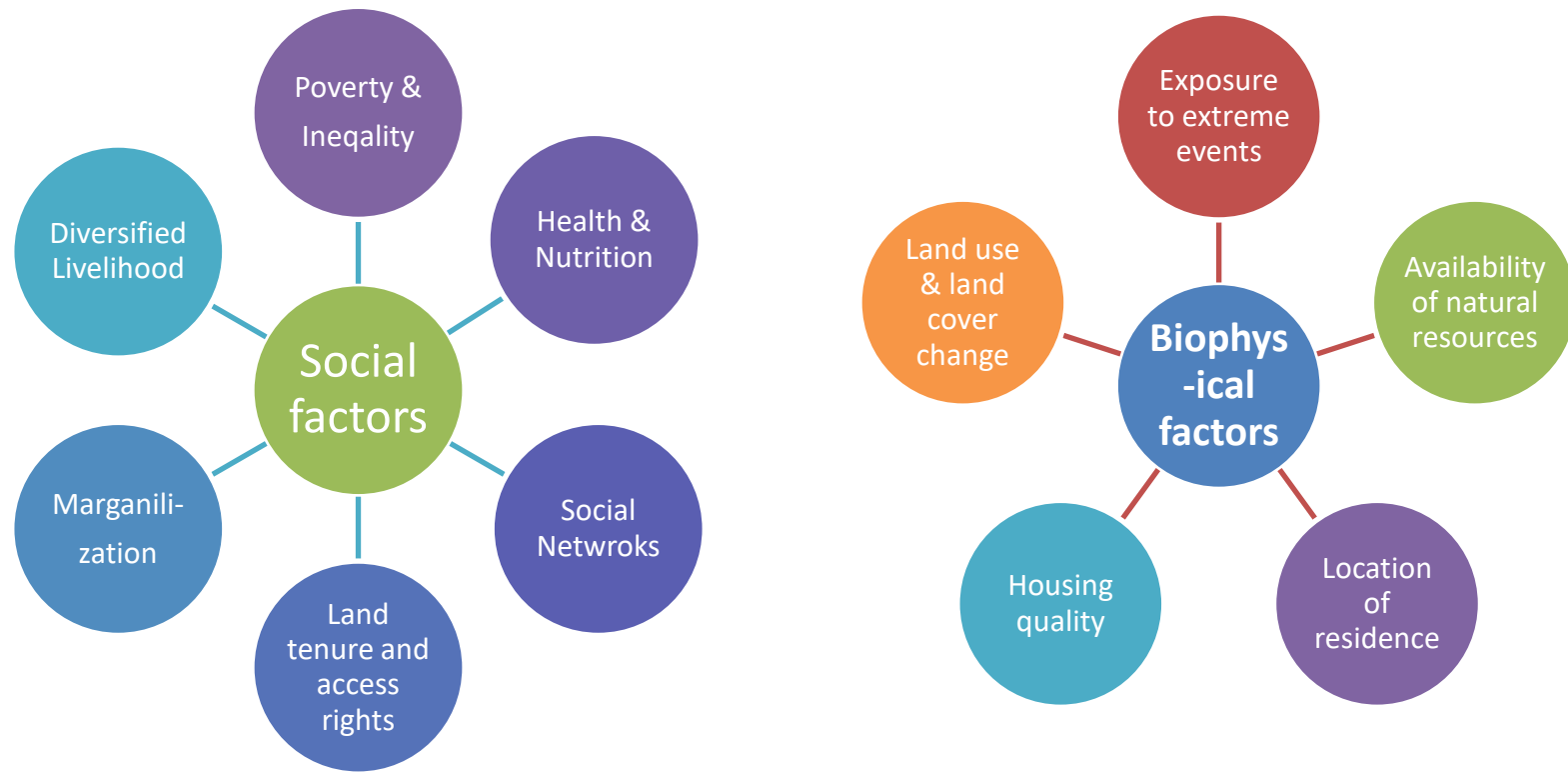


Figure 9.1: The vulnerability factors of traditional and indigenous communities to global climate change (Macchi, 2008)

2. INDIAN AND INTERNATIONAL SCENARIO:

The territories of the world's 370 million indigenous peoples cover 24% of land worldwide, and contain 80% of the world's biodiversity. The World Bank estimates that, in East Asia and the Pacific, nearly 13 million people could fall into extreme poverty by 2030 because of climate change, and the lower crop yields and higher food prices that result from it (ILO, 2017).

India is home to about 700 tribal groups with a population of 104 million, as per 2011 census. These indigenous people constitute the second largest tribal population in the world after Africa. (Bahuguna et al., 2016). In the high altitude regions of the Himalayas, glacial melts affecting hundreds of millions of rural dwellers who depend on the seasonal flow of water is resulting in more water in the short term, but less in the long run as glaciers and snow cover shrink.

In the Amazon, the effects of climate change include deforestation and forest fragmentation, and consequently, more carbon released into the atmosphere exacerbating and creating further changes. Droughts in 2005 resulted in fires in the western Amazon region. This is likely to occur again as rainforest is replaced by savannas, thus having a huge effect on the livelihoods of the indigenous peoples in the region.

Indigenous peoples in the Arctic region depend on hunting for polar bears, walrus, seals and caribou, herding reindeer, fishing and gathering, not only for food to support the local economy, but also as the basis for their cultural and social identity. Some of the concerns facing indigenous peoples there include the change in species and availability of traditional food sources, perceived reduction in weather predictions and

the safety of traveling in changing ice and weather conditions, posing serious challenges to human health and food security.

In Finland, Norway and Sweden, rain and mild weather during the winter season often prevents reindeer from accessing lichen, which is a vital food source. This has caused massive loss of reindeer, which are vital to the culture, subsistence and economy of Saami communities. Reindeer herders must, as a result, feed their herds with fodder, which is expensive and not economically viable in the long term.

Rising temperatures, dune expansion, increased wind speeds, and loss of vegetation are negatively impacting traditional cattle and goat farming practices of indigenous peoples in Africa's Kalahari Basin, who must now live around government-drilled bores in order to access water and depend on government support for their survival (United Nations Permanent Forum on Indigenous Issues, 2007).

3. CASE STUDIES

The resilience of indigenous communities facing threats of climate change is strengthened when indigenous peoples shape climate policies, are included in natural resource management, strengthen tribal economies, and engage in sustainable development

Although there are obstacles to the adaptive capacity of indigenous communities, there are also many factors that contribute to their adaptability and resilience, including traditional knowledges, cultural practices, capacity for natural resource management, proactive initiatives for the control of invasive species, strong external scientific networks, tribal awareness of climate change and intertribal collaboration (USDA, 2016).

Study 1: NAILSMA – Northern Aboriginal and Islander Land and Sea Management Alliance

NAILSMA undertakes mitigation and adaptation work across northern Australia on behalf of many coastal Indigenous groups. Their work takes a culture-based economies approach and focusses on building economically and socially viable local communities while caring for country.

A key climate change program is the Carbon Program which has developed a Savanna Burning Methodology under the Carbon Farming Initiative—a legislated offset scheme of the Australian Government. This approach uses and builds on traditional Indigenous fire management knowledge and practices while incorporating the latest scientific research.

In 2012, NAILSMA also set up the Indigenous Salt Water People Network. Rangers in this Network build alliances across coastal regions to manage climate change and other environmental issues.



Study 2: Managing genetic biodiversity for climate change adaptation

In the Andes in Peru, a unique 12,000-hectare potato reserve has been established to conserve the region's potato biodiversity. The objective of the initiative is to remedy the increasing difficulty of producing potatoes, as warming climates have altered the growing patterns of some of the area's local varieties.

The reserve is home to six indigenous Quechua communities, whose 8,000 residents own the land and control access to local resources, but manage their communal lands jointly for their collective benefit. In the potato reserve, which is located within a micro centre of origin for potatoes, a typical family farm grows between 20 and 80 varieties. Most of these varieties are grown for local consumption or regional barter. As the climate becomes warmer, local potato farmers are experimenting with different varieties at higher altitudes where temperatures are lower. The farmers are using many varieties that had disappeared from their fields but that had been conserved in the gene bank of the International Potato Center.

The Benefit sharing Fund of the International Treaty on Plant Genetic Resources for Food and Agriculture is working with the local farmers to repatriate varieties from the gene bank into their fields. More than 1,345 varieties can be found in the potato reserve: 779 were collected locally; 410 were repatriated from the International Potato Center; and 157 were received through seed exchanges. The fact that these varieties were disease-free helped increase yields. The successful combination of traditional knowledge and modern technology, as evident in this case, underlines the unique role that indigenous peoples play in modern approaches for adapting to climate change.

Study 3: Traditional knowledge that has saved lives

In 2004, before the Indian Ocean tsunami struck, the water on the shores of Yan Chiak, Myanmar suddenly drew back, a sign that was recognized by the Moken, a nomadic group that navigate the waters of southern Thailand and Myanmar.

The entire village moved to higher ground, thereby saving many lives when the disaster struck. The UNESCO Regional Advisor for Culture in Asia commented that the fact that the Moken survived, while many others did not, points to certain lessons to be learned from traditional, indigenous knowledge. Meanwhile, it was found that traditional materials, such as bamboo and thatch, used for housing construction close to the sea based on traditional norms, would not kill the occupants if it were to collapse.

Similarly, making use of their traditional knowledge, Indonesia's Simeulue community saved tens of thousands of lives during the tsunami, as the community of some 80,500 people moved away from the shore to nearby hills. This community was awarded the prestigious United Nations Sasakawa Award for Disaster Reduction, for their efficient response (CoastAdapt, n.d).

4. GOVERNMENT INVOLVEMENT

Key recent international commitments regarding climate change and indigenous peoples' rights:

a) Paris Agreement (2015)

Preamble

Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities, Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

Article 7.5 Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of **indigenous peoples** and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.

b) 2030 Agenda for Sustainable Development (2015)

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, **indigenous peoples**, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

c) Sendai Framework for Disaster Risk Reduction 2015–2030

I. Preamble

7. [...] While recognizing their leading, regulatory and coordination role, Governments should engage with relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, **indigenous peoples**, volunteers, the community of practitioners and older persons in the design and implementation of policies, plans and standards.

IV. Priorities for action

24 (i). To ensure the use of **traditional, indigenous and local knowledge and practices**, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programmes of specific sectors, with a cross-sectoral approach, which should be tailored to localities and to the context.

27 (h). To empower local authorities, as appropriate, through regulatory and financial means to work and coordinate with civil society, communities and **indigenous peoples** and migrants in disaster risk management at the local level. V. Role of stakeholders

36 (a) (v). **Indigenous peoples**, through their experience and traditional knowledge, provide an important contribution to the development and implementation of plans and mechanisms, including for early warning (ILO, 2017).

5. WAY FORWARD

Increasing indigenous participation in climate-change initiatives is one potential solution for increasing the resilience of indigenous communities. Indigenous perspectives and traditional knowledges must guide climate-change assessment and adaptation to develop culturally appropriate strategies (USDA, 2016). Minorities' and indigenous peoples' own organizations can contribute to such a shift in awareness, using all the institutional, media and legal avenues open to them (Baird, n.d).

6. FURTHER READINGS

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