



Research Paper

An Overview of Threats to Traditional Ecological Knowledge

Tej Kumar Nepal

School of Ecology and Environment Studies, Nalanda University, India

ABSTRACT: Traditional Ecological Knowledge system is one of the oldest and evolving knowledge systems in the world, and it has helped conserve the natural environment, maintained social discipline, and taught people to live in harmony with their kith and kin and the surrounding environment over hundred and thousands of years. The threat to Traditional Ecological Knowledge is a matter of concern as the indigenous communities are faced with more severe challenges from the policies and legislation of the government and the pressure of economic development. The paper discusses, in brief, the various threats to TEK. However, it does not talk about all the threats to traditional ecological knowledge.

KEYWORDS: Traditional Ecological Knowledge, threats, indigenous people, generation, decline

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I. INTRODUCTION

The Traditional Ecological Knowledge (TEK hereafter) is significant for the thought of a broad scope of inquiries identified with nature-human relations. Various groups of individuals in different areas of the planet see and connect with nature unexpectedly and have various customs of ecological information (Nepal, 2021). Their insights and information are to some extent molded by their worldviews, values, and environmental ethics - religion in the more extensive sense. In investigating natural morals and religion toward an environmentally sustainable society, native people groups and TEK have drawn significant consideration from the researchers and popular movements. Traditional Ecological Knowledge can be defined as those knowledge systems passed from one generation to another over hundreds and thousands of years through direct contact with their environment (Berkes, 2012). It is dynamic and cumulative, expanding on experience and adjusting to change, as social orders continually rethink what is considered "traditional."

It has been shown that TEK systems assume a principal part in achieving and supporting sustainability (Brondizio *et al.*, 2021). A large extent of the world's domesticated and wild biodiversity lies on lands and in waters customarily managed by local communities, and indigenous people (Garnett *et al.*, 2018; Ellis *et al.*, 2021; Molnár & Babai, 2021); these regions are strongholds for vital ecological capacities that add to human and non-human prosperity, including climate change mitigation (Fa *et al.*, 2020). Despite pressure from developmental activities and industrial resource extraction, globally, biodiversity declines less quickly in the regions of local communities and indigenous people than in biological systems outside of them (Díaz *et al.*, 2019). This is possible because of constant battling to keep these spaces liberated from intensive development and keep up with their cultural and ecological integrity (Spice, 2018; Armstrong & Brown, 2019).

TEK systems worldwide are in danger of declining as an immediate consequence of the intensified powers of globalization, expansionism, political mistreatment, and political interests on local communities and indigenous people (Tang & Gavin, 2016; Cámara-Leret *et al.*, 2019; Lyver *et al.*, 2019). Although TEK is innately unique and, somewhat, equipped for adjusting to changing political and social-environmental situations (Quinlan & Quinlan, 2007), considerable collections of TEK are being lost at disturbing rates (Reyes-García *et al.*, 2013; Gaup Eira *et al.*, 2018). Such losses change the foundations of people's livelihood and culture and result in cultural erosion, poverty, and dispossession (Reo *et al.*, 2019; Armstrong and Brown 2019; Ford *et al.*, 2020). Subsequently, local communities and indigenous people experience unbalanced social and natural changes (Savo *et al.*, 2016; Dunn, 2017).

Some of the significant threats to Traditional Ecological Knowledge are discussed below:

Change in traditional religion and beliefs

Belief systems in any religion are considered the foundational elements in shaping other aspects of traditional ecological knowledge (Berkes, 2012). The abandonment or conversion from indigenous religion has been recorded from several studies, especially in regions with colonization history (Wavey, 1993; Ellen, 2007; Tang & Gavin, 2016). Tang & Gavin (2016) noted in their study that the religion one generation's ancestors followed was slowly eroded as the modern idea was crawling into the mind of young generations.

Change of environment and natural resources

Ecological disturbance can drive changes in TEK (Rocha Silva & Cavalcante Andrade, 2006; Harrison, 2007). Natural change can be driven by population growth, overuse, or tensions from resource use by immigrants into native grounds (Rocha Silva & Cavalcante Andrade, 2006). Furthermore, changes in the ecological premise of TEK may likewise result from voluntary or forced migration of local communities or indigenous people (Tang & Gavin, 2010).

Government policy and regulations

Legislation and policies that suppress or degrade the culture and tradition of indigenous groups add to numerous immediate dangers to TEK, including the change in traditional livelihood practices, loss of traditional institutions, loss of traditional rights, and the loss of means of TEK transmission. Government restrictions on the utilization of native dialects in state-funded schools have negatively affected indigenous dialects, and the TEK communicated through these dialects. In numerous areas, government regulations and policies have subverted native freedoms to self-association and admittance to assets and land (Tang & Gavin, 2010, 2016).

Loss of mode of transmission

TEK is regularly passed on using native dialects, and the loss of language variety straightforwardly influences the loss of information variety (Maffi, 2005; Zent & Maffi, 2009). With the loss of traditional language, the traditional ecological Knowledge also becomes threatened (Tang & Gavin, 2016). Introduction (often forced) and implementation of external education systems often negatively influence traditional ecological knowledge transmission (Voeks & Leony, 2004; Cruz García, 2006). Tang & Gavin (2016) stated that formal schooling often neglects the TEK system, gradually displacing TEK. The migration of young people to other places in search of better opportunities also poses a risk to the TEK. They eventually lose interest in the tradition and culture they were born into, and the decline of TEK gradually initiates. Likewise, contact with and impact from predominant societies might diminish native youth's interest in learning traditional culture, traditions, and practices (Lizarralde, 2001; Case *et al.*, 2005; Reyes-Garcia *et al.*, 2007).

Contact with other culture groups

Contact with other cultures can be caused intentionally by non-indigenous culture groups or by the indigenous community. It can intrude on TEK transmission pathways and drive changes in traditional institutions, livelihood practices, and beliefs. Some of the respondents in the study conducted by Tang & Gavin (2016) usually noticed the expanded impact of TV and other advanced media influencing native youth interests in finding out about conventional ways of life and culture. The most regularly referred to as the method for purposeful social contact were Christian missionaries. Missionary practices might force or advance a change from traditional beliefs to Christianity and have frequently ruined the power and esteem of indigenous spiritual leaders (Minol, 2000; Tang & Gavin, 2016).

Colonization

Colonization, notably the maintenance, acquisition, establishment, and expansions of colonial regions, may cause loss of pathways of TEK transmission, the difference in age-old livelihood practices, loss of traditional religion and convictions, loss of traditional privileges, and loss of traditional establishments. The colonial regional development has often removed indigenous groups from their traditional lands and denied access to resources (Colchester, 2000). Colonial and postcolonial laws and policies have regularly additionally included compulsory education systems that hinder traditional transmission instruments (Cruz Garca, 2006).

Influence of outside market

Expanded connections to local, national, and international markets may at last drive changes in TEK transmission pathways and livelihood of indigenous communities. The market increases the food availability in communities, which reduces the transmission of traditional food production knowledge (Godoy *et al.*, 1998;

Reyes-Garcia *et al.*, 2007). Likewise, market-driven demands can spike shifts towards valuable goods compared to Traditionally harvested species and food (Soemarwoto, 2007).

Migration or relocation

Deliberate or forced non-indigenous immigration and indigenous emigration can underlie changes in TEK transmission pathways, beliefs, and livelihood practices. For instance, the movement of indigenous youth to urban centers searching for better job opportunities and better schooling might influence the interest in learning TEK (Lizarralde, 2001; Reyes-Garcia *et al.*, 2007). When the young population belonging to a particular indigenous group stays outside for a long duration, they occasionally visit their communities. As a result, they tend to miss the skills to speak their indigenous language and gain experience from what elders are doing. In some cases, the indigenous people or community are forced to move from their indigenous land and settle in a new environment due to government policies and regulations (Tang and Gavin, 2010). The immigration of non-indigenous groups also brings exposure to their belief, culture, and traditional practices (Case *et al.*, 2005; Zent and Maffi, 2009).

Voluntary or forced migration might lead the indigenous community to settle in a new environment, which might lead to a decline in their TEK as they have to get adopted to the norms of the new environment. The United Nations' State of World's Indigenous Peoples report (WGIP, 2006) perceived this grave danger to indigenous culture and lifeways:

“...it is clear that one of the most significant threats faced by indigenous peoples arises from their displacement, eviction, and separation from their lands, territories, and resources. These issues are expanding and represent significant challenges to the security, health, and survival of indigenous peoples and their cultures.”

War and civil disorder

In essentially every part of the world, crime, war, militarism has seriously affected indigenous knowledge and indigenous knowledge holders by seizing command over natural resource without compensation or pay (Trask, 2009). War and military occupation may likewise add to the decrease in the population of indigenous people and, this way, disturb TEK transmission pathways.

Pressure from economic development

Most communities' standard of living had increased because of the dominant market economies and government's actions and policies. The pressure from economic development has increased urbanization and conversion of farmlands, resulting in compromise of the welfare and rights of indigenous communities. Most of the time, the voice of the indigenous people are ignored to favor the decision of the government's developmental agendas (DESA, 2009).

II. CONCLUSION

The threats that hamper or hinder the transmission of traditional ecological knowledge should be solved by keeping an eye on the indigenous people and community. The TEK holders and communities should not be neglected for political or business gains, as a collaboration between TEK and science will bear the best fruit for humankind. The adaptation to anthropogenic climate change can also be found in traditional ecological knowledge. The government should work on some policies where young indigenous people get the modern facilities and opportunities and learn about their indigenous beliefs, culture, and traditional practices.

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