Using Participatory Geographic Information Systems to enhance Indigenous Nomadic Tribes’ Access to Territory, Land and Rights

The land rights and lifestyles of indigenous nomadic communities in Iran are constantly threatened by oil and gas exploration activities. With the help of Cenesta and UNINOMAD, the nomadic communities were able to map their land using Participatory Geographic Information Systems (PGIS), and negotiate for protection of their land as Indigenous and Community Conserved Areas (ICCAs). With the use of PGIS, the nomadic communities were able to mark their migratory routes and enforce their land rights.

**PRINCIPAL ORGANISATIONS INVOLVED**
- Cenesta (Centre for Sustainable Development and Environment)
- UNINOMAD (Union of Indigenous Nomadic Tribes of Iran)

**LOCATION**
- Iran

**TIMELINE**
- 2012-to date

**TARGET AUDIENCE**
- Civil society organisations; activists and researchers; governmental bodies.

**KEYWORDS**
- Indigenous peoples, pastoralism, land mapping, campaigning
Case description

Background issues

Iran is a vast country in southwest Asia, covering an area of over 1.6 million square kilometres. It lies on the world's arid belt, and 85% of its land area comprises arid and semiarid regions. It also has rangelands, high to low-density forests and deserts. Overall, natural ecosystems cover about 80% (130 million hectares) of the country's surface area. This includes 14 million ha of forest land (9%), 85 million ha of rangelands (52%) and about 33 million ha of desert (20%). Iran has various ethnic groups, including Arabs, Baluchi, Gilaks, Kurds, Lurs, Persians, Turks and Turkmans. The history of natural resource management, conservation and environmental governance systems by indigenous peoples and traditional communities is based on their identity, and collective production systems in complex ecological conditions such as forests, rangelands, wetlands, marines and coastal areas.¹

These communities have developed a unique lifestyle, in harmony with their surroundings and in respect of nature and the environment. They exist as part of a complex ecosystem, making use of what nature offers, and in turn nurturing the local ecosystem. Every year, the nomadic communities travel with their flocks of goats and sheep from their summer pasturelands to the winter pasturelands. Although they have

been living this way for centuries, their way of life is increasingly under threat from
urbanisation and the spread of globalised development models. Nomadic communities
in Iran are increasingly under pressure to assimilate into mainstream urban society.

The nomadic peoples’ territories are rich in oil and gas. About 20 years ago, when the
Iranian government established a technical institute serving oil and gas industries, it
became necessary to resolve the conflicts of interest between the oil and gas industries
and the local communities living in the area.

**Solution**

Cenesta is a non-profit civil society organisation working on the land rights of indigenous
peoples and nomadic local communities. It is also the secretariat of UNINOMAD, a
 federation of indigenous nomadic tribes of Iran that supports the restitution of the
rights of indigenous peoples. The two organisations work together to achieve policy
changes, sustainable livelihoods, and restitution of the nomads’ territorial rights.

Cenesta and UNINOMAD also works towards achieving the recognition of nomadic
peoples’ territories as Indigenous and Community Conserved Areas (ICCAs) using
Participatory Geographic Information Systems (PGIS). The tool can be used to map
territories belonging to indigenous peoples, and to document their movements and
lifestyles.

UNINOMAD and Cenesta worked with indigenous peoples to map 100 tribal
confederacies and 600 independent tribal areas. To achieve this, they implemented the
PGIS programme, aimed at identifying and registering nomadic tribes’ territories. The
PGIS programme aimed to:

- Retrieve and return ancestral lands and rights to indigenous peoples and
  traditional local communities;
- Support sustainable development programmes;
- Produce GIS maps, reflecting the original ancestral territories of the indigenous
  tribes, threats to their land rights, occupation of their land, and government re-
  allocations (legal or otherwise); and
- Establish a legal support programme.

**Activities**

Cenesta worked with local communities to accurately delineate territories of indigenous
peoples. This is inclusive of both ancestral domains and their current territories.
Information was collected through testimonies of female and male community elders,
and the experiences of Cenesta. The information was further corroborated with official
documentation, maps and google earth. For a comprehensive approach to the
challenges faced by the nomadic tribes, Cenesta mapped lands occupied by the:

- Qashqai Tribal Confederacy;
- Bakhtiari Tribal Confederacy;
- Kurdish, Luri and Laki Tribes;
- Shahsevan Tribal Confederacy;
- Talesh and Galesh Tribes;
- Kormanj and Turkmen Tribes;
- Central Desert Periphery Tribes;
- Baluch Tribes; and
- Marine and Coastal Communities.

PGIS was used as a tool to facilitate the representation of local people's knowledge using two or three-dimensional maps. To implement PGIS, Cenesta worked with local communities to identify areas that had been dedicated to gas and oil exploration. Cenesta relied on the communities' knowledge, identification and understanding of their geographical terrains.

Good PGIS practice is flexible and adapts to different socio-cultural and biophysical environments. It often relies on a combination of expert skills and local knowledge. PGIS therefore, became an innovative means of visualising the geographical territories of nomadic communities and validating indigenous knowledge. To create the maps, Cenesta used the following steps:

- Transferring collected information to ArcGIS software to produce GIS ready databases;
- Assessing invasions, barriers and land use changes in the current territories claimed by indigenous peoples;
- Checking accuracy of mapped layers (territories, migration routes and invasions) by checking random control points using GPS devices;
- Comparing community based PGIS maps with government maps to find incoherencies and gaps;
• Presenting final maps to government agencies including the Organisation for Nomadic Peoples of Iran (ONPI); Forest, Rangeland and Watershed Management Organisation (FRWO), and the Department of Environment (DOE);
• Introducing the concept of Indigenous and Community Conserved Areas (ICCAs) and to negotiate for recognition of nomadic peoples’ territories;
• Engaging and negotiating with key officers in the Ministry of Oil; and
• Supporting the community to claiming its land rights.

Importance of the case for people-centred land governance

This case is important for people-centred land governance because it demonstrates that indigenous communities can successfully make use of technology to define and demarcate their territories, and in doing so, enter into fruitful negotiations with government authorities to claim their territorial rights.

Changes

Baseline

The government dedicated community grazing lands to oil and gas extraction activities. The government was not responding appropriately to the needs of the community, leaving the nomads in a precarious position.

Achievements

As a result of the mapping exercise, communities are motivated to conserve and manage their natural resources using their traditional practices. Local communities, in their capacities as the protectors of nature, partook in the mapping exercise at different levels, leading to the unification of the local community (21 villages, 1 representative for each village) and confrontation of the oil and gas cartel.

Lessons learned

Lessons for civil society

Cenesta works with the community on the ground, and empowers them to understand and engage with policy issues that affect their livelihoods and land rights. Where
possible, the local communities must engage with other organisations working on similar matters at national and international levels. Cenesta worked with Land Mark: The Global Platform for Indigenous and Community Lands to advocate for the nomads' right to free, prior and informed consent (FPIC) in relation to the use or alienation of their land.

Lessons for policy makers

In Iran, rangelands are under governmental control, excluding the local communities. It is important to include local communities in the management of rangelands because they have eco-friendly traditional knowledge that is essential for the management of natural resources. Furthermore, the local communities tend to trust their ancestral knowledge for the management of eco-systems in arid and semi-arid areas.

Challenges

Among the many challenges, is the heterogeneity of nomadic communities that made it difficult to have consensus. Different communities wanted to use the maps for purposes that better suit their needs, without considering the needs of others.

In some instances, the government had not updated their official maps, thus some delineations were not reflected. As a result, it was increasingly challenging to create an accurate map. Cenesta had to negotiate with communities, government and other organisations to finally agree on some parts of the map.

Oil and gas companies, and urban settlements are encroaching on the territories of indigenous peoples. These encroachments must be identified in order to protect the land rights of nomadic communities.

Follow-up

Cenesta has also worked with the Abolhassani Indigenous Nomadic Tribal Confederacy. They have lived and migrated seasonally in a peri-central desert area known as Touran, one of the 9 UNESCO biosphere reserves in Iran. They live on a 74,000 hectare ICCA within a nature reserve. The protected area hosts a wildlife refuge, national park, a protected zone, and the ICCA. In recent years, they witnessed and suffered from significant climate change resulting from severe drought.

Cenesta worked with the Abolhassani nomadic community to support them in overcoming drought-related challenges. Cenesta is the facilitator of a community programme to promote 'The Drought Cycle', a community led initiative to address the effects of drought. The community reintroduced some of their crops to cope with severe drought, conserve their rangelands and to strengthen their resilience.
Supporting material

References and further reading

1. Land or Territory for Indigenous People? Using Participatory Geographic Systems (PGIS) and Satellite Images – Challenges and Opportunities (Ghanimat Azhdari, Taghi Farvar and Azar Tashakor – Cenesta and Uninomad, Tehran, Iran, ICCA Consortium, Switzerland)

2. Arab States Meeting Report ILC – Cenesta Oral Presentation (Bouhendi Kemali, Ghanimat Azhdari, Tafila Jordan)
