

Participatory Mapping and GIS Towards community-based Natural Resource Management in Iran

Participatory Spatial Information Management; Applying Participatory Mapping using GIS technics; the mobile pastoralist tribes of Iran document their knowledge, innovation and survival.

Background

Successful global case studies and examples show how important it is to transfer the power of producing and holding information to reach appropriate decisions. During the last year a number of activities have been done towards documentation of information management by/with the various indigenous/local communities around the country with the help of CENESTA staff to prepare a documentary map of tribal territories and ICCAs.

According to the aim of community-based development projects that are based on local-level participation and engagement and as a new complementary step to recognize and introduce the customary territories of nomads considering their FPIC, CENESTA is now fully prepared to make concrete agreements to push this idea forward.

A systematic training programme for appropriate representatives of a dozen tribal confederacies and independent tribes and core CENESTA workers is now being planned that requires the support of related organizations nationally and internationally. In addition, about three practical experiences were carried out in Abolhassani tribal confederacy, Heybatlou sub-tribe and Farsimadan Tribe respectively, to determine the territory borders in geographical coordinates. The experiences listed in a table below have been done to enhance the ultimate goal of CENESTA to find a better model of development for those communities and document their knowledge and their ancestral territories.

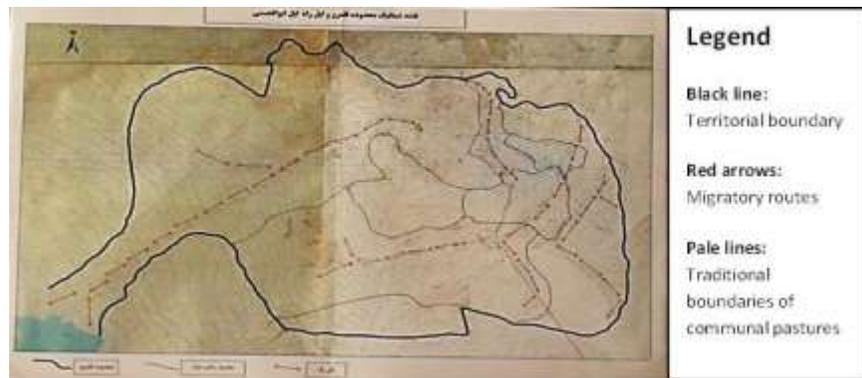
Main activity	Sub-activities	Achievements	Future Activities
Participatory Mapping and PGIS of Abolhassani tribal territories	<ul style="list-style-type: none"> - Preparing the Participatory map on 1/50,000 maps with official expert and a list of customary pastures by the community - Making a community GPS spotted map based on the Bureau of Natural Resources map and indicating it on the Google earth 	A GIS based map of Abolhassani customary pasture tribal territories	Expanding the pilot customary pastures identification for other zones and tribal territories all around the country
Participatory GIS in Farsimadan Tribe	<ul style="list-style-type: none"> - Holding a workshop for PGIS in the region with all stakeholder presence - Preparing a GIS map on Google Earth of the territory boundaries including summering and wintering grounds and migratory routs 	A GIS based map of Farsimadan tribal territory	Expanding the pilot territory GIS map identification for other zones and tribal territories all around the country
Participatory GIS in Heybatlou Sub-tribe	<ul style="list-style-type: none"> - Preparing a GIS map on Google Earth of the territory boundaries including summering and wintering grounds and migratory routs 	A GIS based map of Heybatlou tribal territory	Expanding the pilot territory GIS map identification for other zones and tribal territories all around the country

Participatory Mapping and GIS of Abolhassani Tribal Territory

A pilot/demonstration training activity in the Abolhassani Tribe in the Khartouran region east of Tehran, on the border of the provinces of Semnan, Khorasan and Yazd, was framed within a two days of practical training in participatory mapping and PGIS.

The list of customary pastures were prepared by the community, and based on that the participatory map prepared on scale of 1/50,000 by the Bureau of Natural Resources of Semnan province.

Here is the schematic participatory map drawn by the local community.



The next step was to superimpose this schematic map of the tribal territory onto a GPS-supported one, while with the help of the team from CENESTA and an expert from the Bureau of Natural Resources, one of the local people from Abolhassani tribe was trained to do the GPS in the whole area. They used a motorcycle to get around the boundary of their tribal territory and recorded a number of coordinates which was then sent to the Bureau of Natural Resources to produce a digital GIS map of the area.

Out of the pastures defined as areas where the nomads could legally graze their herds, there are only 4 rangeland management projects prepared by natural resources office and the date of them is too old to be useful now and need to be updated.

Here is the final boundary of Abolhassani territory on the Google map.



PGIS in Heybatlou Sub-tribe, Shesh Boluki Tribe, Qashqae Tribal Confederacy

Following the previous activity and achieved experiences in Abolhassani and in line with the general goals of ICCA recognition, preparing an integrated map of identified and under exploration ICCAs and expanding this participatory approach into the whole ICCAs in the region, a team from CENESTA was sent to the tribal territory of Heybatlou Sub-tribe in South-West of Iran. According to the earlier arrangements, all the members of Sustainable Livelihood Fund of the mentioned community gathered in a determined place by community representative in their wintering grounds. After a short description about the aims, expected results and the methodology of the whole process, the community representatives of about 12 persons began to discuss and exchange ideas to come to a united decision about the territory boundaries. Then with the facilitation of CENESTA experts and using the online Google Earth they started to demarcate the wintering and summering ground boundaries and define the migratory routes considering some of the benchmarks and places along or nearby the boundaries or migratory routes. They also identified the illegally seized areas by the government and outsiders besides all the protective policies that are insisted specially during the last recent years.

PGIS with the new methodology of Google Earth software brought excellent results and made them explain enthusiastically the procedure to each other and admire it. The advantages of this method comparing to 1/50,000 maps and GPS was the high accuracy that made them capable to understand the terrains in a 3D view, when they were sitting at home. They could see the roads, rivers, agricultural fields, mountains and hills, lakes, villages, cities and even vegetation cover which made them excited and motivated. In addition, this is a time and money saving approach, instead of going around the territory and marking the points by GPS besides demarcating the territory on the 1/50,000 maps with the help of an expert from the Bureau of Natural Resources.

After all the geographical coordinates of the territory have to be transferred to ArcGIS software matching with information layers. The next step would be defining all the territories on the digital map of the country and investigation of the overlaps with other boundaries and margins like PAs depending to the related projects. Based on these findings, the available and suitable migratory routes could be offered instead of the seized ones and claim for the illegally seized areas.

Based on the outcomes and assessments of these explorations we can find how wisely these routes were defined, in terms of length and suitability, by the indigenous people upon their precious knowledge and experiences during thousands of years. Results from this pilot activity have been very encouraging for some other surrounding communities as they asked to do the same for their territories in order to be demarcated and registered. In particular this platform would enable the nomads to define and document their claim of their territory that subsequently will enable them to participate in assessments, analysing, planning, decision making and management of their territory.



Participatory GIS in Farsimadan Tribe, Qashqae Tribal Confederacy

Based on the earlier and similar practices in the realm of GIS activities and workshops, this action has been initiated. The PGIS procedure in this activity was similar to what have been done in Heybatlou Sub-tribe territory, in addition to an available participatory map prepared in an earlier workshop with the presence of nearly all the stakeholders including the council of elders, members of sustainable livelihood funds, experts and CENESTA facilitators. The existing map was considered as a base map for the current action and gave the possibility of comparison and improving the results.

Moreover, in comparison with the previous activity in Heybatlou Sub-tribe, this action engaged a bigger community of Farsimadan tribe involving 24 sub-tribes which caused anticipated conflicts among participated representatives that subsequently took a longer time to come to a united outcome. Out of these conflicts, there was more than one migratory rout defined by the participants which it was critically required the council of elders to be involved and finalize the routs. This was a new experience for PGIS team and the achievements can be expanded to other big communities. The following map shows the tribal territory of Farsimadan extracted from Google Earth and overlapped with the country map.



All the efforts for demarcating the boundaries and defining the ICCAs, are towards the ICCA recognition Plan, preparing an integrated map of ICCAs in the national, regional and global maps and consequently in order to conflict resolution, conducting the participatory management plans and to support the rights of indigenous people over their territories.