

Participatory Approach in Combating Desertification in Turkmenistan – Experience in the Farmers Association Yerbent

J. Langbein

Alteburger Str. 121, 50678 Köln, FRG, geoplan.klimm@t-online.de

Abstract

The “UN Convention to Combat Desertification” points out the importance of the participation of the local population in combating desertification. Turkmenistan ratified the CCD in 1996. But in its political system, the so called “Democratic Centralism”, decisions about land use are still made on high administrative levels without paying attention to the needs and the knowledge of the affected people.

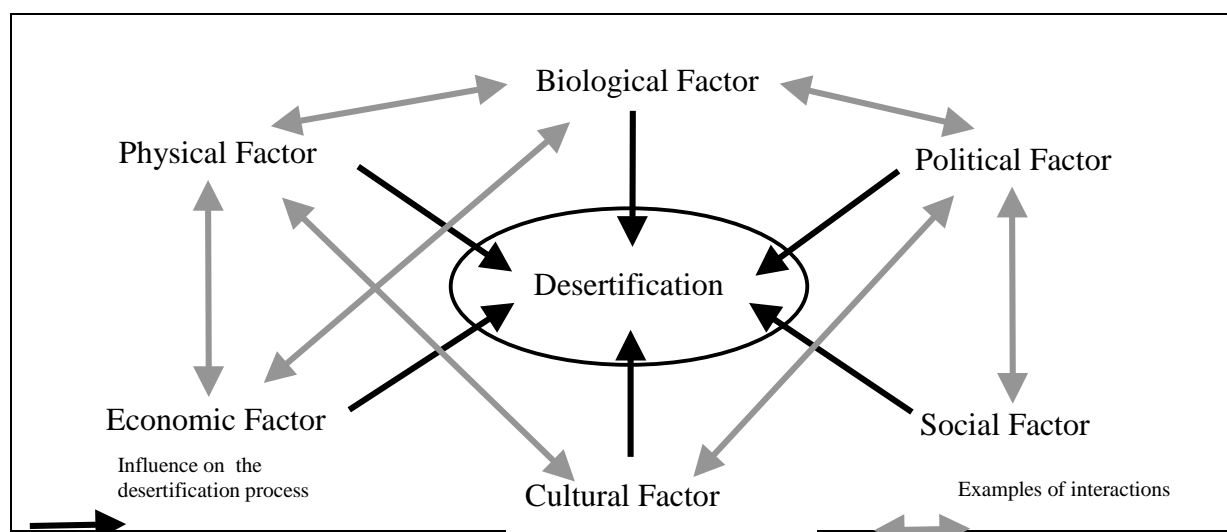
Against this background, a pilot project was designed with the financial and technical support of the GTZ to facilitate processes of participatory desertification combat on the grassroots level. The paper gives an overview about the first experience of this project.

Keywords: Participation – Desertification – Turkmenistan – Central Asia

1. Desertification and Participatory Desertification Combat

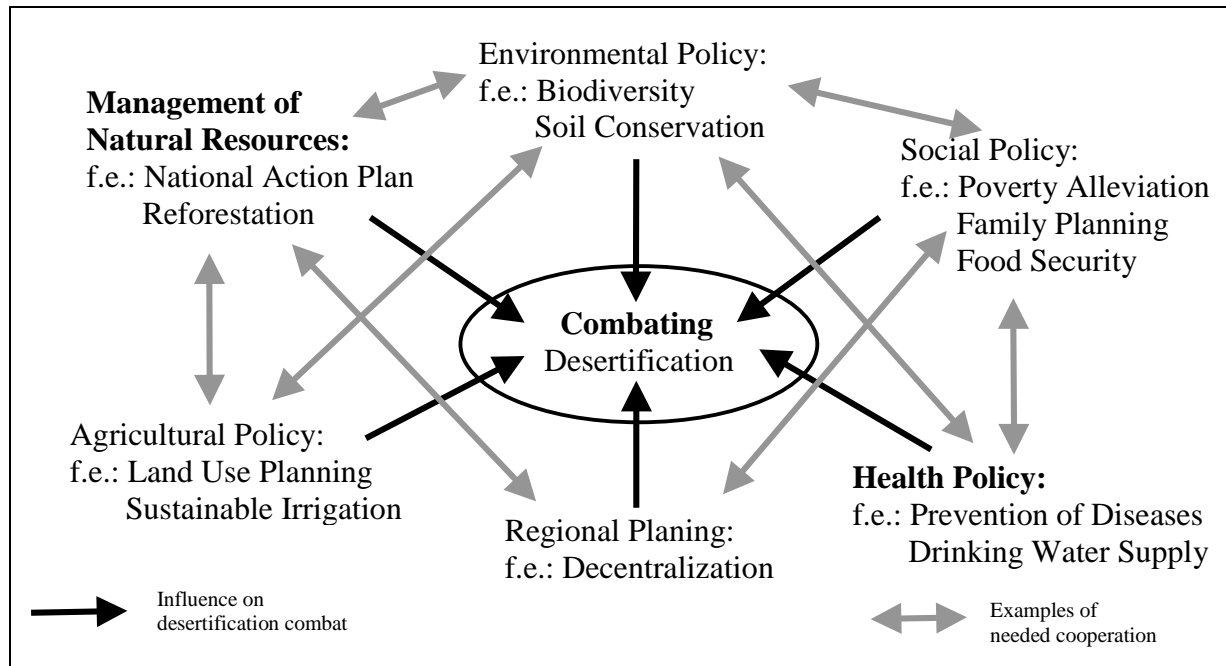
Desertification is one of the most considerable global environmental problems. (BMZ 1997a, Mainguet 1994, Mensching 1990). The UN-Convention to combat Desertification defines desertification as “land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities” (CCD, Article 1) and notes that desertification is caused by complex interactions among physical, biological, political, social, cultural and economic factors (see Fig. 1).

Figure 1. Factors of Desertification and their interactions



This multifactorial and complex system makes clear, that to combat desertification successfully, sector policies such as social policy, environmental policy or agricultural policy have to be linked and well coordinated. Single fields of this sector policies for example poverty alleviation or food security in social policy have to be harmonized with fields of other sector policies like sustainable irrigation in agricultural policy or soil conservation in environmental policy (see Fig. 2).

Figure 2. Sector policies with influence on desertification combat



On the other hand, it is necessary that the institutional framework conditions are supporting the measures against desertification. Resource Management, Action and Land Use Plans on different administrative levels have to be developed and effectively implemented. Food security systems, multisectoral coordination and consulting instruments as well as monitoring and warning systems are needed. In all these programs, action plans and administrative systems, the participation of the affected population should play a major role.

This fact is appreciated by the CCD. It puts human beings in affected or threatened areas into the center of concerns (first sentence) and points out, that programs to combat desertification can only be successful if they are designed and implemented with the participation of the population and the local communities (Articles 3a and 5).

2. Turkmenistan – Problems of Development and Development Perspectives

The former Socialist Republic of Turkmenistan within the USSR, which attained its independence as Republic of Turkmenistan on October 27, 1991, is part of the vast belt of semiarid and arid lands which stretches from North Africa to the Near and Middle East, North and Central Asia to the Interior of China. It is situated in the Aral Sea basin and reaches from

the Caspian Sea in the west and the Amurdaja in the east and south-east. In the North it extends up to the Ust-Urt-Plateau, while in the South a part of the Koped Dag, which reaches nearly 3000 m, belongs to Turkmenistan. The "UNCOD World Map of Desertification" from 1977 includes Turkmenistan in the category of countries, which are high or very high affected by desertification (Mensingh 1990, 11f).

90% of the Turkmen territory is occupied by the Karakum Desert. The strongly continental climate is characterized by hot and dry summers (+32° C, main temperatures in July) and cold winters (0,7° C, main temperatures in January). The annual rainfall reaches 75 to 100 mm in the Central Karakum and up to 400 mm in the Southern mountains.

Due to the Soviet history of the country, unsuitable land-use pattern of industrialized agriculture on irrigated lands (cotton) and on pasture lands (sheep and camel breeding in large herds) were developed and are still practiced. This means, that desertification is a nationwide problem affecting all sections of the economy. Research by the National Institute of Deserts, Flora and Fauna in Ashgabat – NIDFF (formerly the Desert Institute of the Academy of Science of the Soviet Union) proves that desertification is still a growing problem for the development of Turkmenistan. It is not only affecting the pasture lands, but also the irrigated areas (salinization) and the mountain regions (Babaev, 1999).

Turkmenistan became the 46th state to join the International Convention to Combat Desertification (CCD). The Parliament-Majlis of Turkmenistan ratified it on June 18, 1996. The CCD points out that development can only be sustainable if it is oriented towards the needs of the affected population groups (see chapter 1). This fact opens new perspectives especially for the "bottom up initiative" which pays special attention to the participation of the local population in attacking the problems of desertification.

Since the Russian occupation (1881 conquest of the Turkmen fortress Gök-Tepe; 1884 occupation of Merw) and during Soviet times, decisions about land use and production targets were taken at a high administrative level and realized in the field. Techniques of using resources and conceptions about the connection between men and environment as well as the scope of actions for the rural population and the local administration, were given from higher administrative levels without paying attention to the knowledge of the local people. In independent Turkmenistan the planned economy was changed into the so called "Democratic Centralism". In fact the "Top-Down" approach is still practiced and is even worse. Some functions and services (f.e. machine-parks or the management of fertilizers-input), which were formerly exercised by the kolkhoz are now taken by the etrap administration (municipality). This means that the process of transformation, decentralization and democratization in Turkmenistan is still at the very beginning in comparison to other central Asian republics. Participation of local people in planning and decision making processes still plays a minor role in the political culture of Turkmenistan and is seldom practiced.

3. The Yerbent-Project

Against this background a project was designed within the NIDFF and with financial and technical support from the German Agency for Technical Cooperation (GTZ) to initiate processes of participatory management of natural resources as a contribution to the realization of the CCD.

Deutscher Tropentag 1999 in Berlin
Session: Participatory Knowledge and Technology Development

The objective of the project is to facilitate the realization of the CCD process in Turkmenistan. The following sub-objectives were formulated:

1. Sensibilization, awareness creation and the building up of confidence and partnership in the rural population as well as in the local administration through workshops and seminars.
2. The realization of field investigations by using methods of Participatory Rural Appraisal (PRA) to understand the ongoing processes.
3. To initiate capacity building processes through participatory planning and organization.
4. Implementation of local measures to combat desertification to facilitate a participatory process of a common learning for all actors.
5. Monitoring and Evaluation of this process of learning as well as the exchange of experience and information on a national and international level.
6. "Coaching" the process by consultancy activities from experts and scientists from the NIDFF.

The project is based on working together with the families and the local administration on the grassroots-level. The concept of the project follows ideas which are mainly developed from Chambers (1997) and others (f.e. GTZ 1994; BMZ 1997b; OECD 1997). It is principally process orientated and its dynamic is determined by the people. This means, that not only the results of the implemented measures are important, but also the process of planning and managing, which led to these results.

To work process orientated in this sense means to promote a process of learning among all participants with a view to sustainable natural resource management. The sustainability of the planned project impacts is ultimately dependent on that process of learning and on the experience, made during this process. The objective is to build up and to use the potential of self help of the rural population. Thus, the common process of learning is the focus of the project. From the experience, they made during this process, the people that are involved are supposed to improve their capacity in environmental questions.

All participants learn from the experience of observing the implementation of measures and the resulting effects (monitoring). Also they learn through the process of joint reflection on the results on their own actions and those of others, as compared with the objectives set during planning (evaluation).

During all phases, the experts in the project-team take the part of external consultants. They are coaching the project and do not make decisions for – but only together with – the rural population.

In March 1998 a PRA-Team visited the project area, situated in the farmers association Yerbent, about 100 km north of Turkmen Capital Ashgabat in the Central Karakum Desert. The Team informed the decision makers in the community as well as the rural population about the project and its objectives and conducted interviews and group discussions with key-persons from the local administration and the farmers association. Various families in the region were interviewed. Graphs and diagrams of the daily activities, seasonal calendar or others were drawn up by the people.

Deutscher Tropentag 1999 in Berlin
Session: Participatory Knowledge and Technology Development

The results of this PRA-Analysis gave an overview about the ecological and socio-economic problems of the people in the Yerbent region as they are seen by themselves. First of all this are socio-economic problems, which are affecting the people directly:

- Poor living conditions and lack of food diversity.
- Increasing unemployment especially among young people and women.
- Reduction of farm productivity.
- Lack of income.
- Lack of drinking water and bad quality of available drinking water.
- Insufficient level of infrastructure (partly no gas or electricity).
- Insufficient education.
- Slight chances to sell the animal products (Camel- and sheep-wool and meat).

Ecological problems are not the major problem of the people, although they realize, that the ecological degradation is closely linked to how they are using the natural resources. But because of their socio-economic situation at the moment, they do not see a chance to change the way of using land and water resources. The ecological problems are mainly:

- Moving sand dunes and sand storms.
- Degradation of pasture lands due to overgrazing.
- Irrigation with polluted drainage water.
- Uncontrolled harvesting of medicinal herbs and wood cutting.
- Hunting of threatened animals.

The problem analysis served as a basis for the final planning meeting to define future activities of the project. The activities were planned as follows:

- Environmental education for teachers (workshops and seminars).
- Environmental education in school (for pupils).
- Competition “our Environment” with pictures, drawn by the pupils.
- Maintaining the school-garden together with pupils.
- Stabilization of sand dunes.
- Establishing of Homegardens with fruits, vegetables, medicinal herbs and desert plants.
- Improvement of pasture lands
- Supporting the villagers in their activities of selling wool as well as producing needle work and camels milk.
- Installing a wind propeller, which both generates electricity and pumps water that was already used in a research of the NIDFF.
- Supporting the people’s activities against unemployment.

In the NIDFF two scientists were chosen to be responsible for the implementation of the activities. A team of other experts will assist them in specific scientific questions. A young teacher at the school of Bachardoc, the administrative center of the Yerbent region, functions as a connecting link between the NIDFF and the target-group.

Deutscher Tropentag 1999 in Berlin
Session: Participatory Knowledge and Technology Development

In the beginning, the project mainly aimed at building up confidence and partnership among the population and was focused on environmental education. Later on it was possible to implement small measures like sand dune stabilization through participatory planning.

After one year it is possible to sum up the first experience. In spite of the complicated frame conditions, several activities could be implemented together with the population and the pilot project is able to present the first positive results:

- Three settlements were selected, on which the project will focus its work. The sensibility for environmental questions of the people, living in this settlements, could be improved.
- Several seminars for teachers with environmental subjects were held in Bachardoc and most of the teachers participated. Ecological subjects were included into the school curriculum.
- A school-garden was laid out together with pupils to show how to grow desert-bushes and -trees, as well as medicinal herbs.
- 5 ha of sand dunes were stabilized with straw mats and newly planted seedlings near the main-road. Some people started to use the same technique to protect their houses and cisterns from moving sands. The local hospital will be the next to be protected from moving sand dunes.
- Some families started to grow desert-bushes and -trees in their irrigated gardens and shifted the seedlings to the sand dunes around their houses.
- In one settlement a traditional method of rainwater collection was revived. On a takyr (clay-plain) rainwater is collected and stored in a self made cistern. The so stored water is of a relatively good quality.
- Initiated by a teacher a self-help group for unemployed women was founded. The women want to produce carpets and other needlework together. There is a good demand for these products at the weekly market in Ashgabat. Therefore the project made small tools available like combs for preparing the wool or frames for carpeting. The local school provided a room, where the women can meet and work together.

Other measures for example the improvement of pasture land could not yet be implemented. It needs a high financial input and without protecting the newly improved pasture lands by a fence, the grazing animals will destroy them in a short time.

For the future it is planned to support the farmers by selling their wool. For this an expertise about the quality of the local camel and sheep wool as well as possibilities to sell the wool is already made. With the beginning rainsaison the pupils will start to establish a nursery for Saxaul (*Haloxylon spec.*) and other local tree-species as well as fruit-tree seedlings in the schoolyard. Later these trees will be used for sand dune stabilization and as fruit and shade trees near the houses.

Also there are still problems especially in motivating the people, who are living in extremely poor conditions (no gas or water pipeline, no electricity), to start self-help activities. But the first positive results and the feedback of the interested families give hope for the future.

Deutscher Tropentag 1999 in Berlin
Session: Participatory Knowledge and Technology Development

To make the experience more representative for the whole of Turkmenistan, two other pilot projects with participatory approaches to combat desertification will be started in regions of Turkmenistan with other ecological characters.

One additional pilot-area could be identified in a village in the mountain region of the Kopetdag about 100 km northwest of Ashgabat. An other will be realized in an irrigated area near the Mary oasis.

In 1999 the GTZ also started a new rural development project in the northern Vellayat Taschauz. The experience made in the Yerbent-Project, will be used for this larger scaled intention.

Nevertheless a small scaled pilot project like this in Yerbent can not answer the question, how the political and institutional frame conditions in the now independent state Turkmenistan can be improved to promote the participatory approach in combating desertification (compare Chapter 1). For this additional research has to be done on different administrative levels (Ph.D.-Thesis of the author, in preparation).

References

- Babaev A.G. (Editor) (1999). Desert Problems and Desertification in Central Asia. The Researches of the Desert Institute. Springer-Verlag. Heidelberg.
- BMZ – Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (Editor) (1997a). Combating Desertification: Experience of German Development Cooperation. Bonn.
- BMZ (Editor) (1997b). Die Fähigkeit zum Umwelt-und Ressourcenschutz in Entwicklungsländern stärken. Beiträge zur Entwicklungszusammenarbeit. Bonn.
- Chambers, R. (1997). Whose Reality Counts? Putting the first last. London.
- GTZ – Gesellschaft für Technische Zusammenarbeit (Editor) (1994). Participatory and Self-help Approaches in Natural Resource Management. A Position Paper. Eschborn.
- Mainguet, M. (1994). Desertification. Natural Background and Human Mismanagement. Springer-Verlag. Heidelberg.
- Mensching, H.G. (1990). Desertifikation. Ein weltweites Problem der ökologischen Verwüstung in den Trockengebieten der Erde. Wissenschaftliche Buchgesellschaft. Darmstadt.
- OECD – Organization for Economic Cooperation and Development (Editor) (1997). Capacity Development in Environment. Principles in Practice. Paris.
- United Nations (Editor) (1994). The United Nations Convention to Combat Desertification (CCD). New York.