

## **Traditional forest management system**

In this historical form of forest ownership, the resource users were co-owners of the forest (resource) usually from one village. Property in the urbar is inherited from parents to children in equal share. To undertake managerial responsibilities, community rules for harvesting, replanting and self-management were developed over time. Each owner had a duty to participate in the management, taking the size of the share into the account as well as having the right to collect an annual benefit from the land. The most significant formal forest act during Austro-Hungarian Empire was forest degree of Maria Teresa. Translated into the Hungarian and Slovak this documented served as management guidelines for forest industry since 1770 and was adopted also by urbars. The guidelines contained 55 management rules for harvesting and forest revitalisation designed to maintain forest quantity and quality in long term. Each co-owner of urbar had a duty to participate in the management according to the size of the shares and having the right to collect an annual benefit from the land. Annual profit was distributed to members according to their shares or redeemed in firewood. As the amount of land owned per owner was usually very small, the individual earnings were rather minor. Share in the urbar could be sold only with the approval of the assembly. Priority of existing members is legally binding.

## **Driving forces that enhance the vulnerabilities of the local SES**

This case study represents a SES that has traditionally used a very valuable natural resource. Changes in the political and socio-economic conditions which this resource operate, along with market pressures (new external disturbances) and alteration of boundary rules of the common resource, have change the structure of traditional SES and affected its robustness.

### Resource:

- Forest is valuable and the most vulnerable natural resource in many rural areas of Central - Eastern Europe. In our study area, abundant, cheap, and sometimes-unprotected forest being available, cheap land have all attracted new market.

### Public infrastructure providers and social capital:

- Slovak forests are classified into three categories as commercial, special and nature protected (Act no. 326/2005 on Forests). However several provisions of forest and biodiversity protection legislation do not match. Contradicting are definitions of forest categories and rules that applies for the management in protected forests. This creates numerous conflicts over the use of the forest and challenges the right of urbars to devise their institutions often resulting in overexploitation or even in open access.

### External forces on resource and infrastructure:

- The 40 years of interruption resulted in an erosion of local knowledge and loosening roots in the community due to resettlement to large cities. Resulting from technological modernization and lost connections to forest resource during state property regime (1945-1990) number of original forest management practices do not exists anymore although they contributed to the sustainable harvesting such as seasonal harvesting calendar.

#### External forces on social actors:

- After the Second World War, new land reform was undertaken in 1945 and 1948 respectively when most forests remained in non-state hands were confiscated by the socialist regime. In the early 90's as a result of democratization and political transformations, the land was restored by restitution and privatization to the previous owners.
- During 40 years of socialism the study area has been politically and economically isolated from market forces. However, the central planning, the transition to a market economy and opened boundaries for international economic actors, have presented a substantial challenge to the forest commons. The new market opportunities call for more intense harvesting to generate better profit.

#### **Changes in the structure and robustness of the SES**

The long existence and tradition of urbars was interrupted during communism, when land was in the hands of the state. However, in early 90's urbars was re-established in the process of land restitution by Act no. 181/1995 on Land Associations. More than 40 years of regime disconnection and land nationalization in 1948 has resulted in significant fragmentation as it increased the numbers of resource users and reduced the sizes of individual shares to sometimes less than 1 ha. Today, only small part of members takes part on the management of the forest due to the diversification of economic activities, change in the life style, in particularly for those members who change their residency. However, due to residency changes and lack of interest in management activities not all members can take part on collective choice arrangements. The main decision-making body is an assembly of owners (providers), which takes place once a year, and adopts an annual harvesting strategy and approves budget. It also delegates all day-to-day decisions to the economic committee, consisting of elected and professional members. Sometimes, lack of common understanding and weak communication within an enlarged and diversified group changes the original self-governance conditions and leads to the adoption of less flexible management activities. Currently, the infrastructure providers are not only urbars assemblies but also regional and district forest offices, plus Forestry Department of MA SR and its Forest Management Unit, Unit of State Administration on Forests. Moreover for forestland situated in protected areas it is also the Ministry of Environment and Administration of National parks or other types of protected areas.

Another problematic issue of the present is that the 40 years of interruption resulted in an erosion of local knowledge and loosening roots in the community due to resettlement to large cities. Particularly younger generation may see the co-ownership of forestland, as an opportunity for increasing profit generation and due to lack of information about local conditions tends to use intensive and not always suitable harvesting practices. Moreover, due to lack of knowledge about local conditions of the forest resource, the co- owners of urbars sometimes use harvesting practices that have negative effect on surrounding environment and neighboring urbars. Certain types of harvesting practices can have negative influence on the water regulation and prevention against floods. The new intensive harvesting practices affect the resource dynamics vastly. Nowadays, the unpredictability and uncertainty of water precipitation and sudden storm rainfall have increased. The probability of floods in

the area depends not only on the amount of rain precipitation but also on the ability of the forest to absorb and retain the water. Thus, new intense harvesting practices affect not only the ecosystem dynamics but also the relationship between neighboring urbars.