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Promoting Transboundary Cooperation for CBD Implementation  
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**The Use of Landscape Planning for the Establishment of Biosphere Reserves: The Example of Issyk-Kul Reserve in Kyrgyzstan**

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# Landscape Planning for setting up Biosphere Reserves

## Example: Biosphere Reserve Issyk-Kul Kyrgyzstan

Caucasus Conference 9.-11.03 2003, Berlin

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### 1. General conditions and targets of Biosphere Reserves

The biosphere reserve concept is integrated in the ecological program “Man and the biosphere” (MAB) which was established by the UNESCO 1970. The aim of the MAB programme is to contribute to the preservation of natural resources and to cultivate the biosphere carefully and in a way which is oriented to the principle of sustainability. The establishment of a global network of biosphere reserves covering types of ecosystems and biogeographic units of the world, is a central focus of the MAB programme and important part of international environment and nature conservational policies.

Since 1995 the policy of UNESCO for biosphere reserves is changing from conservation to more development strategy. In accordance with the “Seville Strategy” the following strategic targets are important:

- Conservation of natural and cultural diversity
- Models of Land Management and approaches to sustainable development
- Research, Monitoring, Education and Training
- Production and Marketing of regional goods and services

### 2. Biosphere Reserve Zones

The spatial implementation of the concept expected a zoning in 4 “Objective Zones”:

- **Core area** is characterised by a strict nature protection regime which forbid any form of land use. The aim is to conserve the biological diversity.
- **Buffer zone** can be used extensively as well as seasonally. The aim is to conserve a cultural landscape with typical and traditional use forms.
- Further development and the optimisation of sustainable land use is the task of the **transition zone**.
- Heavily damaged areas which urgently needs regeneration are part of **rehabilitation zone**.

### 3. Tasks of Landscape Planning

Landscape planning is a suitable instrument to implement the concept of biosphere reserves. The planning steps are:

- Determination and evaluation of natural resources and cultural peculiarities.

- Analysing and evaluation of existing land use forms and land use conflicts.
- Creation of spatial concrete visions of land use development in accordance with the “Seville Strategy”.
- Elaboration of a zoning concept with the 4 categories of zones.
- Concretisation by interior differentiation.
- Requirements to existing land use practise and –intensity.
- Determination of conformist (new) sustainable land use activities
- Moderation of land use conflicts.
- Implementation- and marketing strategy for measures and products

# Landscape Planning for Establishment Biosphere Reserves

Example: Issyk Kul Kyrgyzstan

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## Targets of Biosphere Reserves

In accordance with the „Seville Strategy“ of UNESCO from 1995 the following strategic targets are important:

- Conservation of natural and cultural diversity
- Models of Land Management and approaches to sustainable Development
- Research, Monitoring, Education and Training
- Production and Marketing of regional goods and services

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## Biosphere Reserve Zones

It will be expected a zoning in 4 „Objective Zones“:

- **Core Area** is characterised by a strict nature protection regime which forbid any form of land use. The aim is to conserve the biological diversity.
- **Buffer Zone** can be used extensively as well as seasonally. The aim is to conserve a cultural landscape with the typical and traditional use forms.

## Biosphere Reserve Zones

- Further development and the optimisation of sustainable land use is the task of the **transition zone**.
- Heavily damaged areas which urgently needs regeneration are part of **rehabilitation zone**.

## Tasks of Landscape Planning

- Determination and evaluation of natural resources and cultural peculiarities.
- Analysing and evaluation of existing land use forms and land use conflicts
- Creation of spatial concrete visions of land use development, orientated on the „Seville Strategy“

## Tasks of Landscape Planning

- Elaboration of a zoning concept with the 4 categories of zones
- Concretisation by interior differentiation
- Requirements to existing land use practise and - intensity

## Tasks of Landscape Planning

- Determination of conformist (new) sustainable land use activities
- Moderation of land use conflicts
- Implementation- and marketing strategy for measures and products

## Zoning concept Issyk Kul

### Зонирование биосферной территории «Иссык-Куль»



## Concretisation by interior differentiation



## Examples of implemented measures



Building a wash-house and sauna



Breeding of Yaks the original local cattle

**List of proposed projects for the donor conference  
for Issyk-Kul oblast (draft: July 1998)**

no.	project name	project implementer	estimated costs in US \$
1	yak and sheep breeding development	farm Araschan, model area 3	17.000
2	yak breeding	cooperation Aikol	6.000
3	milk production	model area 2	20.000
4	reconstruction and increase of the flour mill	Kamil Ltd, Karakol	60.000
5	fishery	family cooperation „NUR“, Tup	3.000
6	drop irrigation	village communities, model areas 1 and 3	250.000
7	final stage of completion of the sewage treatment plant in Balykchy	corporation „Vodokanal“, Balykchy	90.000
8	honey production	family cooperation „NUR“, Tup	6.000
9	stabilization of swan population in Issyk-Kul	town educational institution, Balykchy	3.158
10	water pipe construction in model area 2	village community, model area 2	75.000
11	reconstruction of urban sewage treatment plants	corporation „Vodokanal“, Karakol	152.000
12	fruit processing and canning	Cholpon-Ata	27.000
13	construction of slaughterhouse with cold storage depot and packing equipment	Bokonbaevo	290.000
14	wood-processing	company „Sadus“, Karakol	30.000
15	processing of organic waste into fertilizers	(Karakol)	100.000
16	use of modern horticulture methods	Ananyevo	140.000
17	creation of information centre in Balykchy	head office of „biosphere reserve Issyk - Kul“	300.000
18	construction of wind power stations in Balykchy	Balykchy	1.000.000
19	use of small hydroelectric power stations	model areas 2 and 3	250.000
20	production of solar lamps	company „Tashanbek“	30.000
21	support of anti poaching units for biosphere reserve	head office of „biosphere reserve Issyk - Kul“	300.000
22	meat processing	kyrgyz-russian joint venture, Bokonbaevo	256.700

Thank you for your attention!