



Natura 2000 Seminars

Alpine Biogeographic Region Workshop
Freshwater Working Group

Graz, Austria 12-14 June 2013



Code	Habitat	Score
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	6
3150	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation	6
3220	Alpine rivers and the herbaceous vegetation along their banks	11
3230	Alpine rivers and their ligneous vegetation with <i>Myricaria germanica</i>	10
3240	Alpine rivers and their ligneous vegetation with <i>Salix elaeagnos</i>	8
3260	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and Callitricho-Batrachion vegetation	8
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)	9



Freshwater Field Trip Learning Points

Key Learning Point 1 - Lakes



Austrian alpine lakes are in good condition but there are signs of potential problems ...

Key Learning Point 2 - Lakes



- Increasing levels of tourism
- Alien and/or invasive species
- Climate change eg 2C rise in surface water temperatures

Key Learning Point 3 - Lakes



To protect the Natura 2000 network we must:

- Use the existing legislation and measures better and more consistently within and across member states
- Educate all stakeholders about the fragility of the habitats
- Effectively compensate landowners where restrictions are required

Key Learning Point 4 - Rivers



National park Gesauche

*overlapping with 2 Natura 2000 sites

*Excellent overview

*Details on 2 rivers with LIFE projects on restoration

*Both regulated in 1950ties

*Natural river dynamics changed

*Low diversity of species and low biomass

Key Learning Point 5 - Rivers



River Enns [130 km without barriers from 254 km]

2 restoration activities

- *Creation of oxbow [habitats for species]

- *Revitalization of confluence with its tributary

Cooperation with land owner, village and avalanche and torrent control

Key Learning Point 6 - Rivers



River Johansbach [mountain creek]

- *restoration of the river bed
- *removal of barriers
- *creating new sills friendly to fish

Nature trail [giant Johans]

Cooperation....

Key Learning Point 7 - Rivers



Multiply effects of river restoration:

- *nature, better habitats, species....

- *water quality...

- *flood control and safety

- *tourism...

A good start but not easy to recreate functional habitats on a large scale



Issues and problems

Issues and Problems (identified in the Workshop)

Initial list

- Construction in riparian and lakeside environments eg settlement
- Poaching
- Hydro-power
- Water abstraction for domestic, agricultural and snow(!)
- Lack of available space for floodplains
- Loss of natural dynamics
- Hydrological and morphological alterations to natural systems
- Non-native/alien/invasive species introduction – especially in alluvial forests
- Mining and quarrying pollution
- Lack of co-financing support
- Gravel extraction (and other types)
- Removal of river bed
- Lack of consistent regulation (eg Article 6)
- Awareness – solidarity - education
- Connectivity
- Tourism (inc development and activities)
- Domestic pollution
- Conflict of interests
- Historical and future impact of flood and torrent control measures

Issues and Problems (filtered list)

<u>Activities</u>	<u>Score</u>
● Construction eg houses, roads	9
● Hydro-power	17
● Historical and future impact of flood and torrent control measures	4
● Excavation (in water body and nearby)	3
● Mining and quarrying pollution	3
● Agriculture – pollution, irrigation	1
● Forestry – pollution, damage	2
● Tourism - pollution, water use, damage, disturbance	2
● Housing – pollution	1
<u>Problems (causes and results)</u>	
● Space*	9
● Dynamics*	10
● Connectivity*	12
● Morphological change*	8
● Awareness	5
● Implementation of Article 6	3
● Conflicts of interest	2
● Invasive alien species	1
● (Co-)financing	4

Highest scoring issues coloured **red**
Issues marked with (*) are grouped as one



Solutions and actions

Workshop Solutions – Hydro-power

Solution	Detail	Score
Create new, stronger legislation		10
Better application of existing legislation (Article 6)	training, co-operation, describe obligations, best practice, publish reports	19
Develop applied guidance for use across the alpine region	Minimum standards, best practice, appropriate assessment, cumulative effect, links with Water Framework Directive, fish pass design, domestic practices	9(7)
Review existing consents and licences for hydro-power proposals		10(7)
Alternative energy strategy		8
Cost – benefit strategy		5
Technical solutions	Fish bypass design, communicate best practice, bed-load management, focus new hydro-power only on existing barriers	15
Monitoring		6
Polluter pays principle		4

ISSUE	SOLUTION	Actions (via communication platform, ad hoc expert group)
Hydropower – emerging threat inside and outside N2000 site (up to 100s km distance)	Better application of existing legislation	<ol style="list-style-type: none"> 1. Ask for EU Guidance on the issue (like ports, renewables etc) inc cumulative effects, minimum standards for appropriate assessment 2. Specify minimum standards for best practice for new developments 3. Training and other forms of co-operation 4. Common implementation with Water Framework Directive 5. Public availability of information/decisions
	Technical solutions	<ol style="list-style-type: none"> 1. Fund research into aquatic impacts 2. Share best practice eg fish passes up and down stream 3. Establish principles eg only build new plants only on existing barriers 4. Include bed-load management in research and planning 5. Organise appropriate assessment conference



ISSUE	SOLUTION	Actions
<p>Note, these solutions were identified by a moderated discussion without scoring</p>		
<p>The maintenance or restoration of 'Space, Connectivity & Dynamics</p>	<p>Availability of land for restoration and instruments to acquire land</p>	<ol style="list-style-type: none"> 1. Exchange information of available instruments between states – by communications plan 2. Explore regional funding of long-term projects to find land banking 3. Management plans for catchments 4. Effective spatial planning for rivers and flood zones 5. Fair compensation for all owners and users 6. Stakeholder involvement
	<p>Relocation of dykes, embankments and river banks</p>	<ol style="list-style-type: none"> 1. Encourage natural solutions for existing projects
	<p>All Government bodies sharing responsibility of Natura 2000</p>	<ol style="list-style-type: none"> 1. Sharing of good practice
<p>As a general principle: the condition of Alpine rivers and lakes can be maintained by non-intervention [if state is good] Or will need restoration/revitalization [if state is not good]</p>		





Species Requirements

Species conservation - Key Points

- Because the recommendations identified so far are very general, there are no particular threats to any of the listed species
- In fact, natural restoration schemes would probably benefit these and other species across the landscape scale
- Local adverse impacts could and must be avoided by using Article 6
- Before carrying out projects we need high-quality data and we need to monitor before and after
- There is a need for education to raise awareness of beaver and otter and other vulnerable species
- There are other species (with a large range) which would help define condition of the alpine biogeographical regions better eg amphibians including yellow-bellied toad and carpathian newt, and pearl mussel. These could be added to the list





Cross-cutting issue Fragmentation

Landscape fragmentation

Question 1: How does this theme impact on FCS?

- Defined by landscape structure and by species/population/natural dynamics
- Crucial for maintaining or improving FCS (at different spatial scales)
- Fundamental impact on maintenance of viable populations – some species require isolation – ranging from the genetic to the distribution of a species
- Impacts can be at the micro, local, landscape and all other scales
- Fragmentation can result from inappropriate management as well as physical barriers
- Bad schemes can allow invasive/alien species in!

Landscape fragmentation

Question 2: What are the potential ways forward?

- First step is comprehensive monitoring and good indicators!
- Role of national bodies/government to provide (over-arching) guidance is important
- Link sites by:
 - appropriate networks
 - improving the quality of habitats both within N2000 sites and outside Natura
- Use a mix of landscape, habitat and species approaches (a multi-scale approach)
- Solutions must distinguish between intensively used valleys and remote mountains – but it is a continuum
- For major developments, impacts must be considered at the earliest stages of project design
- Those decisions must be able to rely on a landscape scale master plan
- This demands truly integrated landscape planning at the supra-national scale which should link into local laws and planning and should be compulsory
- But this may mean new priorities focussed on networks and not patches
- Best practice must be shared
- Ensure there is legislation to support the Habitats Directive to make it happen



Landscape fragmentation

Question 3: Are there concrete possibilities for action?

- All levels will require co-operation with all sectors, landowners, businesses, authorities, the scientific community, NGOs and investors via a stakeholder platform
- Co-operation between different sectors is needed to inform master planning
- Process should be bottom up and top down and deal with conflicting needs
- By definition, the process but be carried out at all levels from the landscape to the local scale, within, across and between member states, and outside the community
- It represents an ideal opportunity for LIFE+ to encourage collaboration at the landscape scale

In the time available, it was impossible to identify these in more detail.





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