River Basin Management in the Alps from an NGO perspective

Christoph Walder & Elisabeth Sötz

6th International Conference “Water in the Alps” 2016

100+/ 5 Mio

WWF is active in more than 100 countries, and counts 5 mio supporters

6000+

More than 6.000 people worldwide are working with WWF

1961

WWF was founded in 1961

99%

99% of the population recognize the Panda Logo

Photo: © Michel Roggo / WWF-Canon

WWF Conceptual Model
Living Planet Report 2014

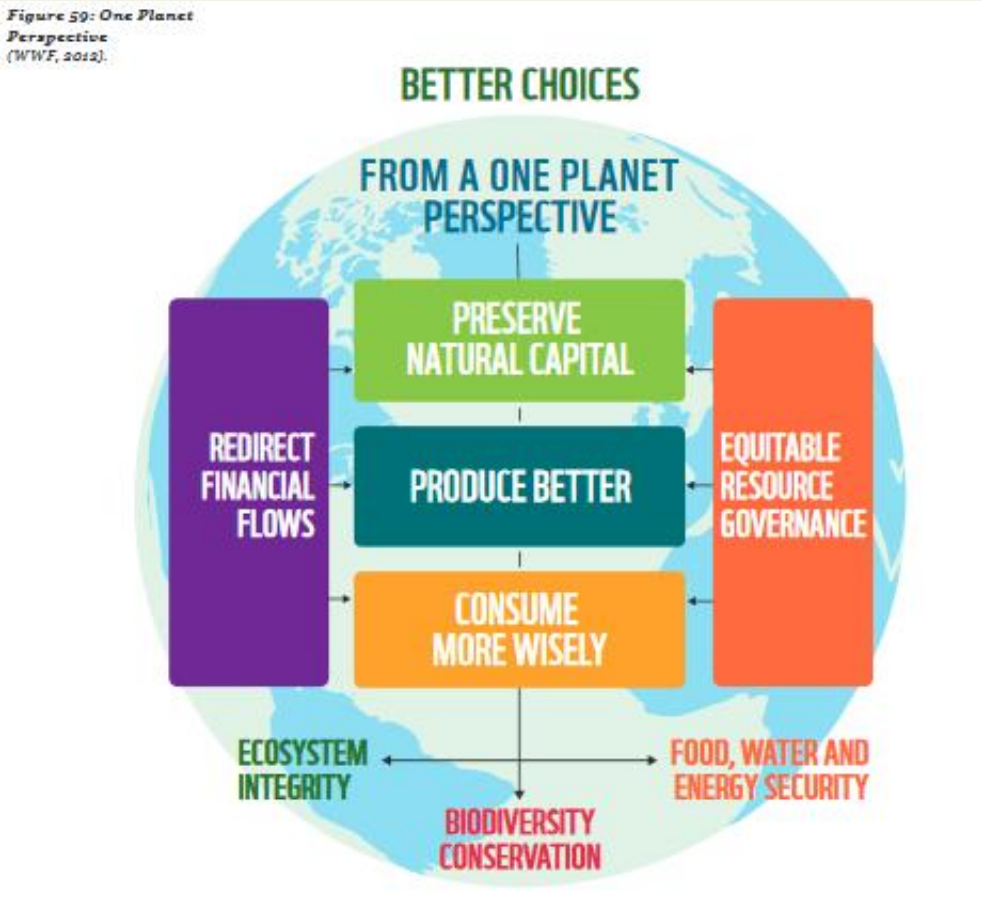
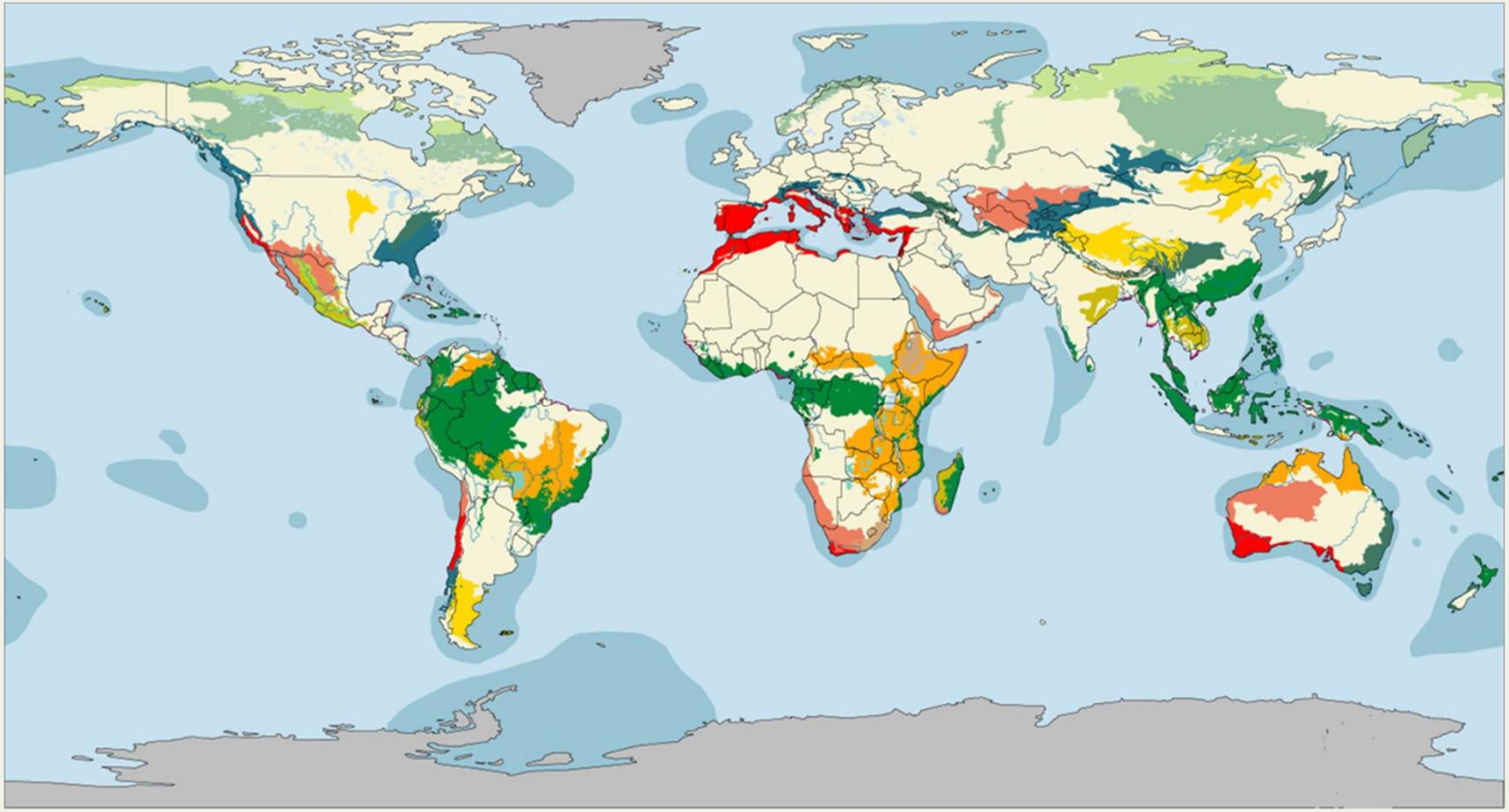
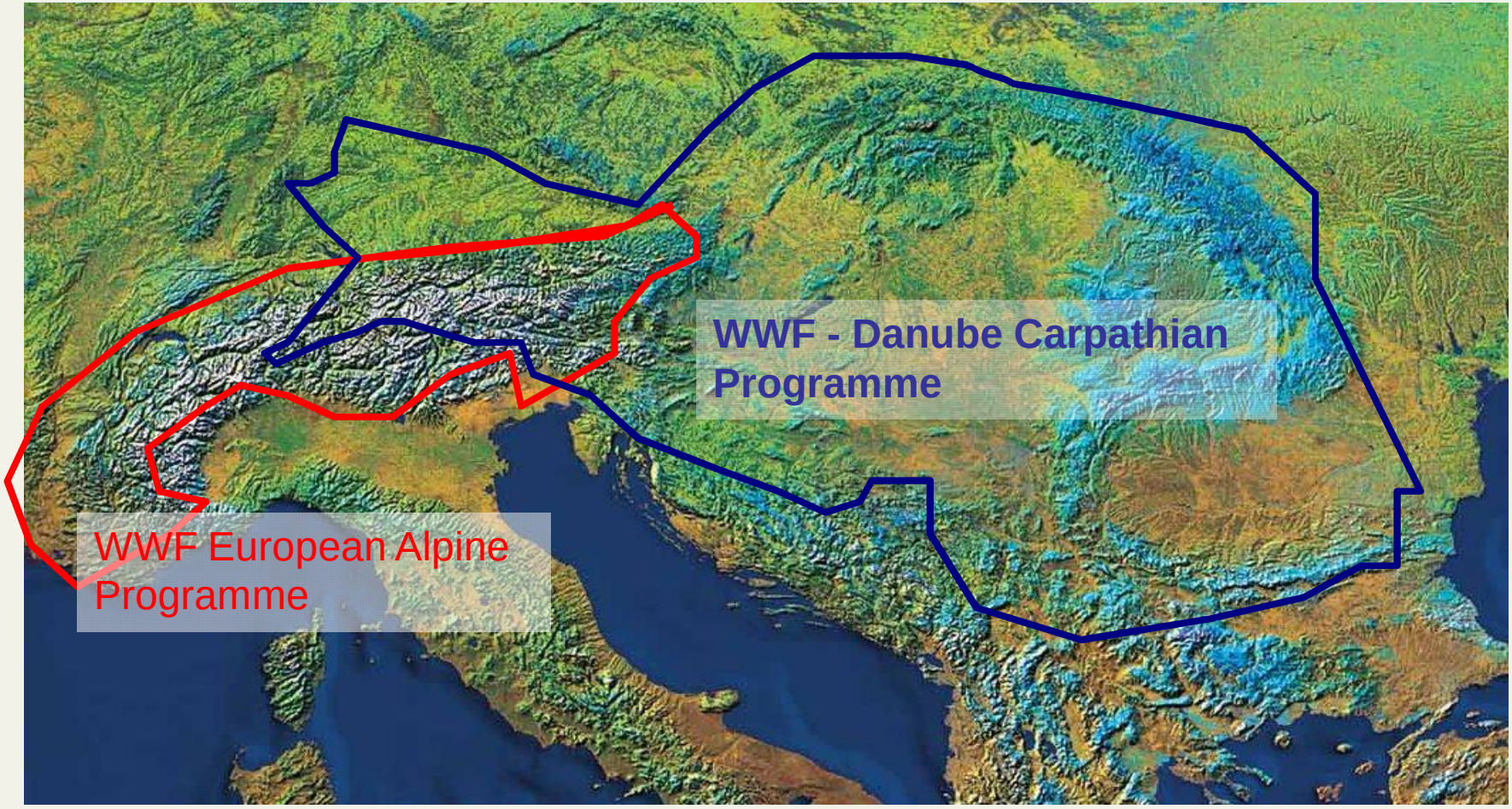


Figure 59: One Planet Perspective (WWF, 2012).

Global Priority Ecoregions



Global Priority Ecoregions



Decline of Freshwater species

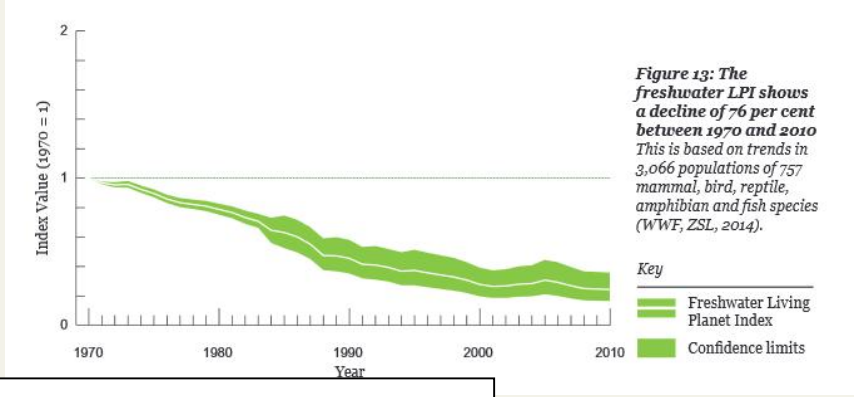
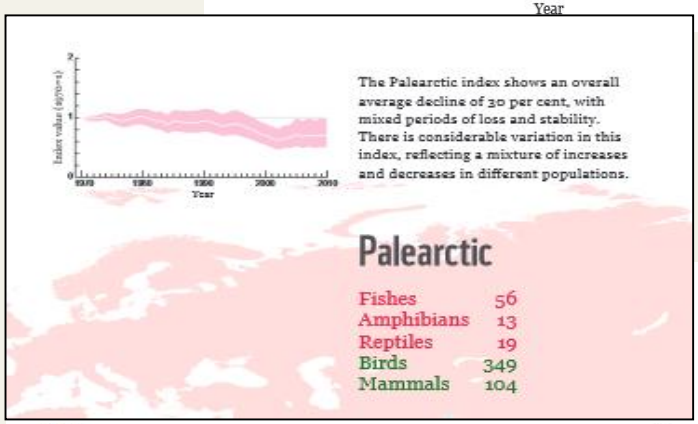


Figure 13: The freshwater LPI shows a decline of 76 per cent between 1970 and 2010
This is based on trends in 3,066 populations of 757 mammal, bird, reptile, amphibian and fish species (WWF, ZSL, 2014).



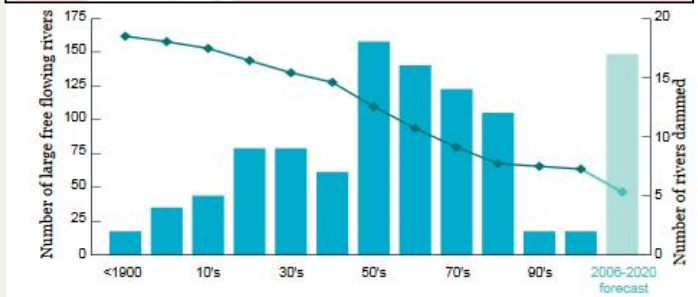
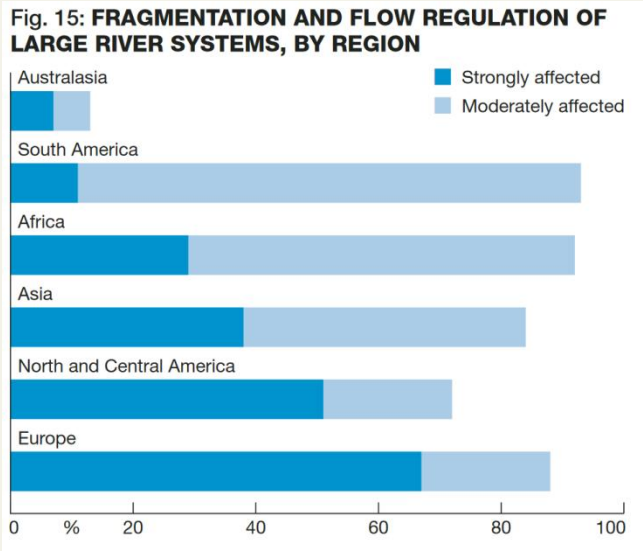


Figure 50: Trends in number of global free-flowing rivers greater than 1,000km in length
Trends from pre-1900 to the present day and estimated to 2020 (line), in comparison with the number of rivers dammed over time (bars) (WWF, 2006a).



(source: Living Planet Reports 2006 - 2014)

Alpine Rivers

- is highly threatened by land use, settlement, economy, flood protection:
  CIPRA study 1992: only 10% of the alpine rivers are natural;
  WWF STAR 2014: 4% of larger rivers (15% of smaller ones) in good ecological status

- Main impact is hydromorphological change due to hydropower and – to a lesser extent – Flood protection shoring (e.g. 81% of Austrian Rivers with hydromorphological alteration)

- only 8% (4.669 km) of the Alpine rivers are still bordered by floodplains or wetlands

Save the Alpine Rivers
Scientific foundations for identifying ecologically sensitive river stretches in the Alpine Arc

Human pressures on river units - Alpine Arc

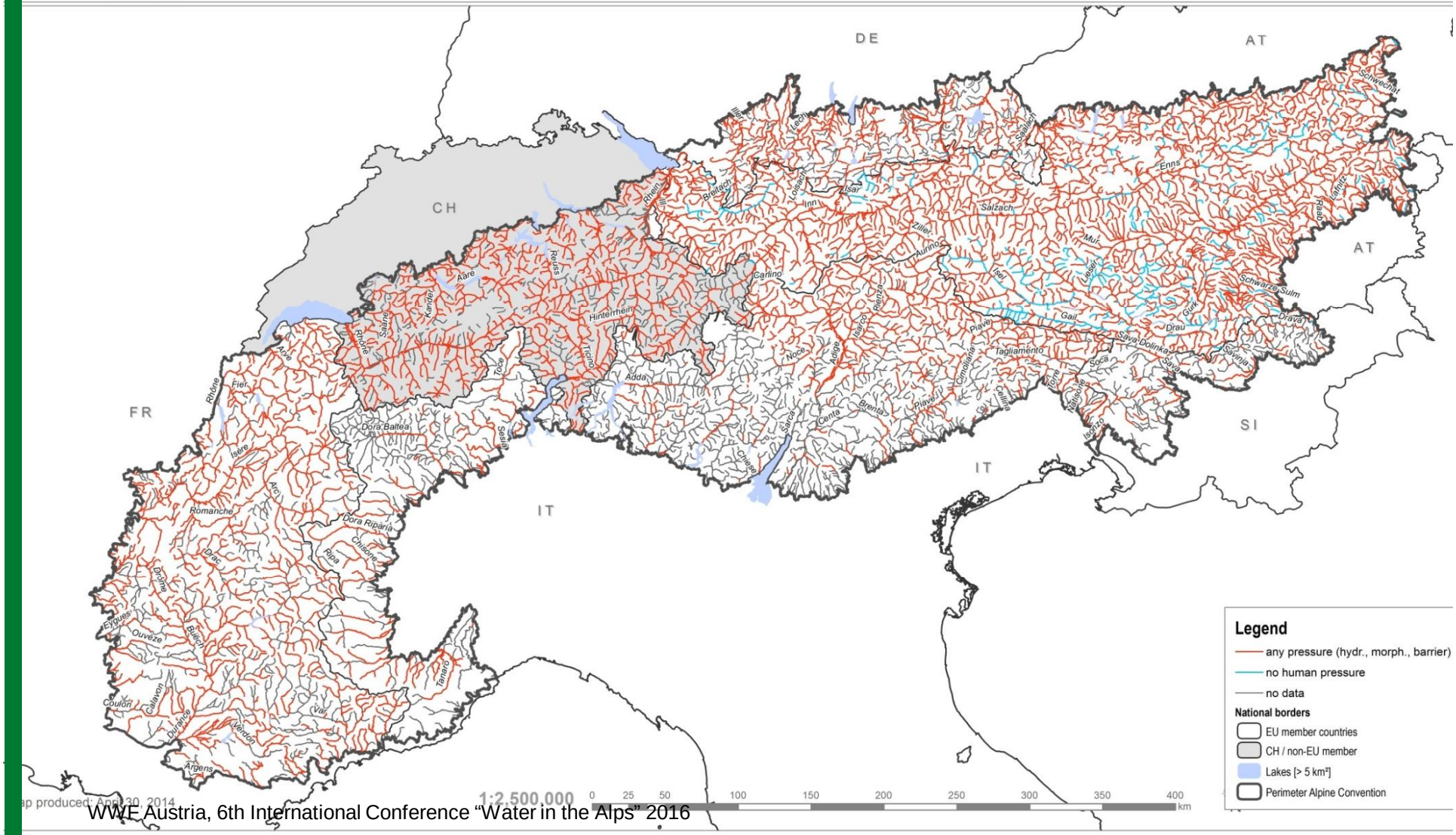
University of Natural Resources and Life Sciences, Vienna
Department of Water, Atmosphere and Environment

Institute of Hydrobiology and Aquatic Ecosystem Management
Max-Emanuel-Straße 17, 1180 Vienna, Austria
Project team: Susanne Muhar, Rafaela Schinegger, Stefan Fleck,
Sabine Preis, Lisa Schülting, Clemens Trautwein & Stefan Schmutz

Funding Organisations: MAVA - Fondation pour la nature
WWF - World Wide Fund For Nature
December 2013

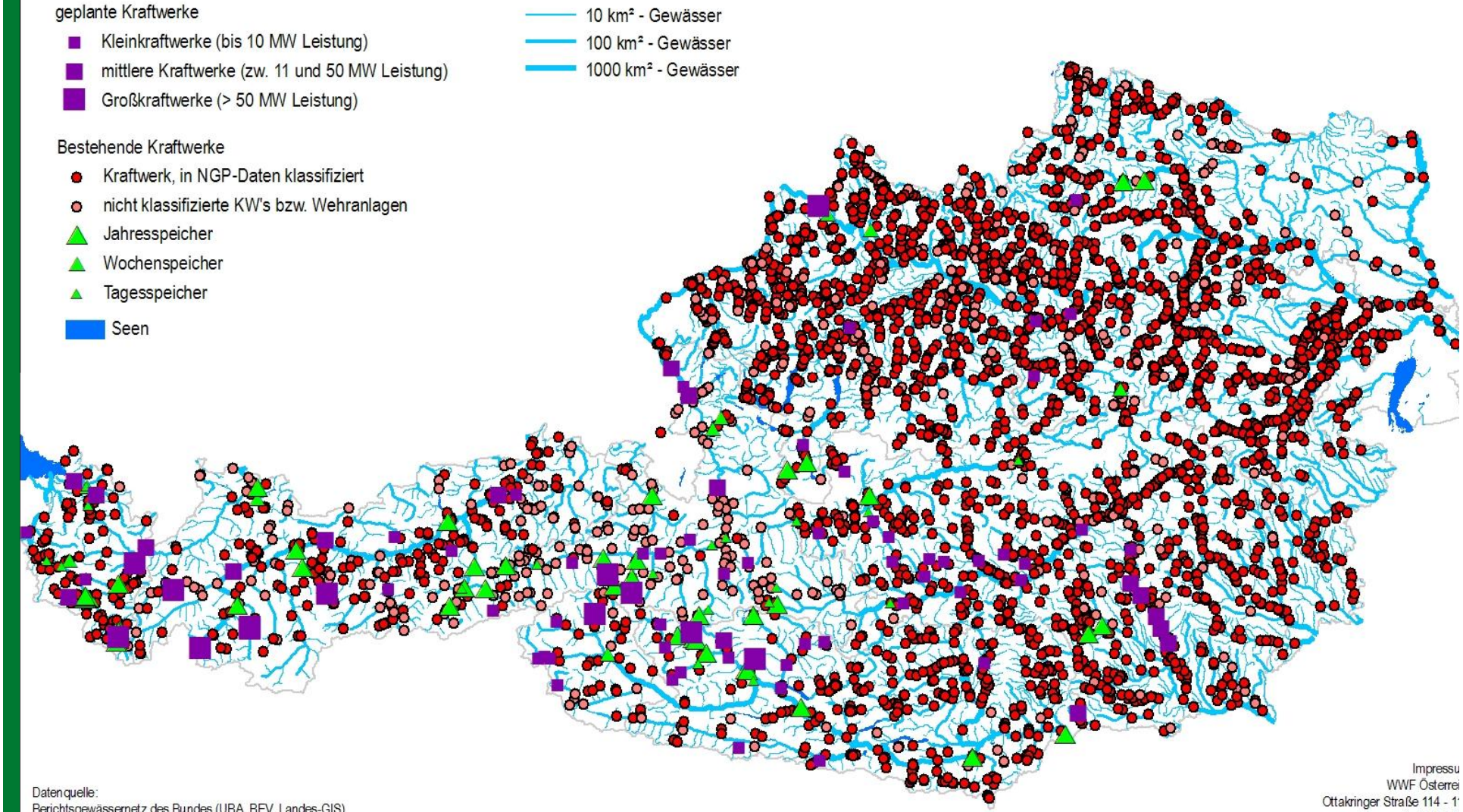
Mapping of human pressures occuring on the river unit with catchment area > 10 km²: Water abstraction OR hydropeaking OR impoundment OR morphology > 2 OR any barrier.
Pan-Alpine river network assembled from official national river networks.

Data sources
Perimeter of the Alpine Convention: *Permanent Secretariat of the Alpine Convention*
National river networks: *ADBPO, ADBVE, GURS, UBA, LFU, IRSTEA, Swisstopo*
Ecological status: *UBA, LFU, Eau France, ADBPO, ADBVE, Region Liguria, ARSO*
Lakes (from ECRINS): *EEA*
Administrative boundaries: *GADM database*



Österreichs Fließgewässer - lebendig oder gestaut?

Bestehende Kraftwerke an österreichischen Fließgewässern mit EZG > 10 km²
sowie österreichweit geplante Kraftwerke



Datenquelle:
Berichtsgewässernetz des Bundes (UBA, BEV, Landes-GIS)
Daten zum Nationalen Gewässerbewirtschaftungsplan (BMLFUW 2009)
geplante Kraftwerke: Internetrecherchen, WWF
Jahres-, Wochen-, Tagesspeicher: HAO - Hydrologscher Atlas Österreichs

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…so what to do?

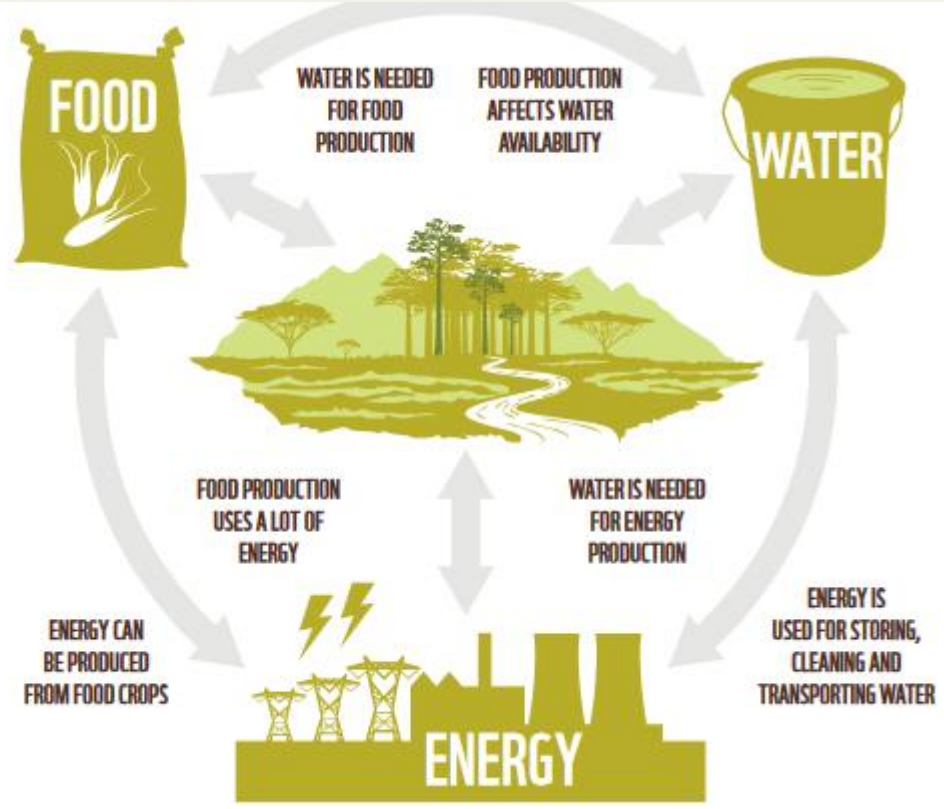

Figure 55: The inter-relationships and interdependencies between the biosphere and food, water and energy security
How we produce food, use water or generate energy impacts on the biosphere that supports these needs.

Integrated River Basin Management

- Determination of ecologically most valuable/sensitive river stretches as “no-go areas”
- restoration of degraded areas
- definition of multifunctional spaces, e.g. flood retention combined with (extensive) agriculture and/or recreation areas
- inclusive dialogue with all stakeholders

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Sabine Preis, Lisa Schülting, Clemens Trautwein & Stefan Schmutz

Funding Organisations: MAVA - Fondation pour la nature
WWF - World Wide Fund For Nature
December 2013

Priority protection rivers - Alpine Arc

Criteria for the identification of protection priorities for rivers with catchment area > 10 km²:
Aggregated from ecological status, protection status and floodplain/wetland data on a river unit.
Pan-Alpine river network assembled from official national river networks.

Data sources
Perimeter of the Alpine Convention: *Permanent Secretariat of the Alpine Convention*
National river networks: *ADBPO, ADBVE, GURS, UBA, LFU, IRSTEA, Swisstopo*
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Lakes (from ECRINS): *EEA*
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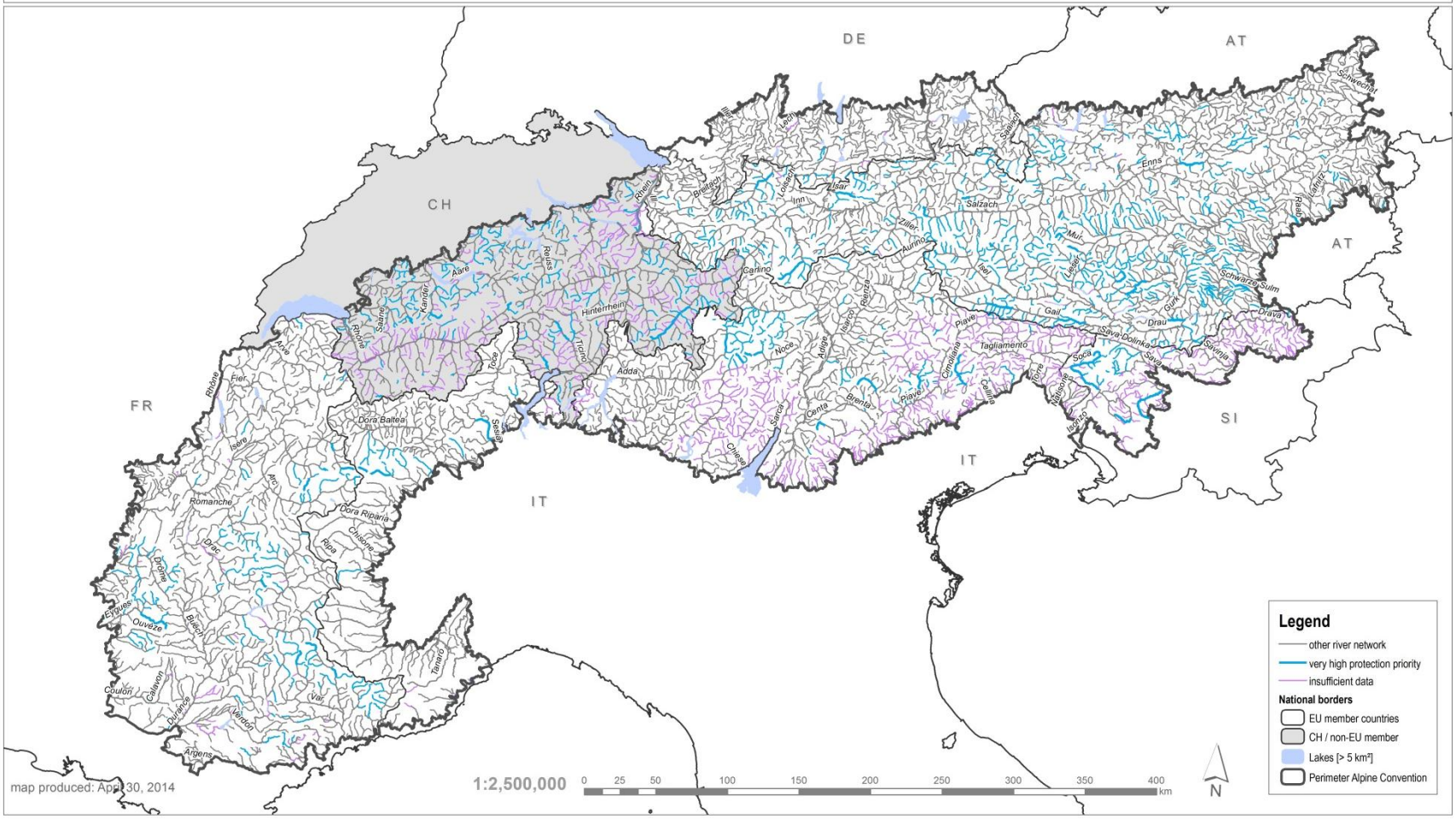

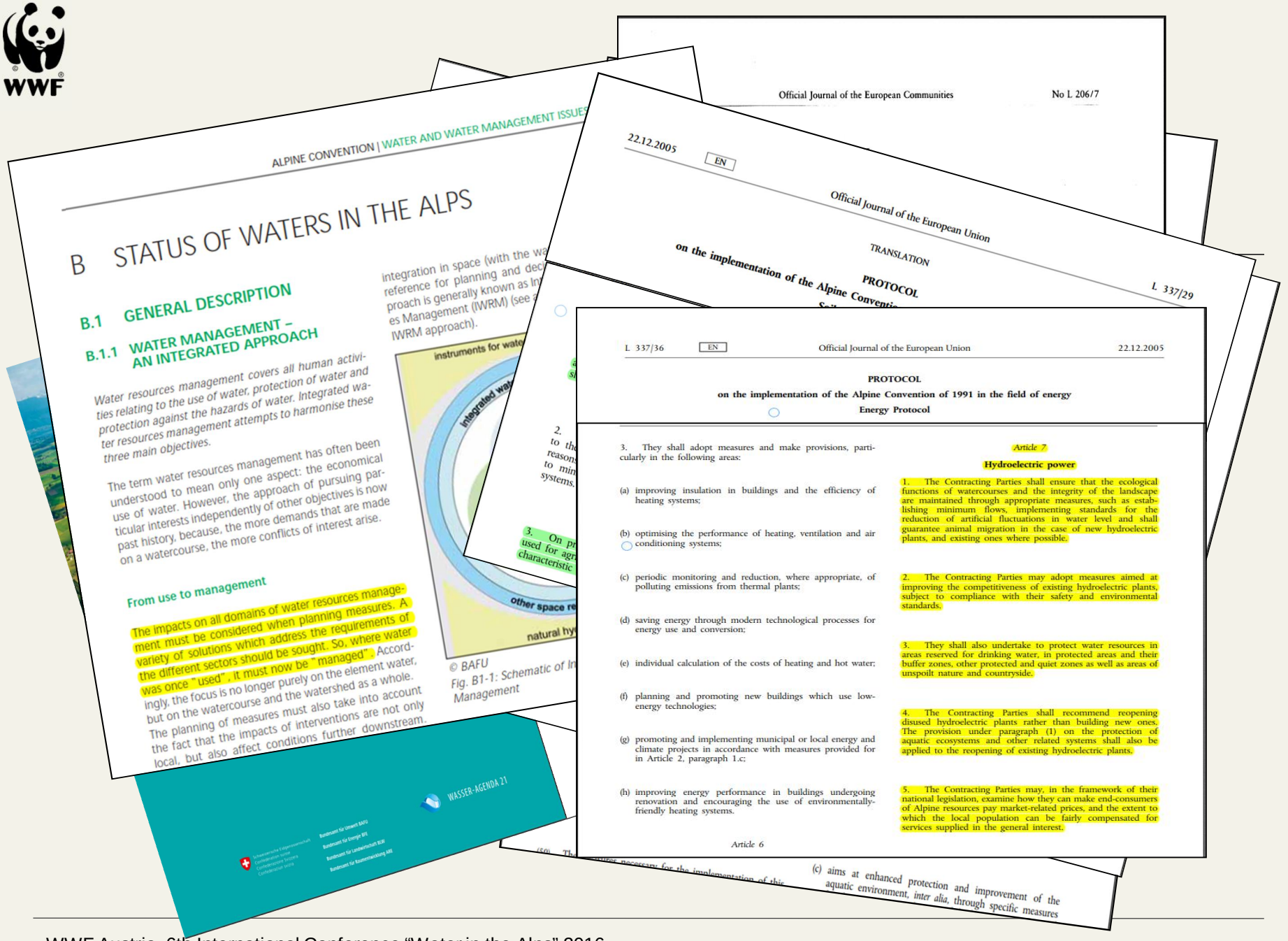
ALPINE CONVENTION | WATER AND WATER MANAGEMENT ISSUES
B STATUS OF WATERS IN THE ALPS
B.1 GENERAL DESCRIPTION
B.1.1 WATER MANAGEMENT – AN INTEGRATED APPROACH
Water resources management covers all human activities relating to the use of water, protection of water and protection against the hazards of water. Integrated water resources management attempts to harmonise these three main objectives.
The term water resources management has often been understood to mean only one aspect: the economical use of water. However, the approach of pursuing particular interests independently of other objectives is now past history, because, the more demands that are made on a watercourse, the more conflicts of interest arise.
From use to management
The impacts on all domains of water resources management must be considered when planning measures. A variety of solutions which address the requirements of the different sectors should be sought. So, where water was once "used", it must now be "managed". Accordingly, the focus is no longer purely on the element water, but on the watercourse and the watershed as a whole. The planning of measures must also take into account the fact that the impacts of interventions are not only local, but also affect conditions further downstream.
integration in space (with the wa
reference for planning and dec
proach is generally known as In
es Management (IWRM) (see a
IWRM approach).
instruments for wate
integrated wat
other space re
natural hyd
© BAFU
Fig. B1-1: Schematic of In
Management
WASSER-AGENDA 21
Official Journal of the European Communities No L 206/7
22.12.2005 EN
Official Journal of the European Union
TRANSLATION
PROTOCOL
on the implementation of the Alpine Convention
L 337/29
L 337/36 EN Official Journal of the European Union 22.12.2005
PROTOCOL
on the implementation of the Alpine Convention of 1991 in the field of energy
Energy Protocol
3. They shall adopt measures and make provisions, particularly in the following areas:
(a) improving insulation in buildings and the efficiency of heating systems;
(b) optimising the performance of heating, ventilation and air conditioning systems;
(c) periodic monitoring and reduction, where appropriate, of polluting emissions from thermal plants;
(d) saving energy through modern technological processes for energy use and conversion;
(e) individual calculation of the costs of heating and hot water;
(f) planning and promoting new buildings which use low-energy technologies;
(g) promoting and implementing municipal or local energy and climate projects in accordance with measures provided for in Article 2, paragraph 1.c;
(h) improving energy performance in buildings undergoing renovation and encouraging the use of environmentally-friendly heating systems.
Article 6
Article 7
Hydroelectric power
1. The Contracting Parties shall ensure that the ecological functions of watercourses and the integrity of the landscape are maintained through appropriate measures, such as establishing minimum flows, implementing standards for the reduction of artificial fluctuations in water level and shall guarantee animal migration in the case of new hydroelectric plants, and existing ones where possible.
2. The Contracting Parties may adopt measures aimed at improving the competitiveness of existing hydroelectric plants, subject to compliance with their safety and environmental standards.
3. They shall also undertake to protect water resources in areas reserved for drinking water, in protected areas and their buffer zones, other protected and quiet zones as well as areas of unspoilt nature and countryside.
4. The Contracting Parties shall recommend reopening disused hydroelectric plants rather than building new ones. The provision under paragraph (1) on the protection of aquatic ecosystems and other related systems shall also be applied to the reopening of existing hydroelectric plants.
5. The Contracting Parties may, in the framework of their national legislation, examine how they can make end-consumers of Alpine resources pay market-related prices, and the extent to which the local population can be fairly compensated for services supplied in the general interest.
(c) aims at enhanced protection and improvement of the aquatic environment, inter alia, through specific measures

Integrated River Basin Management

- Ownership with national/regional/local authorities
- Involvement of all stakeholders interested in water use, in disaster risk reduction and in nature protection
- role of NGOs: support to local civil initiatives, dissemination of information, cooperation with research è specific studies as contributions for planning, participation in institutionalized dialogue on all levels

E.g. “WWF Eco master plan”

39 ecological criteria, e.g. ecological state, indicator species, protected areas…

based on official data

è Identification of high-sensitives river stretches

as WWF contribution in the selection process of exclusion areas

Schutz für die letzten intakten Fließgewässer-Strecken Österreichs

**Darstellung der Schutzwürdigkeit der österreichischen Fließgewässer (Einzugsgebiet ≥ 10 km²)
anhand der Kriterien "ökologischer Zustand", "Lage in Schutzgebieten", "morphologischer Zustand" sowie
"Länge der zusammenhängenden freien Fließstrecke"**

Lobbying for enhanced cooperation on priority rivers

- Tagliamento

- Soča / Isonzo

- Inn


Thank you!