

Partners



Observers



Capitalized projects



The project AIM is co-funded by the European Regional Development Fund in the frame of the European Territorial Cooperation Programme Alpine Space.

RSE - Lead Partner
Via R. Rubattino 54
20134 Milan, Italy

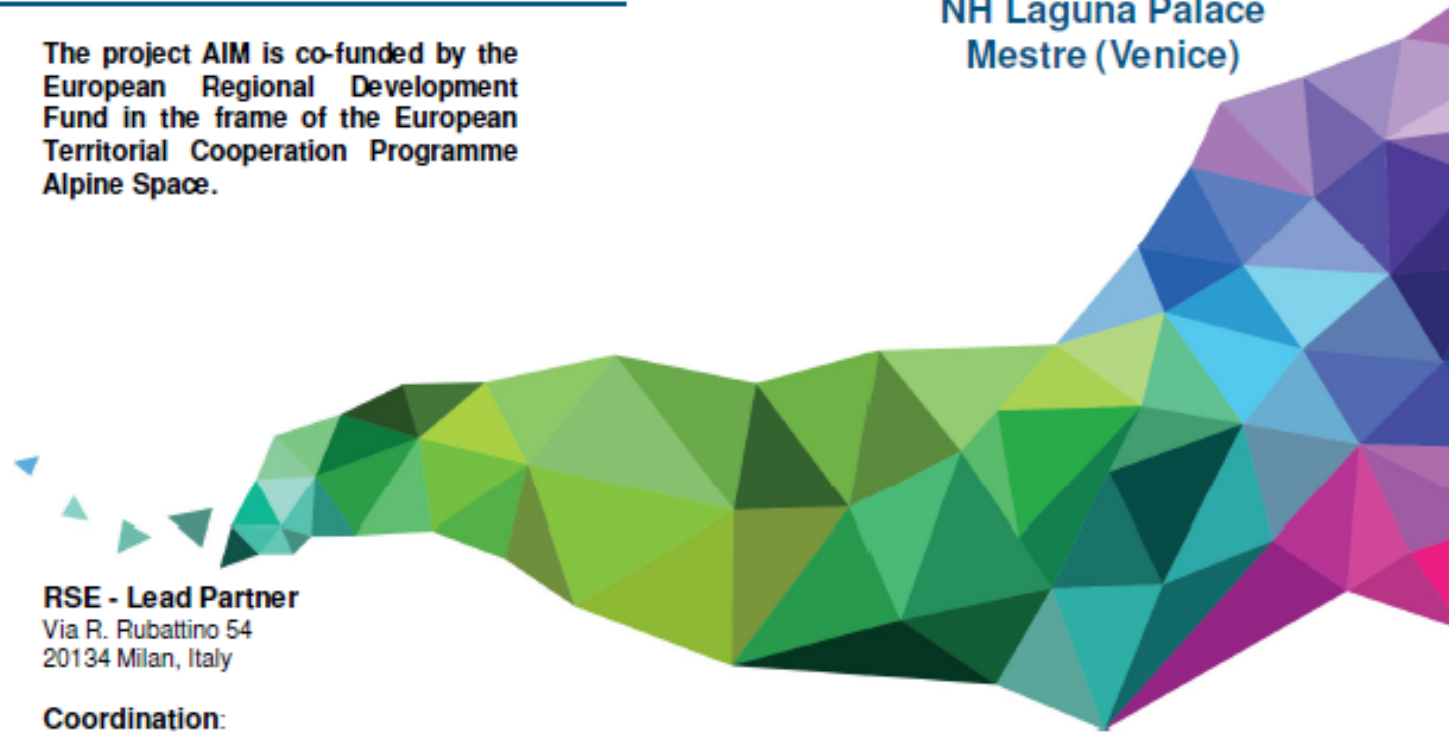
Coordination:



Final Transnational Seminar in Italy

Tuesday, November 25th 2014

NH Laguna Palace
Mestre (Venice)





Final Transnational Seminar in Italy



NH Laguna Palace
Viale Ancona 2
30172 Mestre-Venice
Italy

Agenda

09.00 **Registration & welcome coffee**

SESSION 1 The AIM project

09.20 **Welcome address**

09.30 **Alpine Space Programme 2020**
E. Stare, Joint Technical Secretariat

09.45 **Presentation of the AIM project**
(partners, objectives and activities)
M. Peviani, RSE (Italy) – Coordinator

10.00 **Presentation of Alpine Space
project outcomes available for
stakeholders**
S. Šantl, IzVRS (Slovenia)

10.15 **Setting the scene for the next
project generation 2014+**
R. Schinegger, BOKU (Austria)

10.30 **How to involve decision makers in
a transnational cooperation project**
N. Evrard, AEM (France)

10.45 **The project results translated to
local problems: the web-GIS
database**
A. Danelli, RSE (Italy)

11.00 **Coffee break**



SESSION 2 Floor to the stakeholders

11.30 **Alpine Convention: State of the
activities**
*L. Cetara, Ministry for the Environment,
Land and Sea (Italy)*

11.45 **Benefits for the Public
Administration from the Alpine
Space projects**
B. De Fanti, Veneto Region (Italy)

12.00 **Monitoring and characterizing hydro
morphology for the WFD in Europe:
current status & future prospective**
S. Bizzi, JRC – ISPRA (EU)

12.15 **Thematic Pole Low Carbon
Communities, capitalization action of
South East Europe programme**
*P. Nagy, Municipality of 18th District
of Budapest (Hungary)*

12.30 **Lunch**



**SESSION 3 Growing cooperation projects for
the ASP2020 calls**

14.00 Participants are asked to join in
moderated groups to propose issues
related to the water-energy nexus,
growing partnerships and project
proposals for the next calls of the
Alpine Space Programme 2020

15.30 Presentation and discussion of project
proposals

16.00 Closure of the seminar



Growing cooperation projects for the ASP2020 calls PROPOSED TOPICS



Please, choose a Topic where you want to participate in SECTION 3, and bring the form to the Reception Desk (Mrs|De Larderel) before 12:30 AM

- ☐ TOPIC 1 : Low impact hydropower technologies and HP integration with other energy sources
- ☐ TOPIC 2 : River basin management in the Alps: best practices and capacity building
- ☐ TOPIC 3 : Improving Alpine capacity to cope with increasing floods & droughts due to climate change effects
- ☐ TOPIC 4: Water and energy nexus: networking of experiences for solving common problems (including available tools and pilot case studies)

Contact details:


Name.....

Organisation.....

Growing cooperation projects for the ASP2020 calls



PROJECT IDEA



Problems to be addressed

Transnational solutions

Potential results

Proposed activities

Proposed partners

Contact details

Name

Organization

E-mail

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target to water & energy capitalization

Maximo Peviani, Andrea Danelli
RSE – Research on Energy System
Lead partner



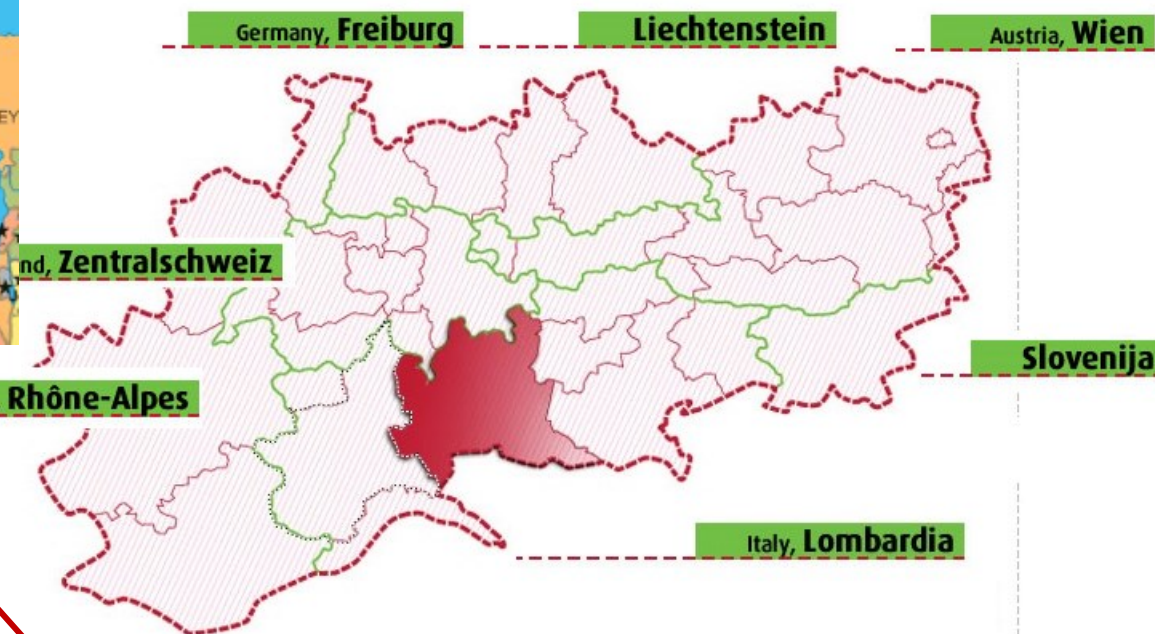


Programme co-funded by the
EUROPEAN UNION

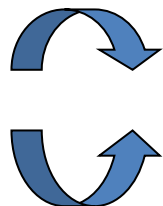


European Territorial Cooperation Alpine Space Programme

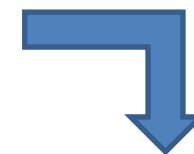
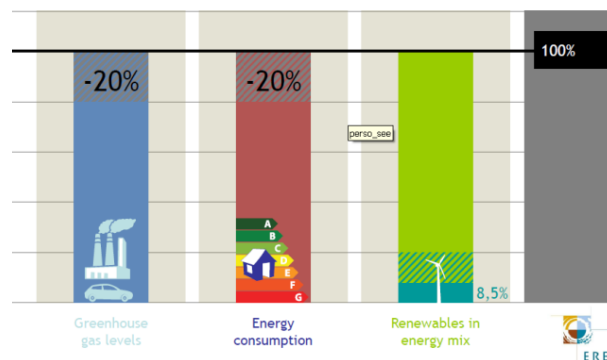
European Regional Development Fund



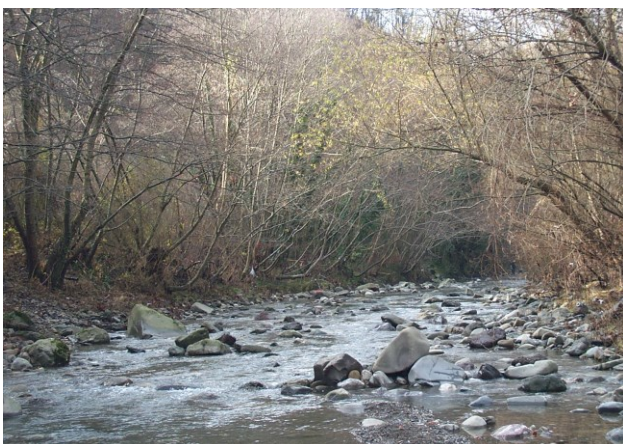
Energy RES-e Directive



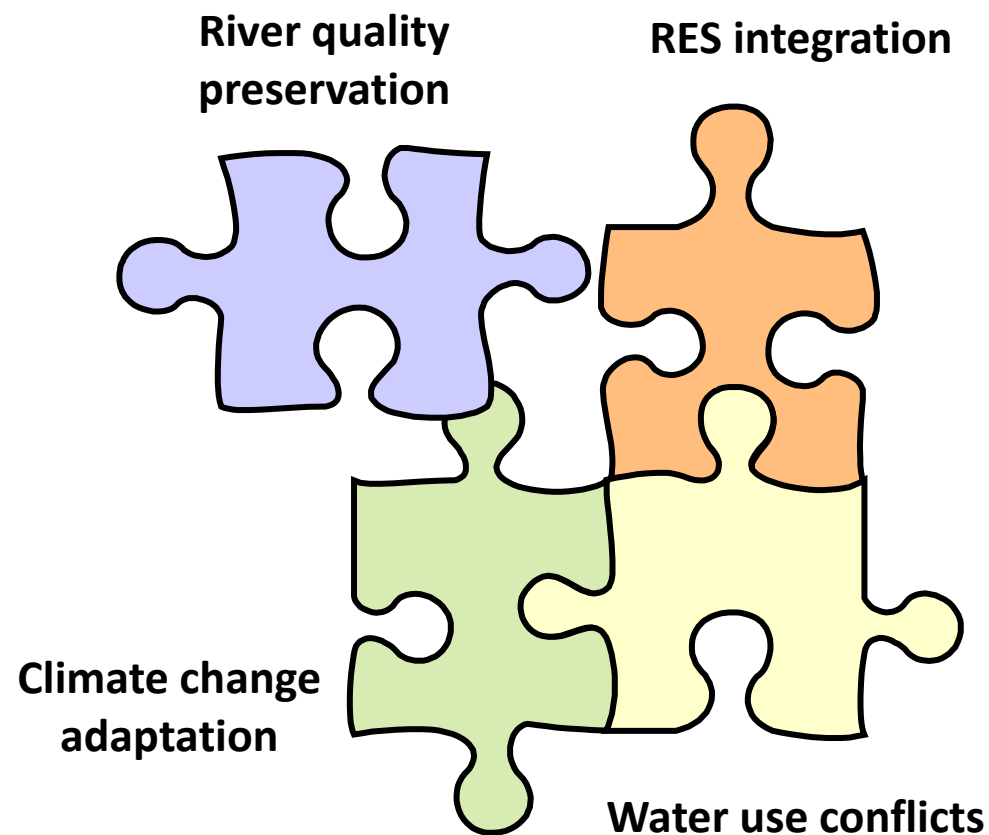
The 20-20-20 EU policy by 2020



Environment Water Framework Directive

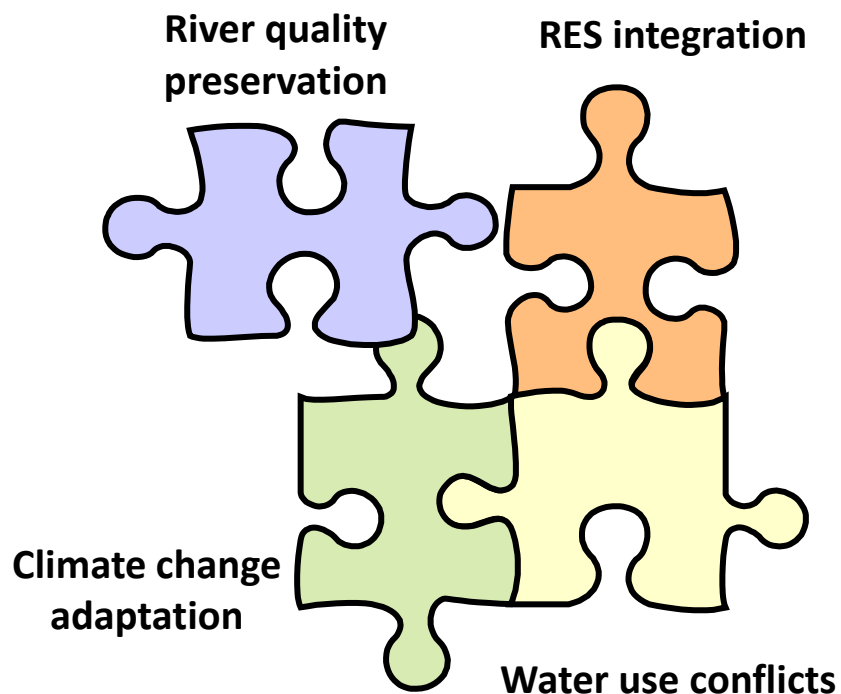


Good ecological status
of water bodies

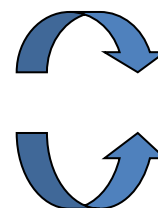




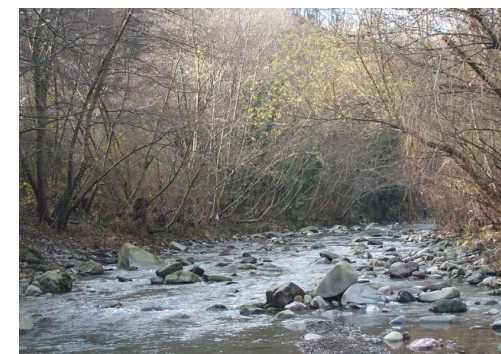
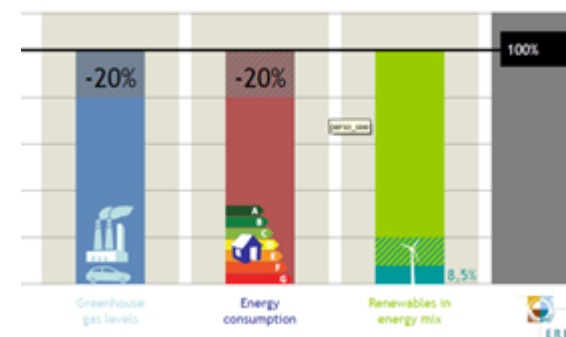
SOLUTIONS to harmonize Water and Energy !



Energy
RES-e Directive



Environment
Water Framework Directive



MEGAPHONE of tools & good practices !



Partners



RSE - Research on Energy Systems (Italy)



**BOKU – Institute of Hydrobiology and Aquatic
Ecosystem Management
University of Natural Resources & Life Science
Vienna (Austria)**



**IzVRS – Institute for Water of the Republic of
Slovenia (Slovenia)**



**AEM - European Association of elected
representatives from mountain regions (France)**

25 Observer partners

Observers	Institution	Country
1	Permanent Secretariat of the Alpine Convention	Austria - Alpine Region
2	Schneider & Jorde Ecological Engineering	Germany
3	University of Stuttgart	Germany
4	European Commission Joint Research Centre – Institute for Environment and Sustainability (Ispra)	Italy - Europe
5	UNESCO-IHE Institute for water education	Europe
6	Compagnie Nationale du Rhône	France
7	Association of Renewable Energy Producers	Italy
8	ARPAV Regional Land Safety Department	Italy
9	Veneto Region	Italy
10	Italian National Committee on Large Dams	Italy
11	Soča Valley Development Centre	Slovenia
12	Soške Elektrarne Nova Gorica, Hydropower producer on the Soča River	Slovenia
13	Institute of the Republic of Slovenia for Nature Conservation	Slovenia
14	Fisheries Research institute of Slovenia	Slovenia
15	Ministry of the Environment, Territory & Sea Preservation	Italy
16	ASCONIT Consultants on environmental issues	France
17	International Commission for the Protection of the Danube River	Austria - Danube region
18	Kyoto Club	Italy
19	Torino Province	Italy
20	Arpa Valle d'Aosta	Italy
21	POLE4 Municipality of 18th District of Budapest, Thematic Pole Low Carbon Communities	South East Europe
22	WWF Austria	Austria
23	University of Veterinary Medicine Vienna, Research Institute of Wildlife Ecology	Austria
24	Austrian Federal Ministry for Agriculture, Forestry, Environment and Water Management	Austria



REGIONE DEL VENETO



INSTITUTE OF THE REPUBLIC OF SLOVENIA
FOR NATURE CONSERVATION



Compagnie Nationale du Rhône



Stakeholder Panel

Selection of available tools



SESAMO

+

SMART Mini-Idro

+

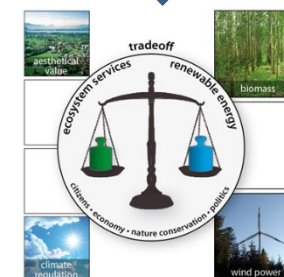
VAPIDRO-ASTE



Water Scarcity Index



SEAP_Alps Action Tool



+ Habitat modeling

+

MORIMOR

www.aim2014.eu



SMART Mini-Idro

SESAMO_MCA

VAPIDRO-ASTE

Water Scarcity Index

SEAP_Alps Action Tool

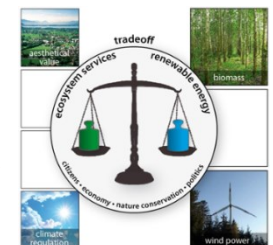


Habitat modeling

TOOLS BOX



MORIMOR



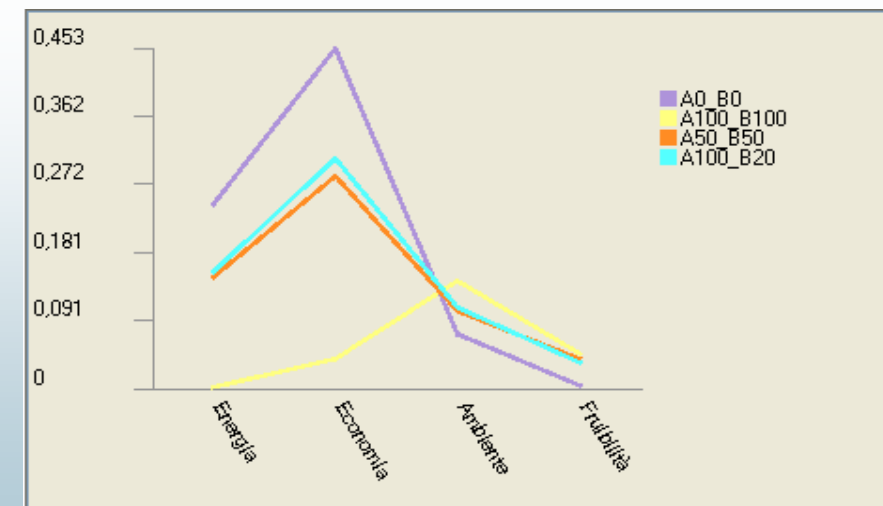
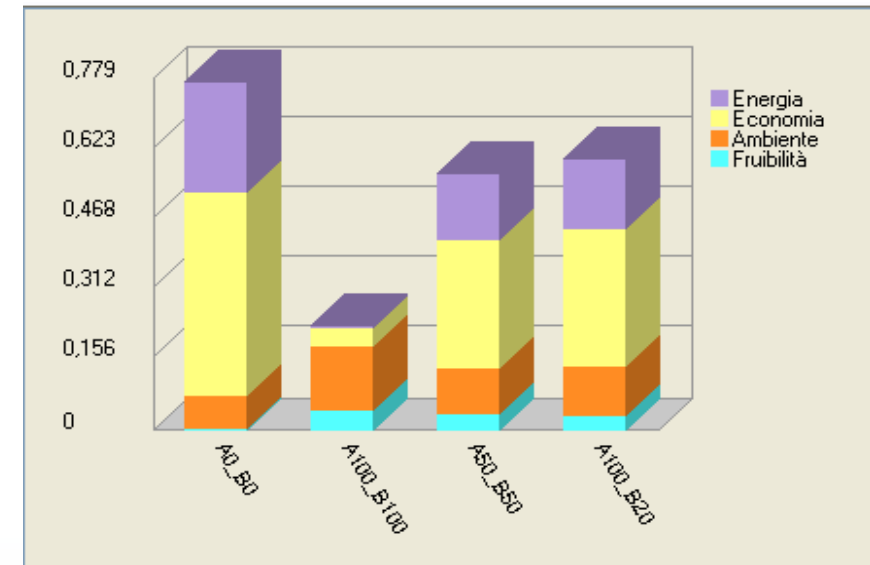
MCA tool implementation for water management: **SESAMO** software

Multi Criteria Analysis

- Comparison among alternatives
- Pro and cons of each alternative
- One ranking for each stakeholder
- Comparison among rankings

It does not decide, it supports decision makers

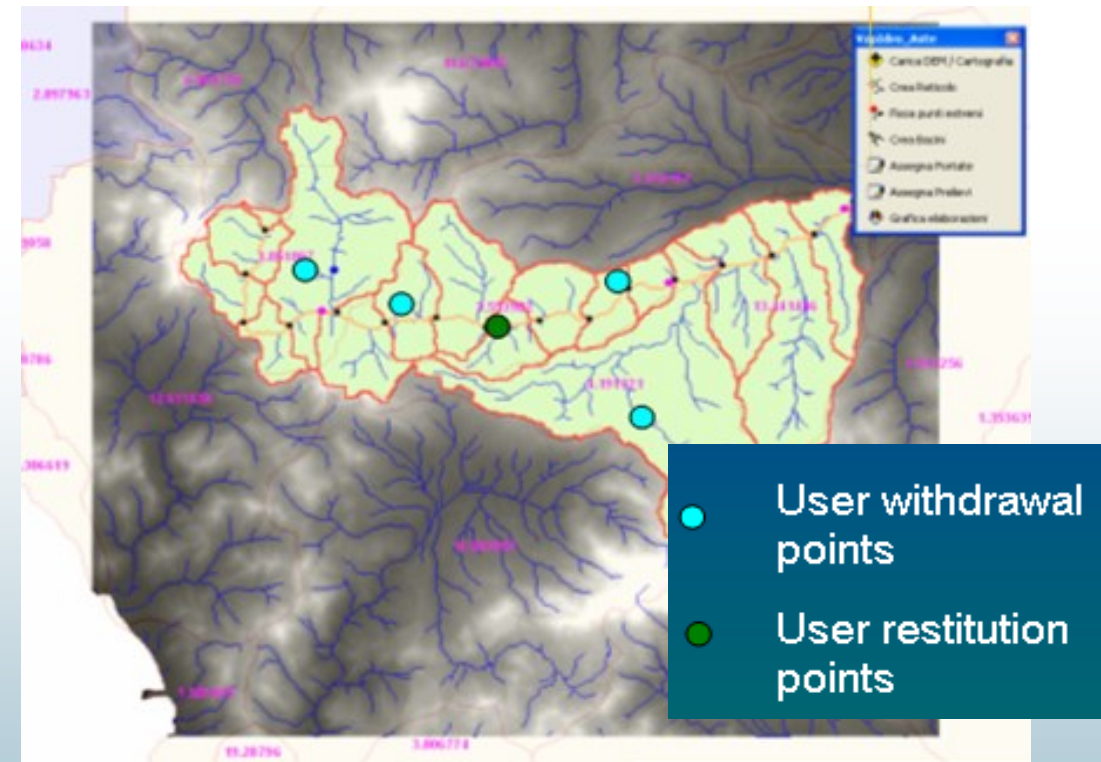
It helps to make transparent decisions





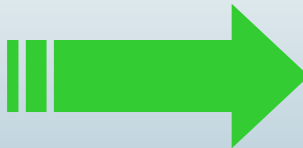
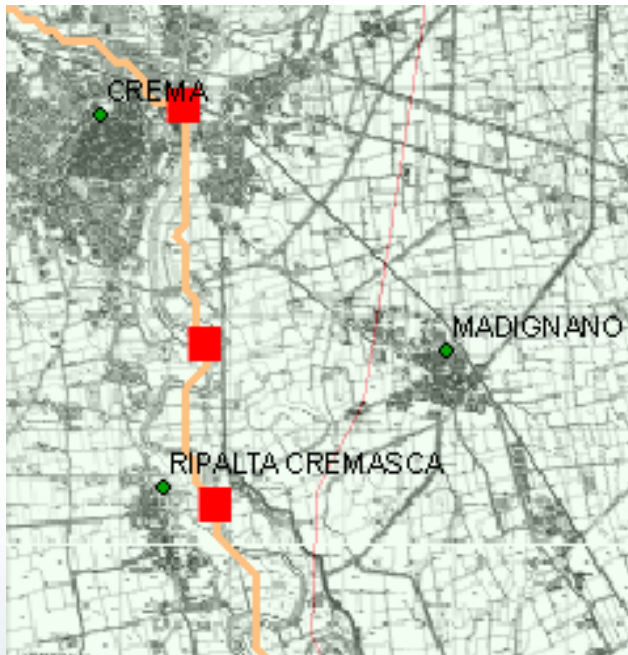
Model to determine the optimal small hydropower exploitation scheme and most suitable sites

Residual potential hydropower



Installable power of potential mini hydro plants

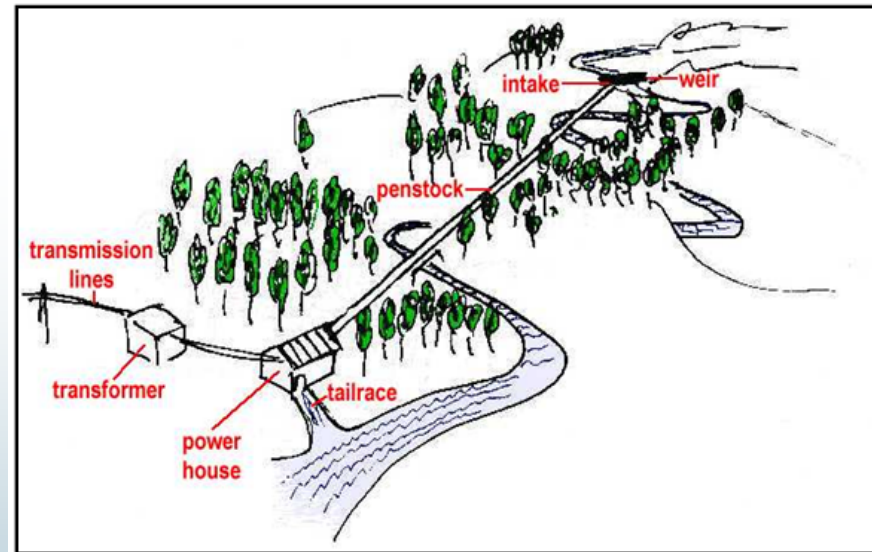
SHP Cost / Benefit detailed analysis



Optimized B/C solution

SMART Mini-Idro

Software for the technical-economic feasibility analysis of small hydropower plants in fluent water courses



WORKING MODULES:



[1. Discharge](#)



[2. Turbine](#)



[3. Energy](#)



[4. Costs](#)



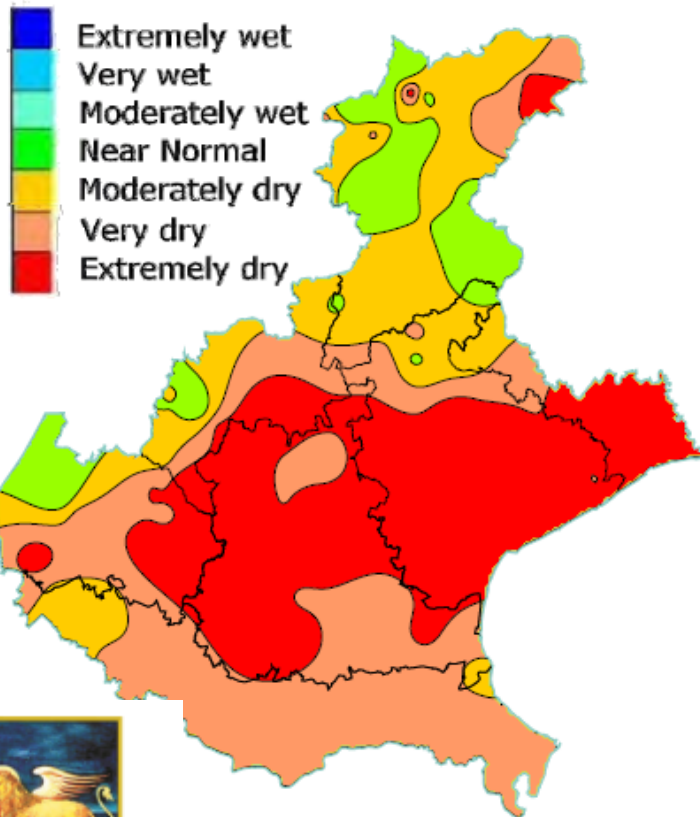
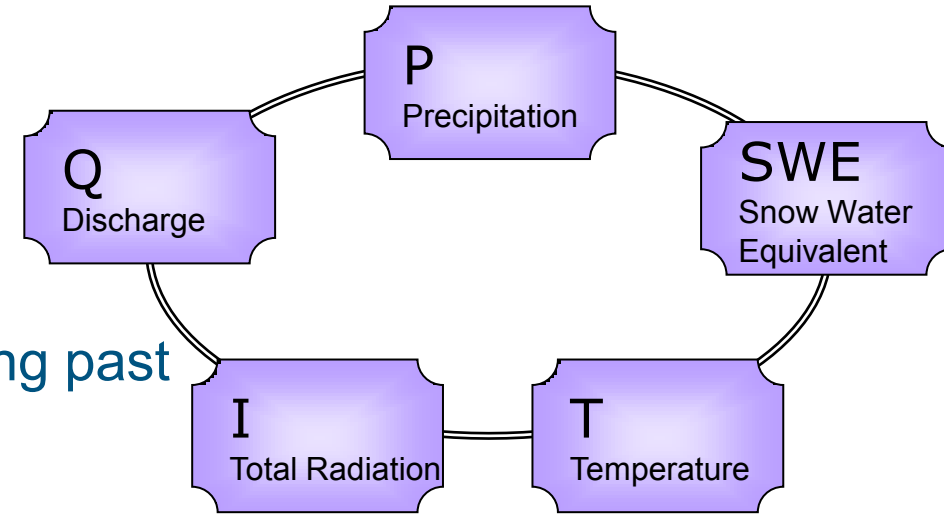
[5. Financial Analysis](#)



[User Guide](#)

WSI – Water Scarcity Index

- Evaluation of the percentiles of P, SWE, T, I, Q
- Applications of weights and WSI calculation
- Weights and threshold value are calibrated using past data (critical years)

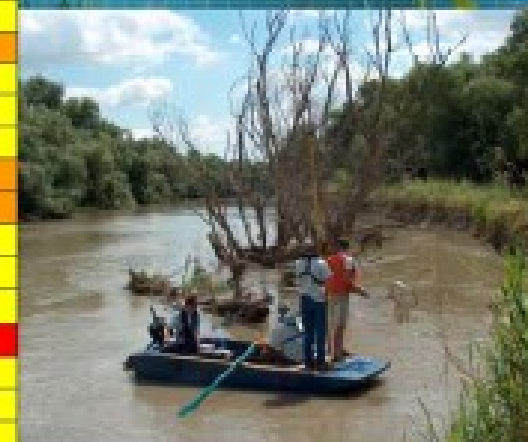


situation at: 31 January 2013													
Hydrological year (1 Oct - 30 Sep)	percentiles									WSI	Predicted water scarcity (Yes / No)	Real situation of water scarcity (Yes / No)	Indicator reliability
	rainfall		discharge			temperature		snow					
	cumulated rainfall from 1 Oct	cumulated rainfall from 1 Dec	mean discharge from 1 Oct	mean discharge till now	cumulated water volume drained from 1 Jan	mean temperature from 1 Oct	mean temperature from 1 Mar	snow pack - mean value of 10 days before now	cumulated snowfall till now				
<i>weight:</i>	<i>0.05</i>	<i>0.15</i>	<i>0.20</i>	<i>0.10</i>	<i>0.10</i>	<i>0.05</i>	<i>0.10</i>	<i>0.15</i>	<i>0.10</i>	<i>0.50</i>	<i>WSI threshold</i>		
1990 - 1991	0.82	0.67	0.41	0.69	0.59	0.00		1.00	0.87	0.74	N	?	-
1991 - 1992	0.52	0.52	0.61	0.39	0.49	0.35		0.69	0.54	0.60	N	?	-
1992 - 1993	0.50	0.12	0.56	0.43	0.51	0.58		0.30	0.74	0.49	Y	?	-
1993 - 1994	0.75	0.50	0.94	0.69	0.71	0.37		0.19	0.37	0.64	N	Y	failed alarm
1994 - 1995	0.05	0.33	0.59	0.61	0.58	0.55		0.61	0.41	0.54	N	Y	failed alarm
1995 - 1996	0.00	0.20	0.38	0.15	0.18	0.23		0.11	0.00	0.29	Y	N	false alarm
1996 - 1997	0.72	0.03	0.78	0.75	0.74	0.83		0.57	0.20	0.56	N	N	OK
1997 - 1998	0.25	0.57	0.28	0.65	0.57	0.80		0.65	0.49	0.53	N	Y	failed alarm
1998 - 1999	0.62	0.75	0.54	0.48	0.38	0.17		0.34	0.66	0.60	N	N	OK
1999 - 2000	0.10	0.30	0.64	0.66	0.63	0.52		0.00	0.04	0.44	Y	N	false alarm
2000 - 2001	1.00	0.87	0.93	0.93	0.97	0.85		0.92	0.91	0.89	N	N	OK
2001 - 2002	0.38	0.93	0.16	0.18	0.13	0.92		0.15	0.08	0.36	Y	N	false alarm
2002 - 2003	0.88	0.02	0.81	0.90	0.87	0.67		0.07	0.29	0.54	N	Y	failed alarm
2003 - 2004	0.80	0.52	0.33	0.39	0.41	0.13		0.96	0.95	0.65	N	N	OK
2004 - 2005	0.22	0.15	0.36	0.38	0.35	0.38		0.53	0.25	0.41	Y	Y	OK
2005 - 2006	0.37	0.28	0.47	0.16	0.14	0.07		0.42	0.62	0.46	Y	Y	OK
2006 - 2007	0.15	0.83	0.05	0.12	0.09	1.00		0.03	0.16	0.28	Y	N	false alarm
2007 - 2008	0.35	0.75	0.15	0.29	0.22	0.67		0.73	0.70	0.51	N	N	OK
2008 - 2009	0.95	1.00	0.65	0.76	0.72	0.60		0.88	1.00	0.83	N	N	OK
2009 - 2010	0.53	0.72	0.32	0.46	0.66	0.15		0.84	0.83	0.66	N	N	OK
2010 - 2011	0.55	0.45	0.72	0.82	0.88	0.67		0.50	0.79	0.68	N	N	OK
2011 - 2012	0.08	0.15	0.38	0.21	0.25	0.93		0.23	0.45	0.33	Y	Y	OK
2012 - 2013	0.77	0.39	0.96	0.89	0.86	0.72		0.92	0.95	0.81	N	N	OK

The "European Fish Index +" a numerical tool for Ecological Status Assessment



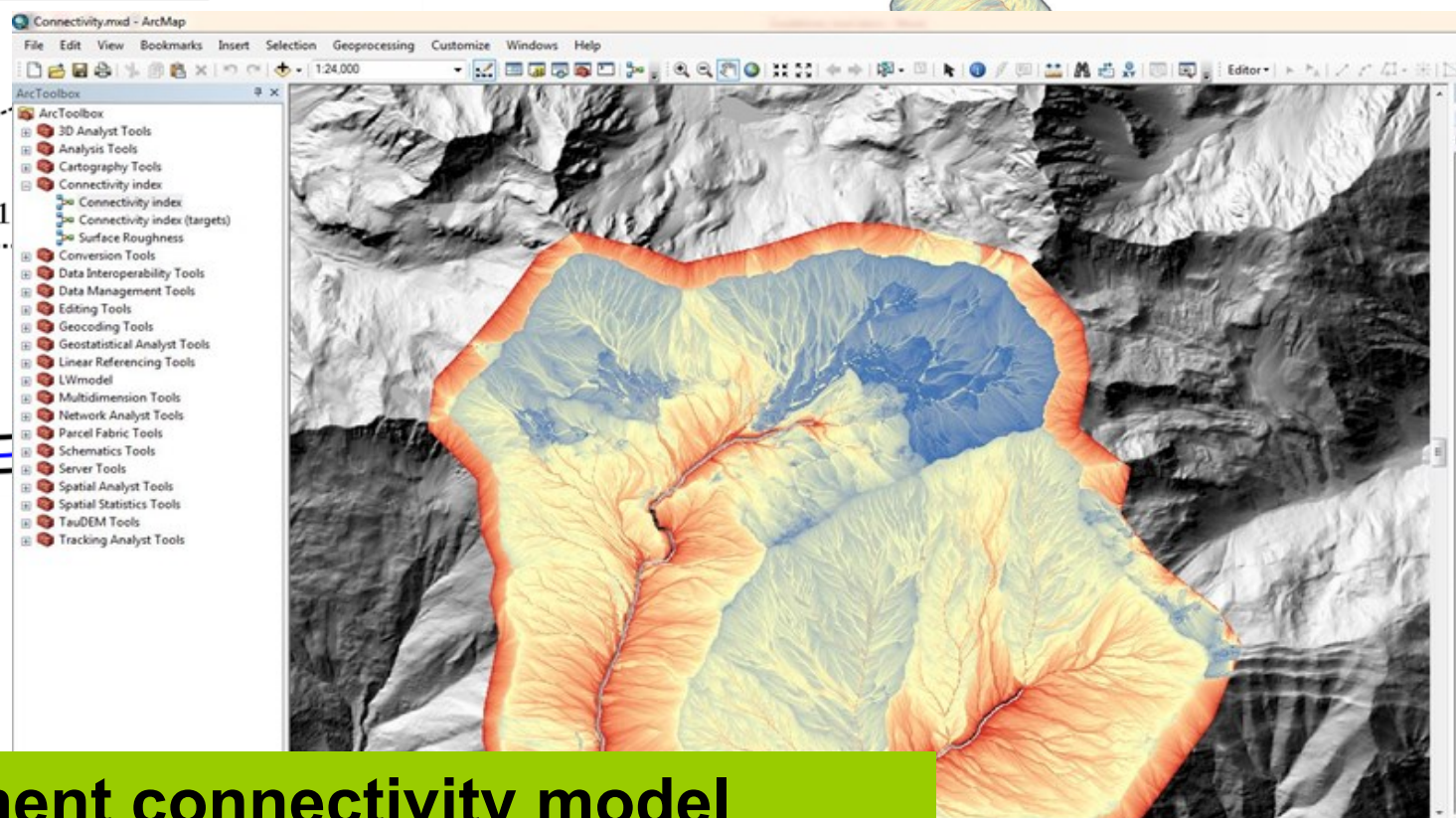
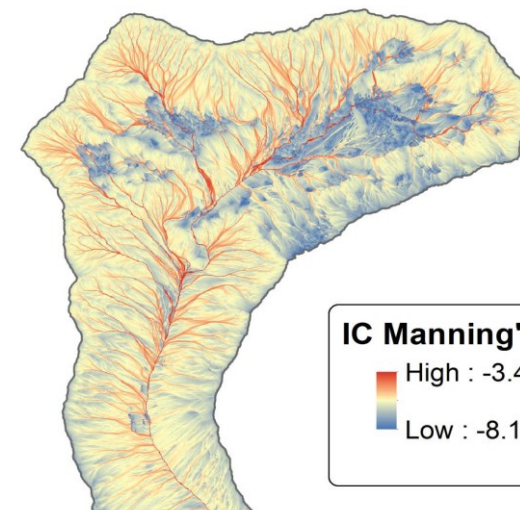
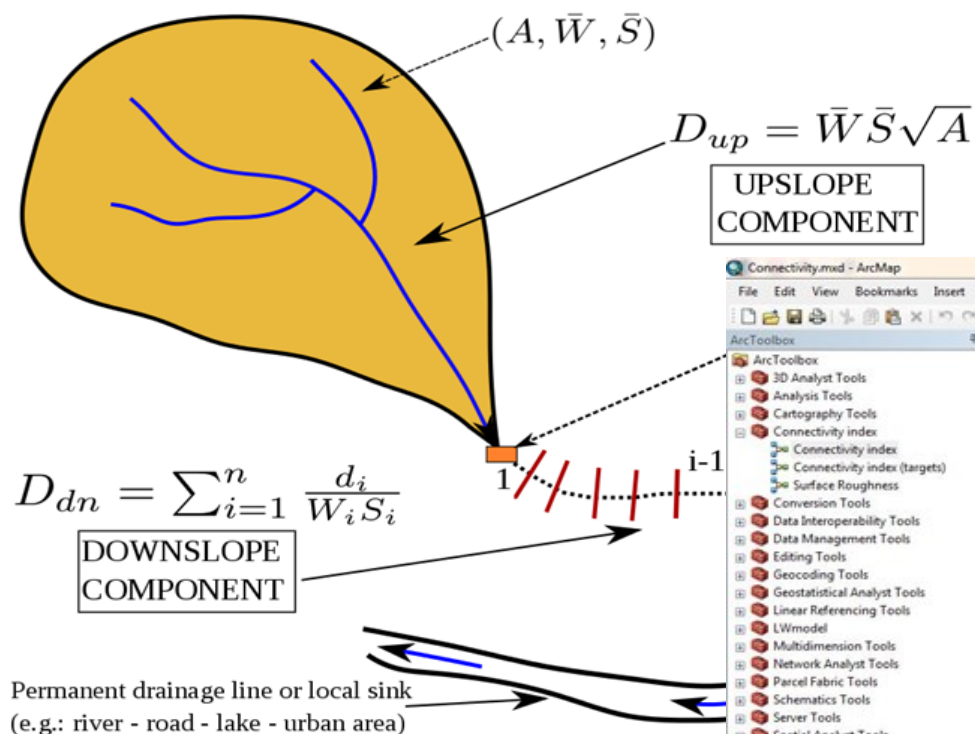
Stenname	DEU 1994	DEU 2000
Oroflana Eastern Plateaus	12	13
Bajura	12	15
Hirodibona	12	15
Radauti	14	13
Cotu Miculini	12	13
Romanesti	12	15
Hernicodu	18	15
Sondresi	15	16
Uagheni	20	14
Opriseni U	14	13
Opriseni D	14	11
Cotu Salageni	30	13
Draceni	26	13
Pogonesti Pontic Province	24	15
Brascovesti	24	18
Bumbata	20	18
Falcu	22	16
Carja	22	13
Gancea	18	13
Felteni	20	8
Pietrosa	18	15
Giurgulesti Garla	12	12
Giurgulesti	28	16



**University of Natural Resources
and Life Science Vienna**

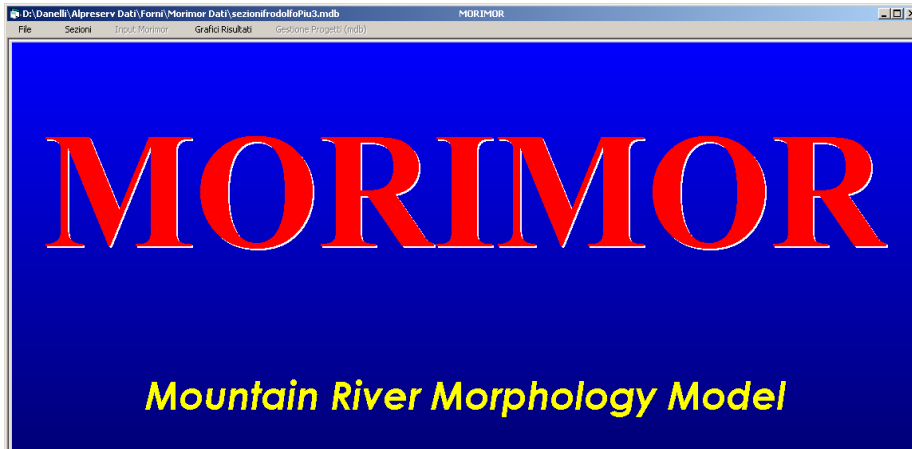


Sediment Connectivity Tool



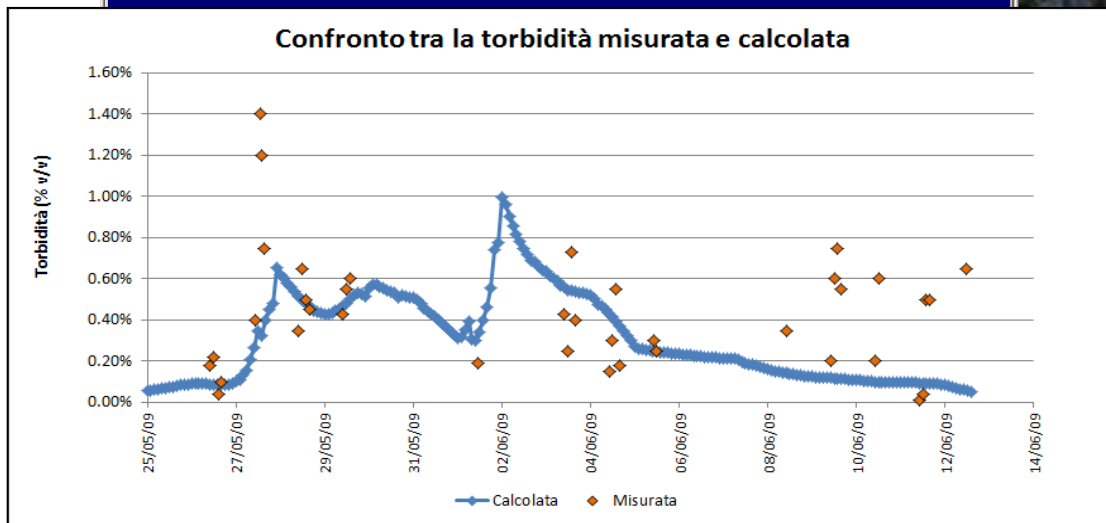
GIS-based sediment connectivity model

Sediment transport and river morphology



**Controlled FLUSHING
OPERATION of HP reservoirs**

Mathematical model GIS integrated



- Suspended concentration
- Embeddedness
- Aggradation level

Danelli, Peviani et al., 2012

JECAMI, Joint Ecological Continuum Analyzing and Mapping Initiative



1P + http://gis.nationalpark.ch/arcgisserver_app/econnect/jecami.htm

Adventure | Blogothèque | Brompton | MerckVM | [Monocle] | Outside | Blog_Rapha | Mongabay | DirtbagD | Nau | FB | MobileMe | PatBlog | Biblio_VMU | FIWI | VUW | G-Scholar | netbank

HOME ABOUT THE PROJECT PILOT REGIONS WORK PACKAGES PARTNERS & OBSERVERS NEWS & EVENTS AREA

econnect
Restoring the web of life

Karte Satellit Hybrid Gelände

CSI SMA PAM CARL

CSI Service (v.8)

Legend

- ☒ Pilot areas
- ☒ Municipality borders
- ☒ Protected areas
- ☒ Landuse LAN
- ☒ Landuse Planning LAP
- ☒ Population POP
- ☒ Infrastructure INF
- ☒ Altitude Topography TOP
- ☒ Fragmentation FRA
- ☒ Patch Cohesion COH
- ☒ Edge density ED
- ☒ Environmental Protection ENV
- ☒ Ecological Measures ECO
- ☒ CSI

i Activate function and display Indices by clicking in the map

Search

Search a municipality inside a pilot region:

Search pilot region:

Search Place or Address

1 Search 2 Select & Upload 3 Calculation Chart Table Report

Kartendaten ©2011 Google, Tele Atlas, Europa Technologies, Nutsquare, Bing, Microsoft

SEAP_Alps Action Tool

area of intervention	A51	policy instrument	B52
action			
Check for reservoirs			
description			
<p>With an increasing insertion of renewable energies the necessity of balancing facilities are indispensable because the fluctuation of energy production - caused by the weather - has to be compensated. This can be reached on three approaches:</p> <ul style="list-style-type: none"> - coordination of consume and supply - increase the efficiency of supply but rather in consume - storage facilities which save the energy of high level energy periods and give it away of low level energy periods <p>In this case the focus is on the third approach referred to hydro storage power plants. They are one of the most used and reliable energy storage facilities. But for their installation some aspects has to be taken into account:</p> <ul style="list-style-type: none"> - an early citizen information about installation plans are very important for their acceptance and demurs toward the project - conservation regulations - technical potential: physical aspects of the building site (i.e. underground character, quality of the water, groundwater level) - economical potential: financial aspects of the project (i.e. funding methods, amortisation) - development potential: conservation and monumental aspects of the region 			
objectives			
<ul style="list-style-type: none"> • set up information event for the local citizens • potential calculation • awareness raising • strengthen renewable energies in the region 			
CO₂-saving potential	high		
estimated costs for municipality	high	cost-benefit-ratio	medium
Implementation time frame	3 - 10 years		
target group	municipality, hydroelectric supplier		
key actors	municipality, energy experts, civil engineer, GIS experts		
references	<p>Overview of hydroelectric storage facilities http://www.electricitystorage.org/technology/tech_archive/surfaceres_pumped_storage </p>		

Keywords: hydroelectricity, storage, balancing method,

How to develop a sustainable energy action plan?

AIM 2014+

Alpine Space in Movement

Brainstorming seminar for stakeholders in Austria





Panel discussion with key stakeholders in Slovenia





Panel discussion with key stakeholders in France targeted to water & energy capitalization



AIM's outcomes

Setting the **scene for the 2014+**
project generation

Identifying key relevant policy actors
and institutional competences

Crossing the achieved results with
beneficiaries needs

Guidelines for the ASP 2014 – 2020

EU WATER AND ENERGY POLICIES: CAPITALIZATION and HARMONIZATION



„Challenges for RBM“
www.icpdr.org



**Alpine space
In Movement**

Be part of our community !

Thanks for your attention

www.aim2014.eu

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andrea.danelli@res-web.it