



Etats généraux L'EAU EN MONTAGNE

MEGÈVE (FRANCE) - 8, 9, 10 OCTOBRE 2014

« Save the Alpine Rivers ! » :
Un projet du WWF sur les rivières alpines

Jean-Christophe Poupet, WWF-France / European Alpine Programme





- L'arc alpin (~ 200.000 km², Population 14 millions) alimente en eau environ **180 millions d'habitants** (bassins versants du Danube, du Po, du Rhone et du Rhin)

- **Une biodiversité unique** (30 000 espèces animales et 13 000 espèces végétales – une des plus importantes régions d' Europe)



- **Les hydrosystèmes des Alpes sont menacés** par l'évolution de l'occupation des sols, le tourisme, la production d'énergie et les mesures de protection contre les inondations.



Un constat : un manque de vision d'ensemble sur l'état des rivières alpines et les menaces qui pèsent sur les hydrosystèmes



Une étude pan-alpine complète de manière à identifier les priorités de protection et de restauration des cours d'eau

3 grands objectifs :

- Développer une base de données exhaustive pour améliorer les connaissances à l'échelle de l'arc alpin
- Identifier et documenter les principales pressions sur les rivières alpines
- Désigner les tronçons de rivières avec un haut niveau de priorité de protection ("zones refuges" ou "no-go areas") et ceux à haut potentiel de restauration



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



Institute of Hydrobiology and Aquatic Ecosystem Management
 Max-Emanuelstr. 17, 1190 Vienna, Austria
 Project team: Susanne Muhar, Ralazla Schinegger, Stefan Flock, Sabine Preis, Lisa Schilling, Clemens Trautwein & Stefan Schmutz



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



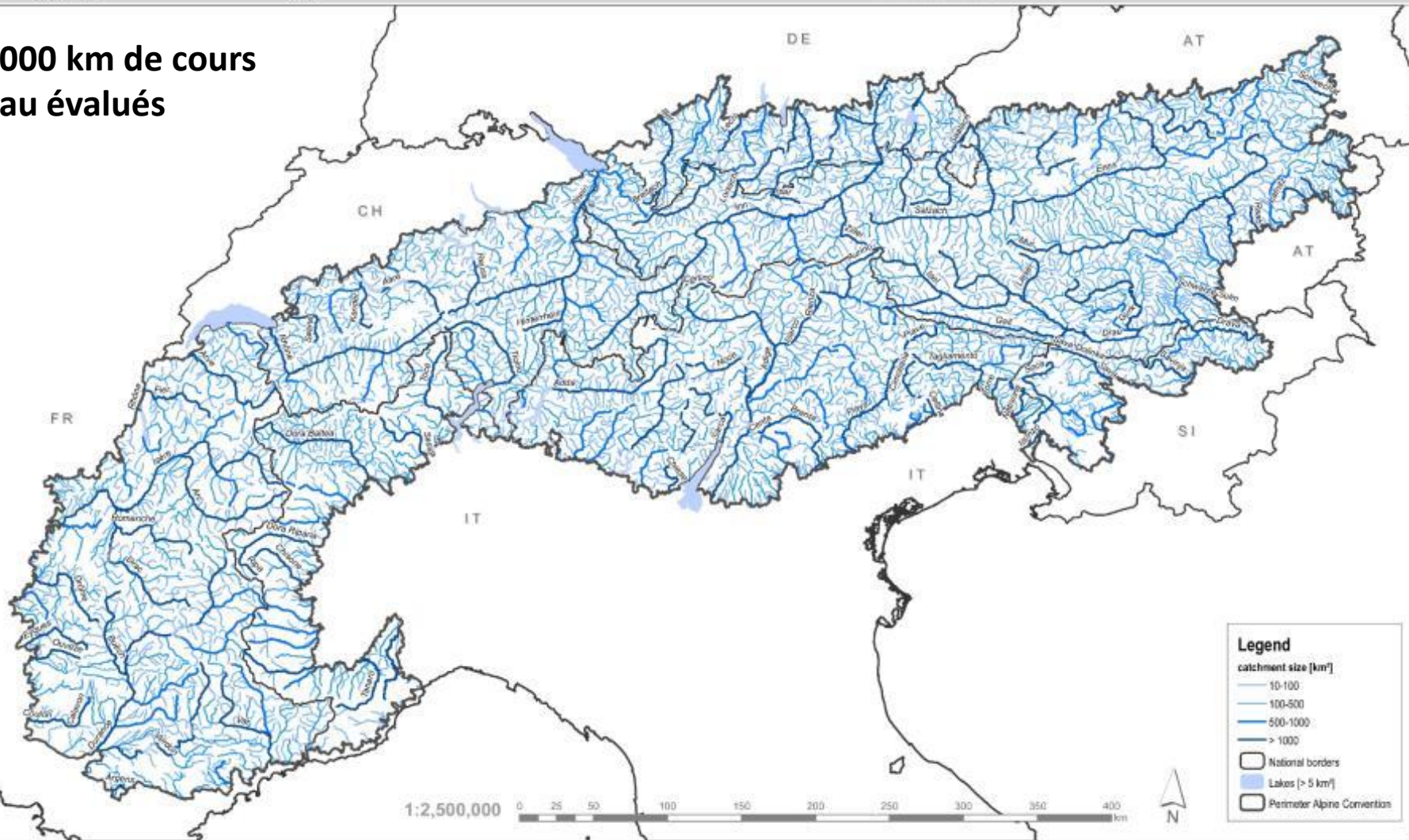
A pan-Alpine river network assembled from official river networks from responsible national authorities. Data were reprojected and modified to account for duplication and gaps along national borders. Common coordinate reference system (ETRS1989 LAEA). Rivers are assigned into four catchment size classes.

Only rivers with a catchment size larger than 10 km² are displayed in this map.

Data sources

Perimeter of the Alpine Convention: Permanent Secretariat of the Alpine Convention
 National river networks: ADBPO, ADBVE, GUARS, UBA, LFI, IRSTEA, Salsitopo
 Lakes (from ECRINS): EEA
 Administrative boundaries: GADM database

57 000 km de cours
 d'eau évalués



Legend

catchment size [km²]

- 10-100
- 100-500
- 500-1000
- > 1000

- National borders
- Lakes (> 5 km²)
- Perimeter Alpine Convention



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



Institute of Hydrobiology and Aquatic Ecosystem Management
 Max-Emanuelstr. 17, 1180 Vienna, Austria
 Project team: Susanne Muhar, Rabeala Schinegger, Stefan Flack,
 Sabine Preis, Lisa Schörling, Clemens Trautwein & Stefan Schmutz



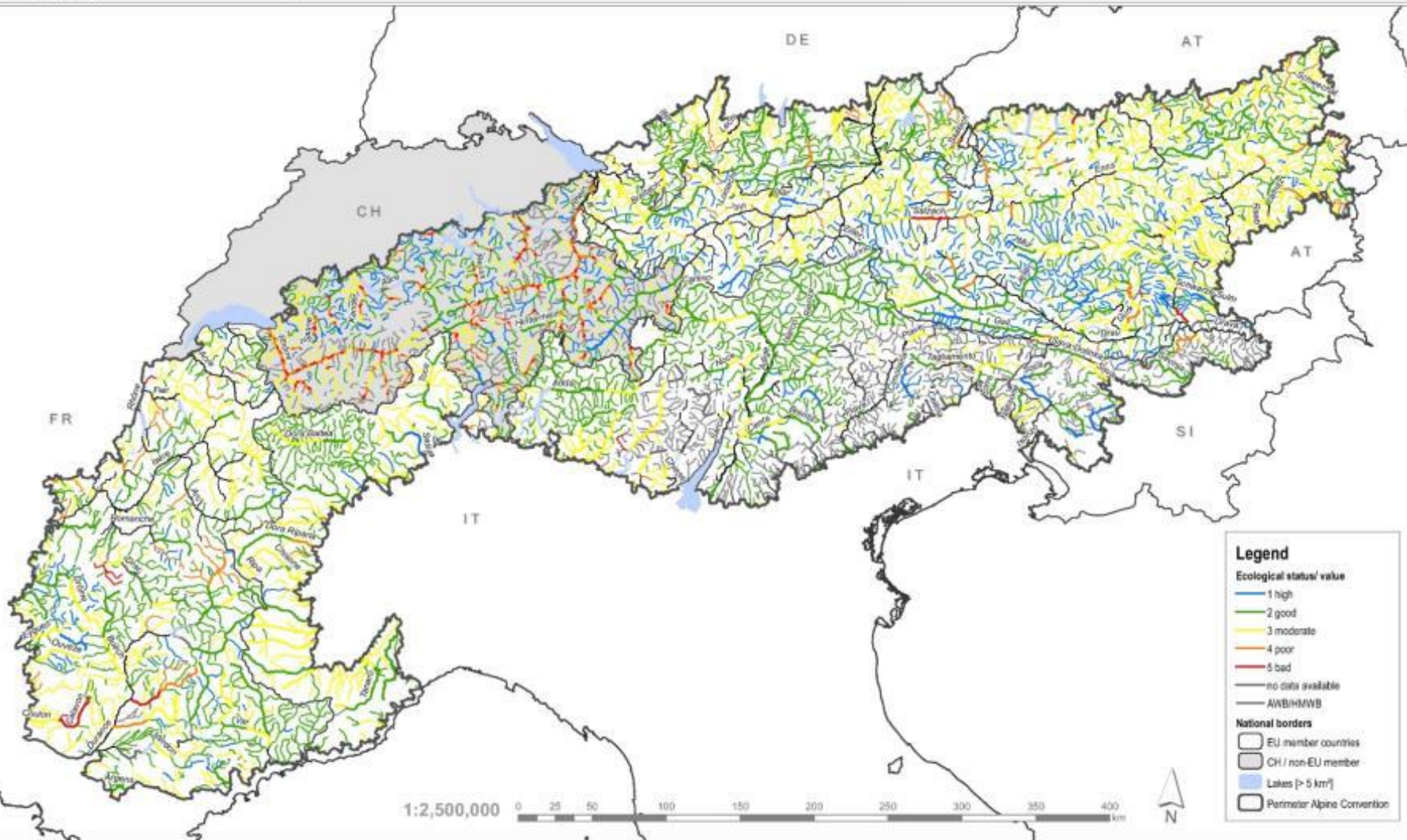
Funding Organisations: MAVA - Fondation pour la nature
 WWF - World Wide Fund For Nature
 December 2013



Ecological status assembled from national data and a surrogate method for Switzerland. Aggregated to the spatial unit of confluence to confluence river segments (river units). Pan-alpine river network assembled from official national river networks. Only rivers with a catchment size >10 km² are displayed.

Data sources

Perimeter of the Alpine Convention: Permanent Secretariat of the Alpine Convention
 National river networks: ADBPO, ADBVE, AUS, GURS, UBA, LFI, CEMAGREF, Swissstopo
 Ecological status: UBA, LFI, Eau France, ADBPO, ADBVE, Region Liguria, ARSO
 Lakes (from ECRINS): EEA
 Administrative boundaries: GADM database



Legend

Ecological status/ value

- 1 high
- 2 good
- 3 moderate
- 4 poor
- 5 bad
- no data available
- AWBHMWB

National borders

- EU member countries
- CH / non-EU member
- Lakes (> 5 km²)
- Perimeter Alpine Convention



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



Institute of Hydrobiology and Aquatic Ecosystem Management
 Mollersmannstrasse 17, 1190 Vienna, Austria
 Project team: Susanne Auer, Katja Schindler, Andrea Hock,
 Sabine Hies, Lisa Schilling, Cornelia Trautwein & Stefan Schmutz



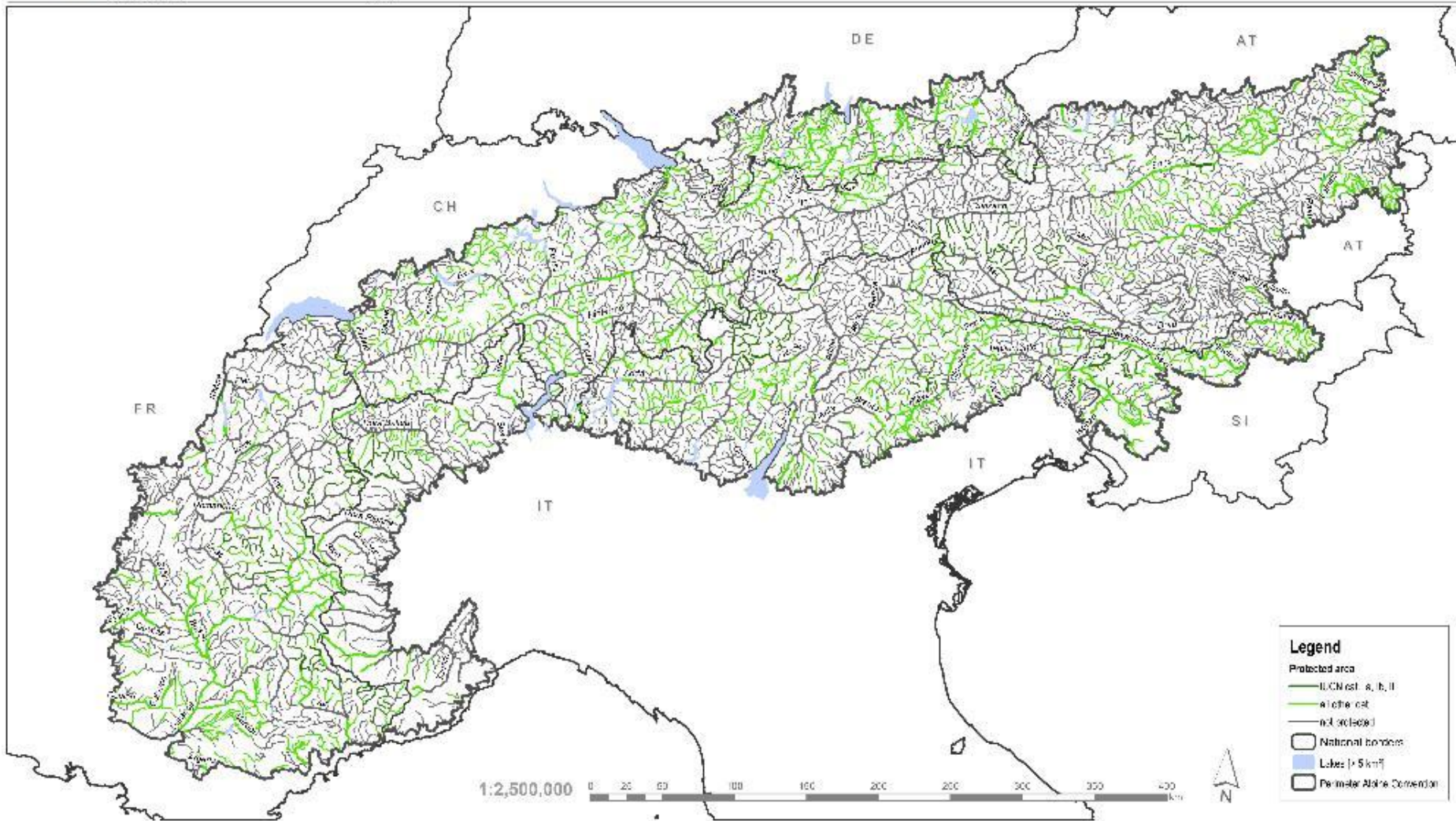
Funding Organizations: MAVA, Fondation pour la nature
 WWF - World Wide Fund for Nature
 December 2013



Protected areas - Alpine Arc

River units in protected areas from spatial interest with official river networks. Information is aggregated to river units in the stretch between two adjacent Pan-Alpine river networks assembled from official national river networks. All rivers with a catchment size >10 km² are displayed.

Data sources:
 Pan-Alpine of the Alpine Convention; Permanent secretariat of the Alpine Convention
 National river networks: AUSTRIA: AUSTRIA-GUMS, AUSTRIA, AUSTRIA; SWITZERLAND: AUSTRIA-GUMS, AUSTRIA, AUSTRIA; ITALY: AUSTRIA-GUMS, AUSTRIA, AUSTRIA; FRANCE: AUSTRIA-GUMS, AUSTRIA, AUSTRIA; GERMANY: AUSTRIA-GUMS, AUSTRIA, AUSTRIA; SLOVENIA: AUSTRIA-GUMS, AUSTRIA, AUSTRIA
 Lakes from: ECHO-EAS, ECHO
 Administrative boundaries: SIDA3 database



Legend

- Protected area
 - EU CN est. a, b, II
 - national
 - not assessed
- National borders
- Lakes (> 5 km²)
- Perennial Alpine Convention



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

Institute of Hydrology and Aquatic Ecosystem Management
 Max Eymann Straße 11, 1150 Vienna, Austria
 Project team: Susanne M. Jirak, Raikob Schmegele, Stefan Töcs, Sabine Pelek, Lisa Schilling, Clemens Trautwein & Stefan Schmutz



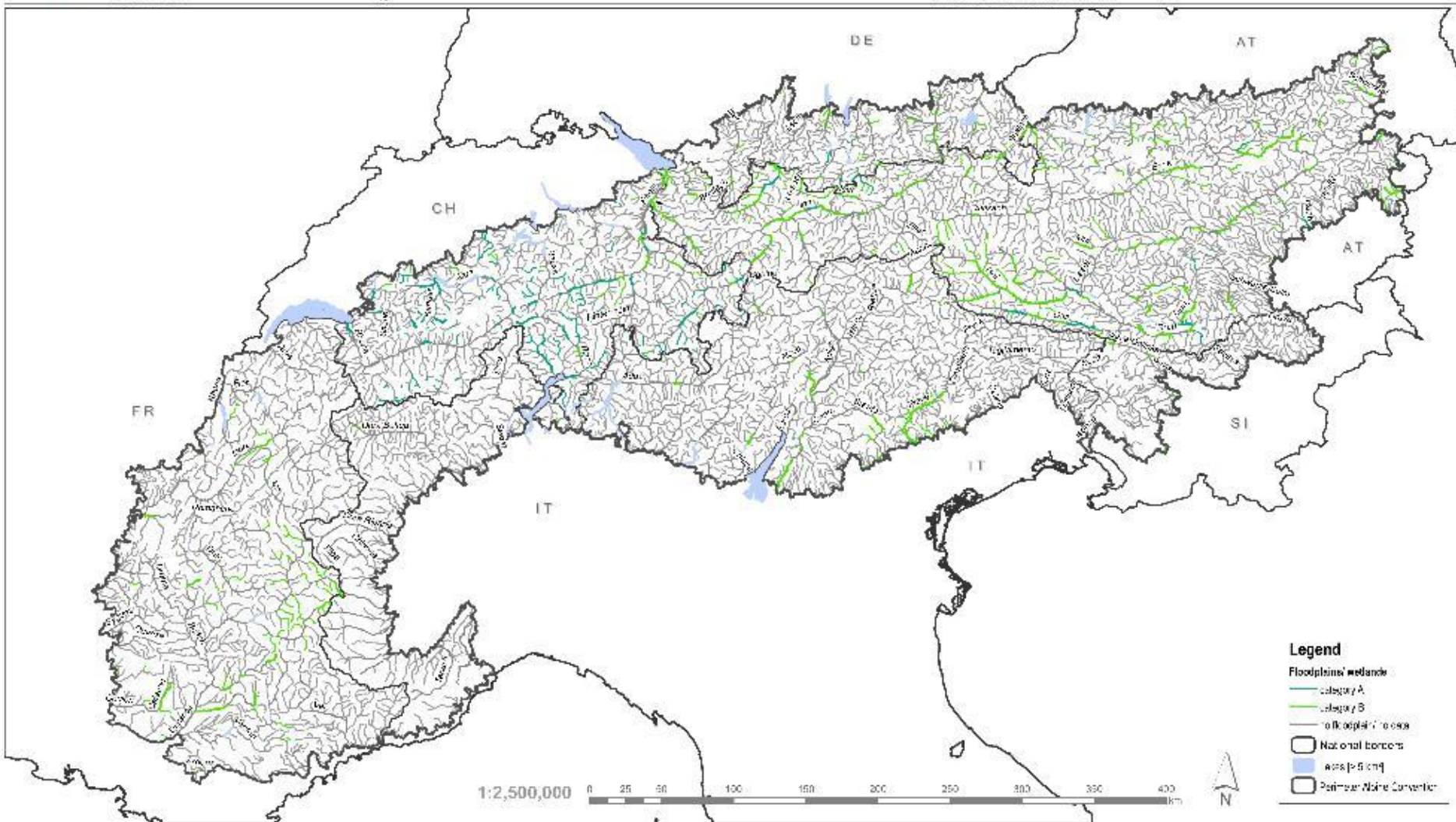
Funding Organizations: MAWA - Fondation pour la Nature
 WWF - World Wildlife Fund for Nature
 December 2013



Floodplains and wetlands along rivers. Floodplains category A: high conservation value in the assessment system; category B: all other floodplains. Information was aggregated to river units in the spatial unit of confluence to confluence river segments (river stretch) between two 10 km buffer. The Alpine river network assembled from all national river networks. All rivers with a catchment size >10 km² are displayed.

Data sources:

Particular of the Alpine Convention: Permanent Secretariat of the Alpine Convention
 National river networks: ABERO, ADEVE, GNAS, IGA, LAU, MS15A, Salsdopa
 Floodplains/Wetland data: USA, IFO, BAFU, Eau France, CEA, ARSO
 Lakes from: CC-BY-NC-SA
 Administrative boundaries: GADM database





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, Rabele Schinagler, Stefan Flock,
Sabine Preis, Lisa Schulling, Clemens Trautwein & Stefan Schmutz



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

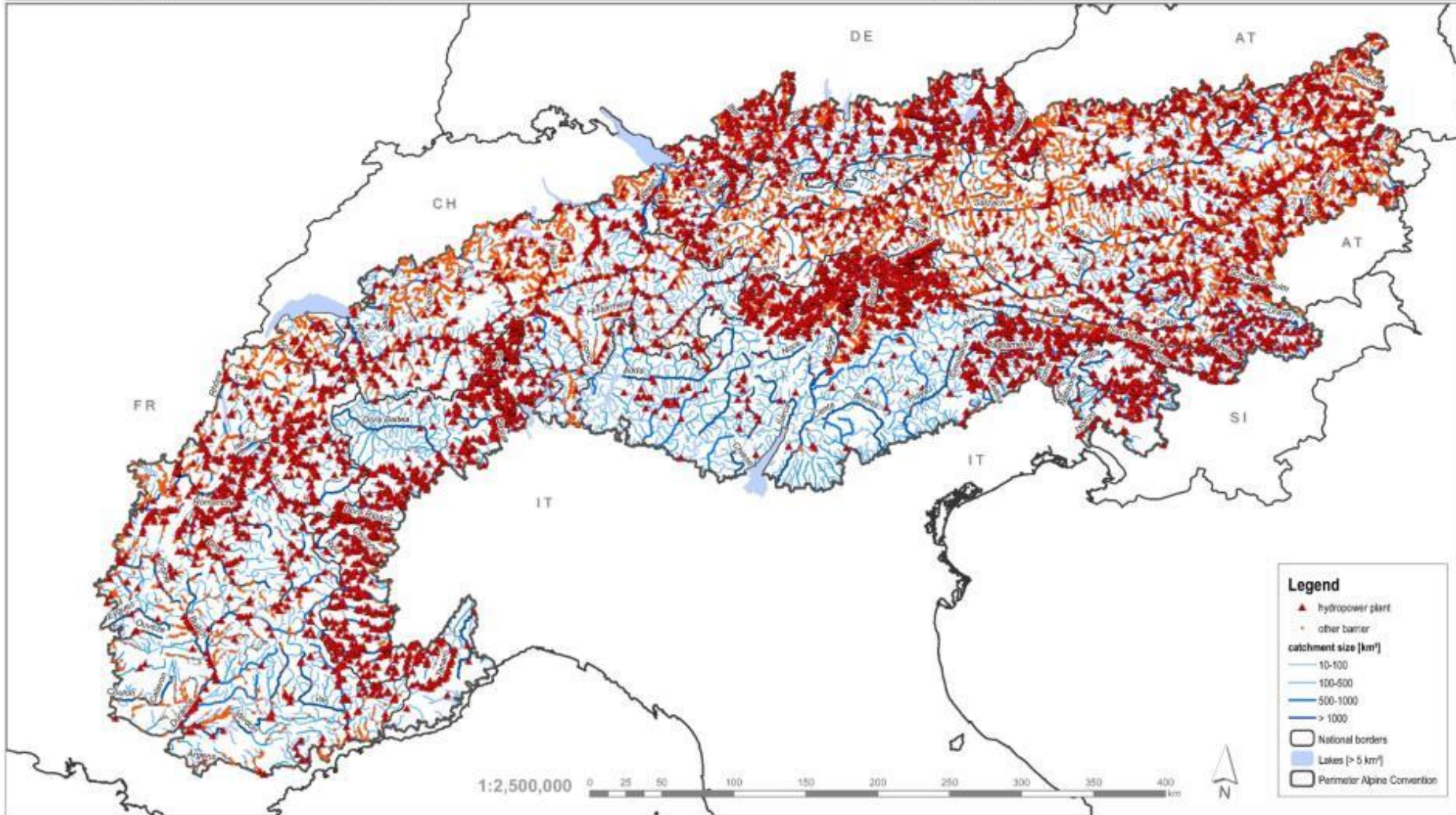


Hydropower plants and other barriers

Hydropower plants and other barriers (where available/provided) are mapped on a pan-Alpine river network assembled from official national networks. Data quality and received information varies between countries. Incomplete/missing information for many regions.
All rivers with a catchment size >10 km² are displayed.

Data Sources

Perimeter of the Alpine Convention: Permanent Secretariat of the Alpine Convention
National river networks: ADBPO, ADBVE, GURS, UBA, LFU, IRSTEA, Swissstopo
Hydropower plants and barriers: UBA, BAFU, LFU, Eau France ADBPO, ADBVE, Regione Liguria, ARSO, APPI Bozen, WWF
Lakes (from ECRINS): EEA
Administrative boundaries: GADM database





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



Institute of Hydrology and Aquatic Ecosystem Management,
 Max-Planck-Str. 17, 1190 Vienna, Austria
 Project team: Susanne Müller, Tobiasa Schwegler, Stefan Fleck, Sabine Freix, Lisa Schilling,
 Clemens Trutwin & Stefan Schmutz



Funding Organizations: KAW - Forschungsjahr und UML
 WWF - World Wildlife Fund for Nature
 December 2013

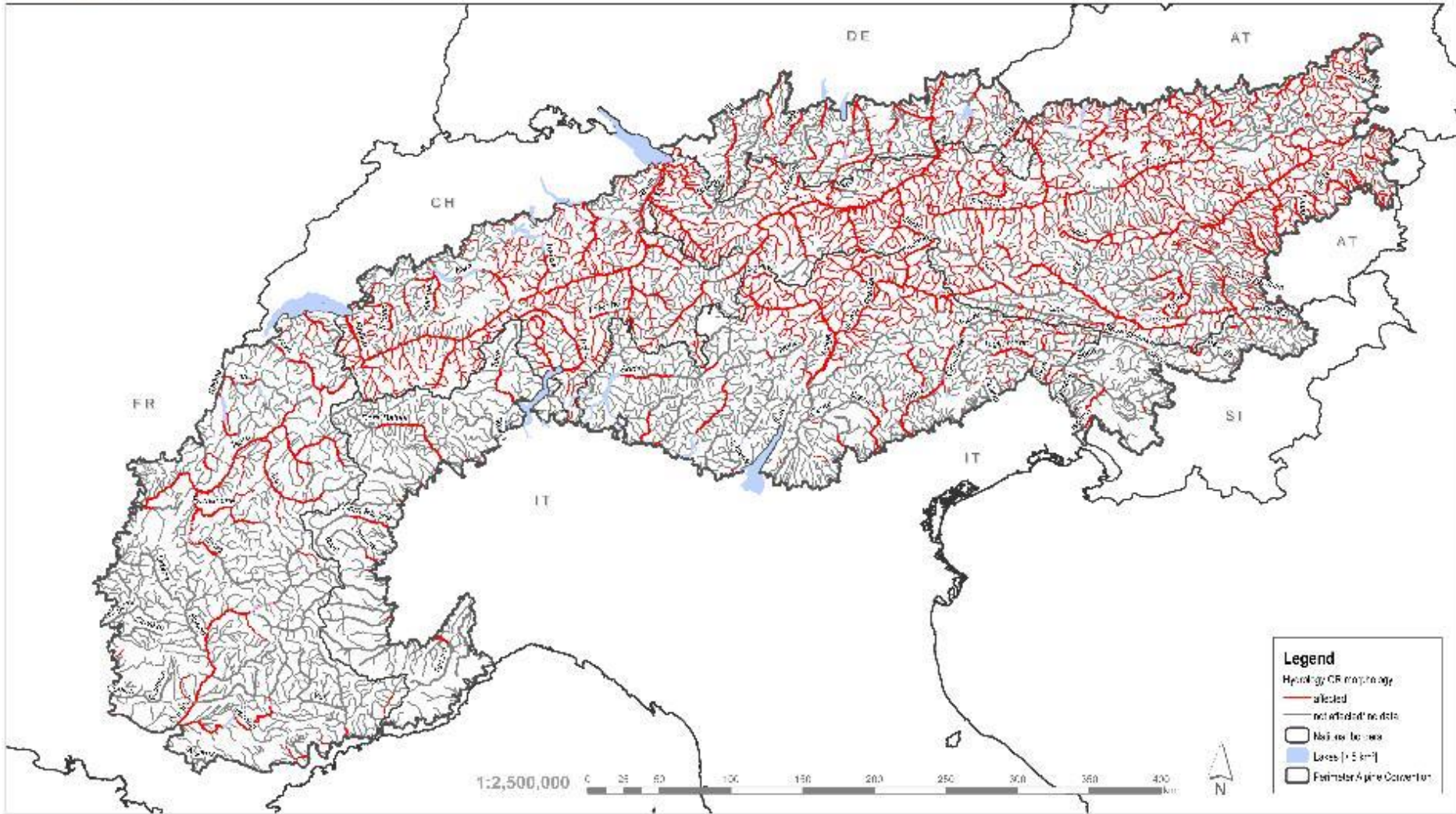


Mapping files: hydrology or morphological pressures (status class 3-5) or
 hydrological pressures (status class 3-5)

For Alpine river networks assessed from total natural river network. All rivers with
 a minimum of 100 km are displayed.

2013 version

Member of the Alpine Convention: Permanent Secretariat of the Alpine Convention,
 14100 Courmayeur, 01100 Courmayeur, 01100 Courmayeur, 01100 Courmayeur, 01100 Courmayeur
 Morphological data: SDN, LPO, DDTU, Eau France, ADPPO, L'Agg. Urbain de Annecy, ADPPO
 Area from FORVIE, ESA
 Administrative boundaries: SADM database



Legend

- Hydrology OR morphology
 - affected
 - not affected (no data)
- National Parks
- Lakes (> 5 km²)
- Estimated Alpine Convention



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 Mutar, Rafaela Schlegel, Stefan Fleck,
 Sabine Preis, Lisa Schilling, Clemens Trautwein & Stefan Schmutz

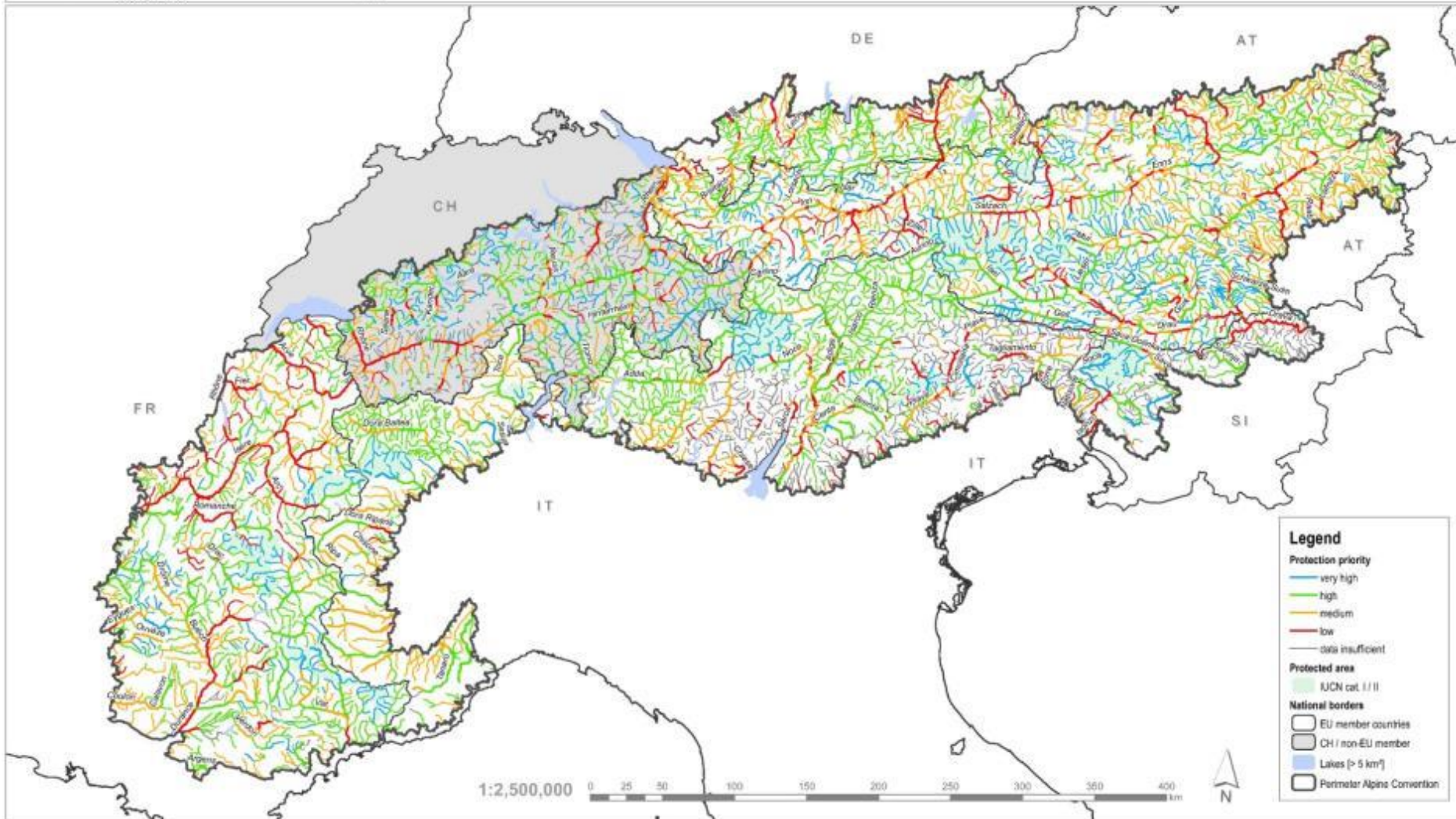


Funding Organisations: MAVA - Fondation pour la nature
 WWF - World Wide Fund For Nature
 December 2013



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, I.F.U., IRSTEA, Selsstogo
 Ecological status: UBA, I.F.U., Eau France, ADBPO, ADBVE, Region Liguria, ARSO
 Protected areas: EFA, ARSO, BAFU
 Lakes (from ECRINS): EEA
 Administrative boundaries: GADM database





...d'améliorer la qualité et la quantité des données

Les procédures d'acquisition et de mise à disposition des données devraient être plus transparentes et harmonisées entre les Etats membres. De plus, chaque acteur institutionnel devrait être activement engagé dans la mise à jour de ces données. Il est également urgent de constituer une base de données exhaustive des installations hydroélectriques, existantes ou en projet, outil indispensable pour évaluer et restaurer les continuités écologiques des rivières à l'échelle de l'arc alpin.

...de définir des „zones refuges“ (ou No-Go areas)

Les « zones refuges » devraient être mises en œuvre dans les Plans de gestion de district hydrographique, de manière à mettre l'accent sur les bassins-versants intacts.

...de restaurer les rivières dégradées et de prévenir toute atteinte

Les plaines alluviales, les zones humides et les grandes rivières sont parmi les écosystèmes les plus menacés des Alpes. Un effort important doit donc être fait pour inverser le processus de dégradation de ces milieux et restaurer les régimes naturels des cours d'eau. Une attention toute particulière doit être portée aux cours d'eau jouant naturellement un rôle dans la protection contre les inondations.

...de développer une stratégie pan-alpine de gestion des rivières assurant l'équilibre entre protection de la nature et réponse aux besoins humains

La DCE est une première réponse à cette vaste problématique, imposant la mise en œuvre de programmes régionaux de gestion par bassins-versants. Elle ne prend cependant pas en compte les effets indirects de facteurs comme le changement climatique ou l'étalement des espèces invasives. Leur influence étant pourtant considérable, ces éléments devraient être au cœur des politiques de gestion des milieux aquatiques.



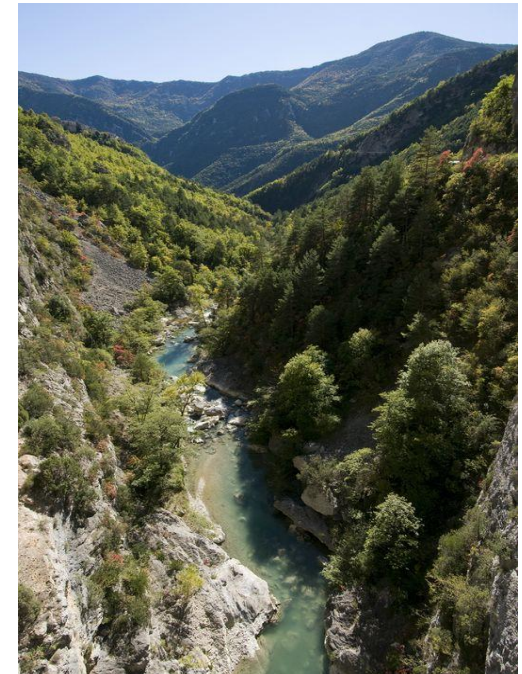
Soča



Tagliamento



Estéron





Merci de votre attention

