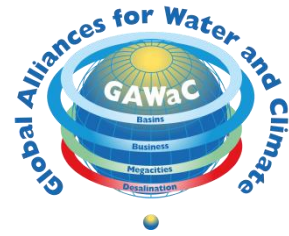




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MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE



International Summit

“Water and Climate:

Meeting of the Great Rivers of the World”

Rome, 23-25 October 2017

**Report of session n°2:
“ Water resources and
aquatic ecosystems management
in a changing climate”**

Edouard BOINET

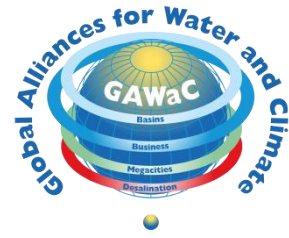
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Questions asked

1. What kind of nature based solutions can help to reduce the natural risks related to water and climate change (floods, droughts, soil erosion...)?
2. What are the criteria to be followed in order to ensure rapid, efficient and sustainable nature based solutions (multiple benefits, no-regret, complementary to “grey infrastructures”, low cost, conflict-resolution)?

Panel 2

Chair: Mr. Jean Launay, President, France National Water Committee, French Water Partnership.

- *Keynote speaker:* Ms. Gaia Checcucci, Director General, Department for Land and Water Protection (STA), Ministry of Environment, Land and Sea Protection, Italy
- Panelists:
 - Mr. Olcay Unver, Deputy Director, Land and Water Division, Food and Agriculture Organization (FAO)
 - Mr. Erasmo D'Angelis, Secretary General, District Authority of Central Italy,
 - Mr. Dibi Millogo, Deputy Executive Director, Volta Basin Authority
 - Mr. Ian Atkinson, International Commission on Irrigation and Drainage (ICID), Australian National Committee
 - Ms. Olga Vladimirovna Gorelits, Zubov State Oceanographic Institute (Volga River)
 - Mr. Giancarlo Gusmaroli, Board Member and Secretary, European Centre for River Restoration (ECRR)





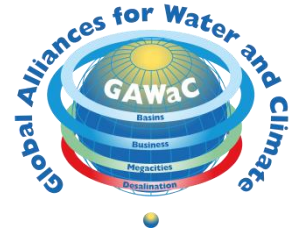
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AQUAMADRE



Panel 2: report

- Challenges:
 - Combined **anthropologic** and **climate** pressures on aquatic ecosystems.
 - Resulting in too much/too little water (**floods** and **droughts**).
- Time of crisis: time of decision (ethymologically). Crisis can be positive. Example of the Rhine: management by accident.



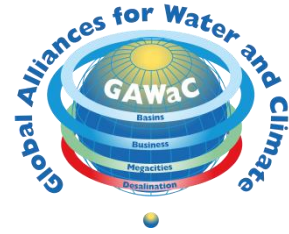
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AQUAMADRE



- **Basin-wide governance** as a solution to protect aquatic ecosystems and the benefits they provide for adaptation:
 - **capacity building** of basin organizations (technical and institutional), including on cycling basin management planning (WFD).
 - based on **monitoring networks** and **Water Information Systems (WIS)**
 - to develop **basin strategy** addressing climate adaptation.
 - with **stakeholder involvement** in the decision-making process: to improve diagnosis and build ownership of aquatic ecosystem protection, (demonstrate the **interest** for the basin managers, for the stakeholders).
 - **Cooperation** (incl. in transboundary context).



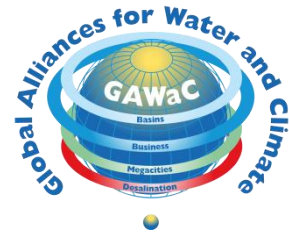
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AQUAMADRE



- **« Green, Blue, Grey » solutions :**
 - **Multiple benefits/functionalities.**
 - **Tailor-made** rather than one size fits all,
 - **Combining green/grey infrastructures.** From the design phase (best) to the revision (by default) of rules of operation of grey infrastructures in an integrated manner, according to environmental protection objectives and new constraints of climate changes (ex. of the multiple objectives Volga-Kama Hydroelectric Power Plants).



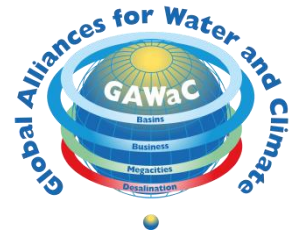
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AQUAMADRE



- **Water-Food Nexus:**

- Hunger will be made harder to address given the current trends: growing **population**, **consumption** models and increasing pressure of **climate** change on soils and aquatic ecosystems.
- Solutions?
 - improving **water efficiency** in agricultural irrigation,
 - **Reducing food waste** (also a water waste: 3 times the volume of Lake Geneva),
 - **Mainstreaming ecosystem-based management in development plans** (incl. food production), through networks (i.e.: ECRR) and knowledge base (i.e.: NWRM).



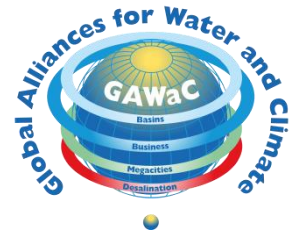
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- **Considering the protection of aquatic ecosystems as an investment for resilience to climate change:**
 - **Preserving environmental flow** to sustain water consuming economic activities (all). Example of the Murray-Darling basin: buying of water rights & implementing water efficiency/water productivity programs.
 - **River restoration and banks reforestation** to improve livelihoods. Example in the Volta river basin.
 - For flood control: **Making room for the rivers**, reconnecting their beds and flood plains, implementing the **“Sponge city”** concept, Natural Water Retention Measures (**NWRM**).

- **Knowledge:**

- From monitoring networks and the data collected to Water Information Systems (WIS) for a sound decision-making.

YOU CANNOT MANAGE WHAT YOU DON'T MEASURE!

Thanks for your attention!



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