

SWOT and transboundary basins management

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Study presentation



Objectives and study domain

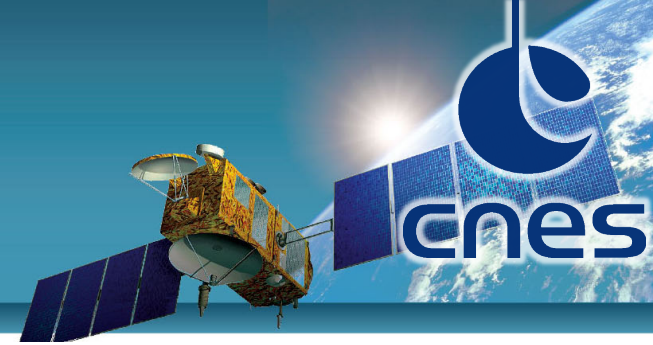
- What are the specific observation needs for transboundary basin (i.e. basin shared by two or more countries) management? Benefits from SWOT in this context?
- 2 studied basins: **Rhine** and **Amazon**. No water conflict, but huge disparity between these basins (“small”, well instrumented, with good collaboration basin versus biggest basin with sparse observations).

Methodology

- Phone interviews with hydrologists and managers for these 2 basins + answers analysis (social science methodology).
- Internship at LEGOS for 5 months (social science master student) and 3 translators (German/Dutch, Spanish, Portuguese).
- 24 persons interviewed from 9 countries (~50% Rhine and ~50% Amazon).



Results



Benefits from SWOT

- SWOT = new data, homogeneous in space and time (not country dependent).
- Help to better understand/manage water resources.
- Rough spatialization of water resources at low cost. Basin wide tool.
- Develop environmental and integrated over the whole basin approach (help general public/politics to realize water resources are limited).
- Usage/application depends of local/regional stakes -> reach local institutions.
- To be used, putting data online will not be sufficient. Should be put on web platform gathering data from multiple sensors for multiple variables.
- Key benefit from SWOT is its global coverage = shows dependences between countries, shows water resources limitations, help collaboration on water management projects.



Results



Limits from SWOT

- For the Amazon, SWOT answers to a real need. Temporal sampling might be a limitation for smaller rivers, but it will be a real break through.
- For the Rhine:
 - SWOT will observe the main stream but not the tributaries.
 - Temporal sampling is not good enough (for inundations).
 - Data time latency exclude operational (i.e. here near real time) use.
 - Mission life time not long enough to worth the cost of adapting current operational processing chains.

Water managers needs

- To be used by public institutions, SWOT data will need to be validated by a national reference institution.
- Level 2 products will not be used by water managers: too complex. Need to develop a (not yet existing) link between scientific and application needs (indicators, decision support tools, ...).
- There is a huge demand for training by water managers.