



Transboundary impacts analysis

INTRODUCING THE STATE OF THE ART

Apollonia Miola

European Commission - JRC

26 November 2020 - OECD 20th Meeting of the informal network of NFPs for policy Coherence

KEY OPEN QUESTIONS

- How to identify interactions between different policy objectives (such as climate goals) in order to achieve them without compromising other fundamental policy goals, such as employment, investment or competitiveness?
- How country's sustainable development efforts can be undermined by another's domestic policy choices, and vice versa?
- Which institutional mechanism can coordinate actions across policies and countries to manage transboundary impacts?

KEY CHALLENGES

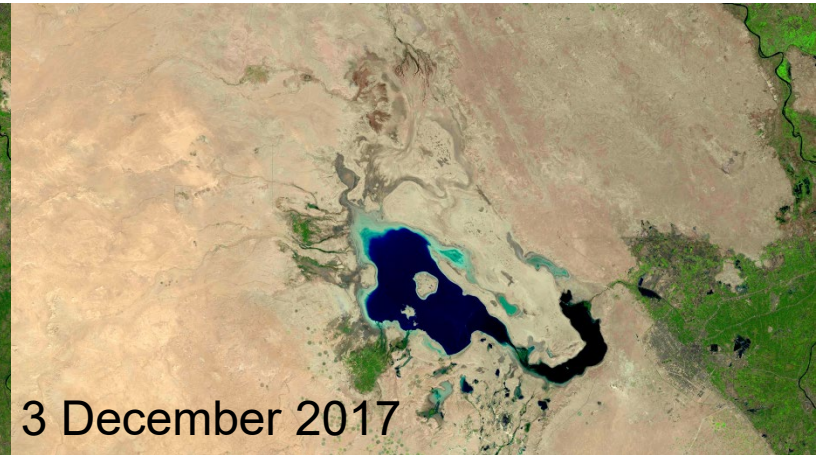
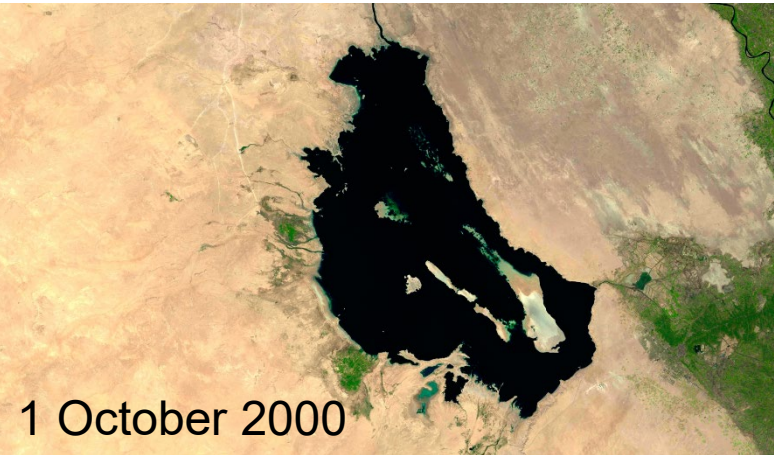
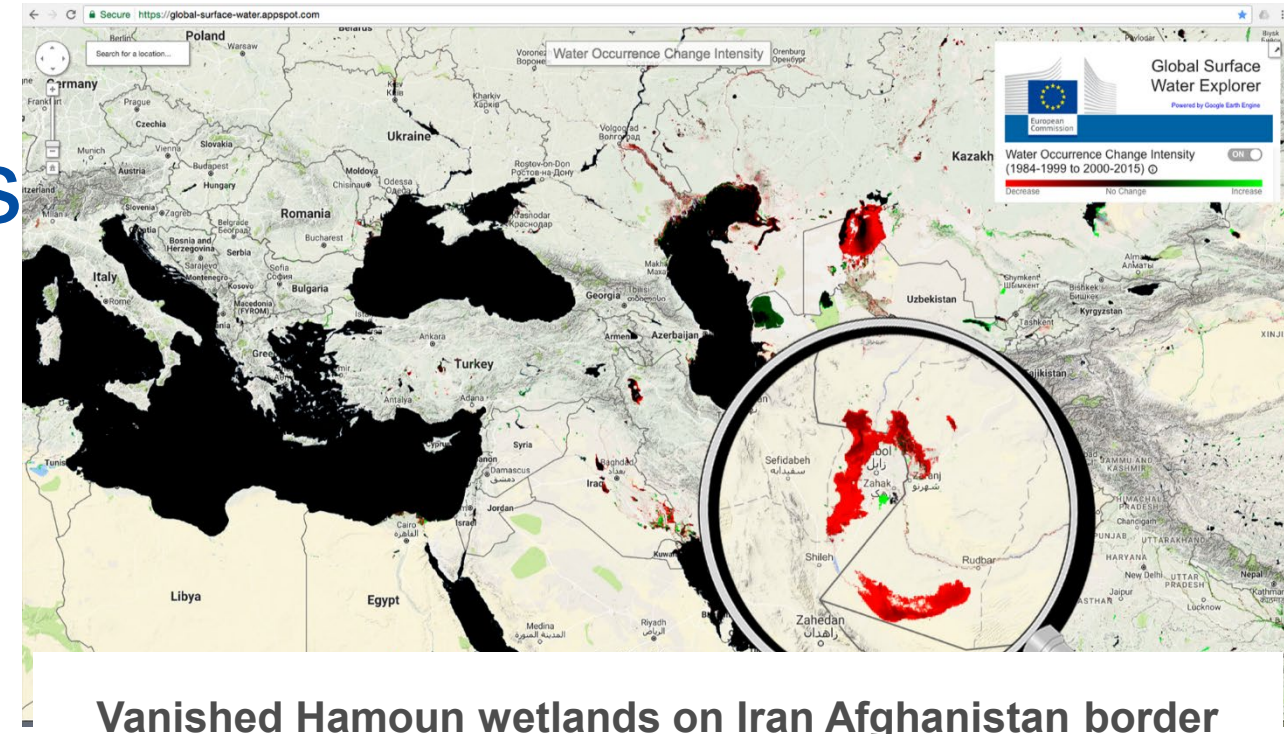
- Methods, models and indicators to identify transmission channels and evaluate Transboundary impacts
- Institutional mechanisms and coordination across countries

Taxonomy

- **SPILL-OVER EFFECTS** cross-dimensional impacts related to the implementation of national and international policies
- **TRANSBOUNDARY IMPACTS** cross-regional effects (*intended or not*) generated by policies

DIMENSION	EXAMPLES OF FACTORS INFLUENCING THE TRANSMISSION OF IMPACTS ACROSS BORDERS	POLICIES CATEGORIES WITH LARGE POTENTIAL WITH TRANSBOUNDARY IMPACTS
ECONOMIC	Changes in production and aggregate demand, volatility of prices, trade agreements, quotas and regulations .	<ul style="list-style-type: none"> ▪ Knowledge, research and innovation ▪ Transport and connectivity ▪ Labor and legal issue ▪ Trade and commercial agreements ▪ Enterprise collaboration and multinational companies ▪ Financial markets ▪ Territorial development issues and regional planning ▪ Agriculture policy
SOCIAL	Changes in social regulations, political stabilities, quality of life and wellbeing.	<ul style="list-style-type: none"> ▪ Wellbeing, quality of life and migration ▪ Culture and heritage ▪ Political stability ▪ Knowledge, research and innovation ▪ Territorial development issues and regional planning
ENVIRONMENTAL	Changes in resource availability, ecosystem's services and pollution. Change in the quality and provision of the global public good (such as water quality or air pollution, where two or more countries share the use and the exploitation of the natural resource).	<ul style="list-style-type: none"> ▪ Sustainability and environmental issues ▪ Energy ▪ Agriculture policy
GEOPOLITICAL	International aids, international cooperation, peacekeeping agreements, natural resource regulations, humanitarian assistance, foreign direct investments, trade agreement.	<ul style="list-style-type: none"> ▪ Political stability and military conflicts ▪ Trade and commercial policy ▪ Enterprise collaboration and multinational companies ▪ Energy ▪ Development and cooperation policy

Example of transboundary impacts related to over-exploitation of natural resources



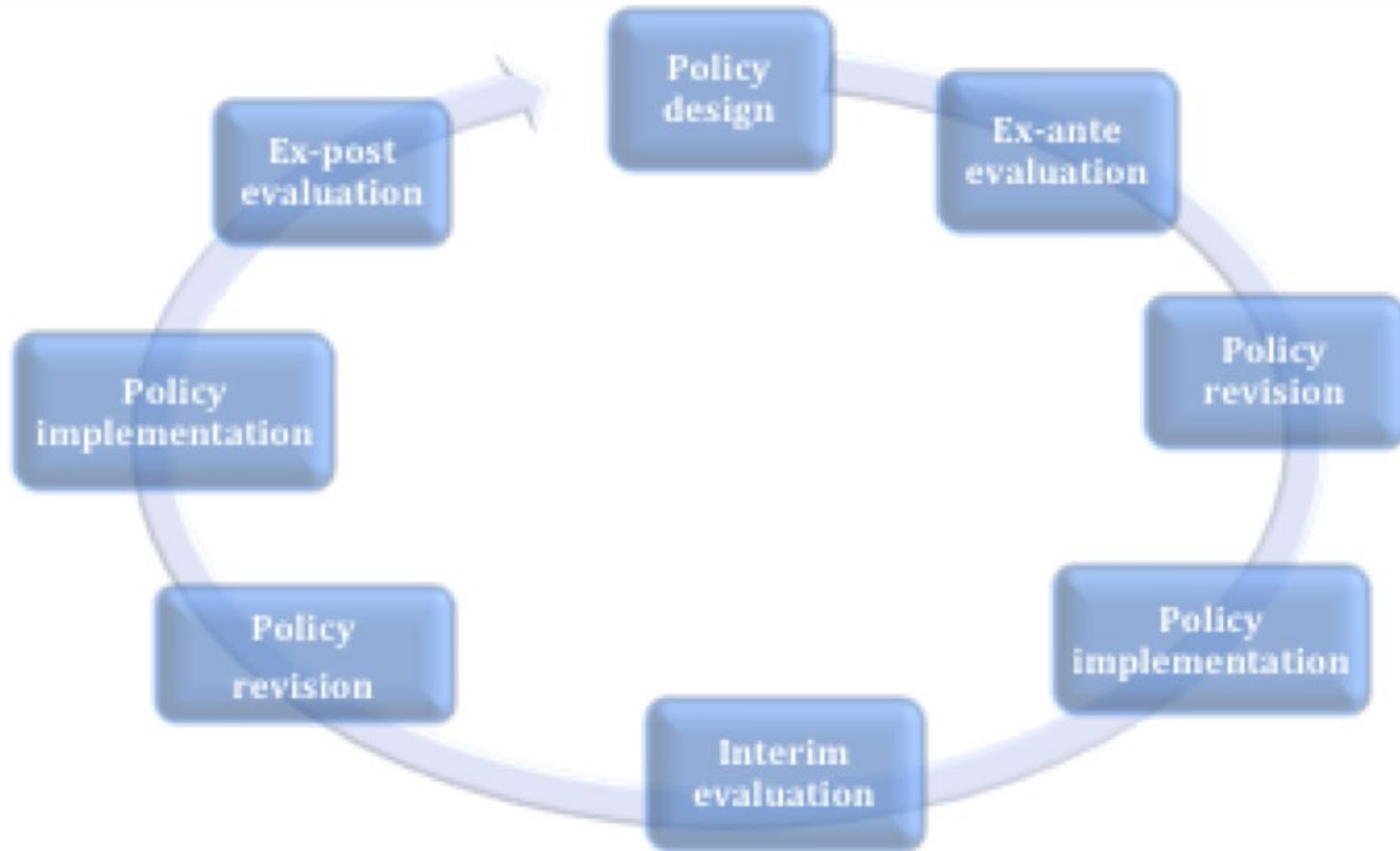
Analytical tools to identify and estimate Tranboundary impacts (1)

- Measures: Indicators such those proposed by the joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development in 2013; Consumption-based measures of emissions and carbon intensity allocations; Footprint of a country calculated to estimate the natural resourced embodied in exports.
- Input-output, multi-regional input-output models (and the related extension) used to track the impacts along the international value chains and to analyse the interdependencies of industries and countries.
- Social Accounting Matrix , such as those used to estimate price transmission mechanisms and the socio-economic effects of carbon pricing.

Analytical tools to identify and estimate Transboundary impacts (2)

- General equilibrium and econometric models such as those used to (1) analyse transboundary fish stocks management impacts in competition or cooperation management scenarios, (2) investigate the spatial effects and the strategic behavior in a multiregional transboundary pollution game
- Multi-country, multi-sector computable general equilibrium model such as those used to evaluate the economic and water resource availability effects of trade liberalization in the Nile Basin, MAGNET model including an SDG Insights Module.
- Expert judgements, story line and stakeholder consultations to investigate the possible relationships existing between variables and transboundary implications.

STEPS FOR POLICY EVALUATION AND DESIGN



SOME RECOMMENDATIONS

- Definition of guidelines for integrated SDGs impact assessment framework to identify and manage potential trade-offs and synergies among SDGs and **across countries**;
- Definition of transboundary collaborations (wide collaborations between experts from different disciplinary background together with cross-countries collaborations) as fundamental factor supporting the evaluation of the potential drawback and acceleration effects.

For more information

apollonia.miola@ec.europa.eu