

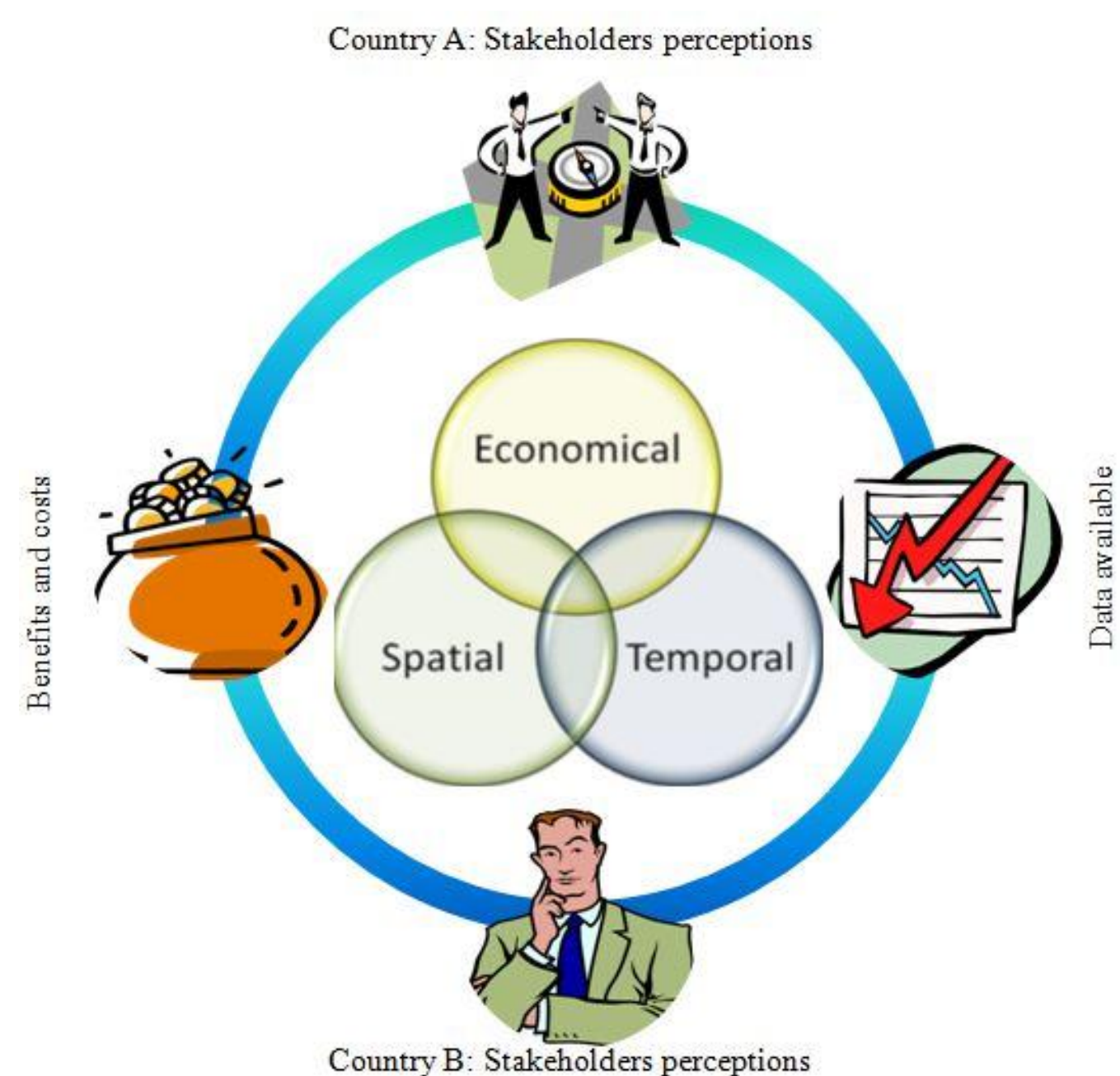
COMPLEXITY OF TRANSBOUNDARY WATER NEGOTIATIONS – CASE STUDY OF ECOLOGICAL FLOW IN THE GUADIANA BASIN

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Introduction



A framework of analysis was used in order to understand transboundary conflict and cooperation. The economic dimension explores how countries can enhance their economic benefits through transboundary water cooperation. The spatial dimension examines how power relations and asymmetries influence water allocation regimes and bargaining positions of countries during transboundary negotiations. The temporal dimension deals with the influence of water availability and variability on political uncertainties which may impact signing of a transboundary agreement.

Ecological flows in the Guadiana basin

The research focused on the ecological flow in the lower Guadiana and the absence of agreement between Spain and Portugal on a minimum flow regime for the Pomarão section. The Pomarão section is located on the lower Guadiana River, 50 km north of the estuary.

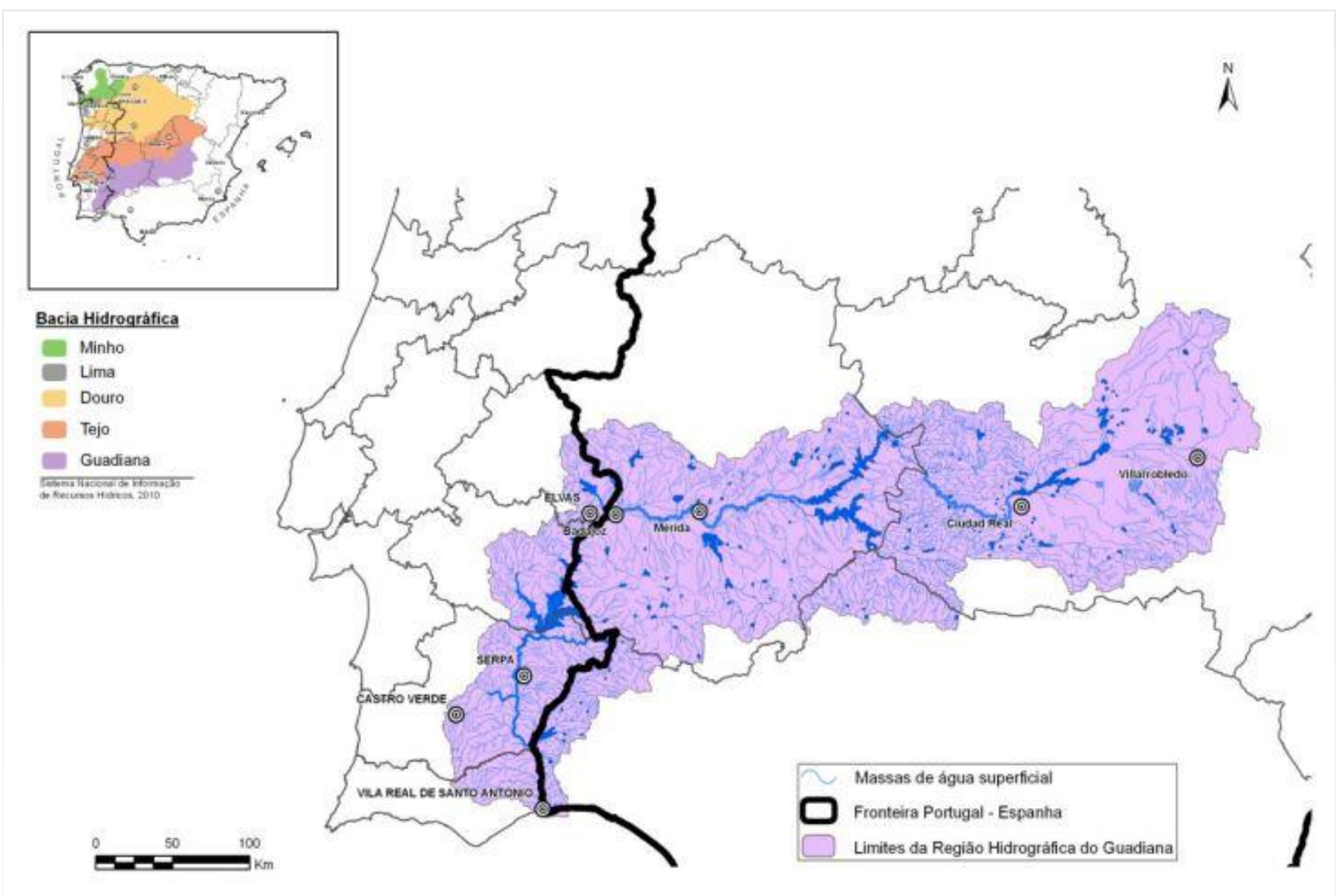


Figure 1. Guadiana basin in Spain and Portugal and Pomarao section

Discussions on minimum flow in rivers between Portugal and Spain started in 1993, together with the preparation of what would be the 1998 Albufeira convention (regulating the management of shared Spanish-Portuguese water resources). By the end of 2008, almost all of the minimum flow control points had been selected for the establishment of the minimum flow regime with the exception of those along the Pomarão section.

Decision making network and stakeholder interviews

Table 1: Stakeholders in the basin and interviewees

Stakeholders	Interview
Portuguese Delegation	6 (7)
Spanish Delegation	2 (7)
Outside experts	3 (3)
Farms and Fishermen	0 (2)

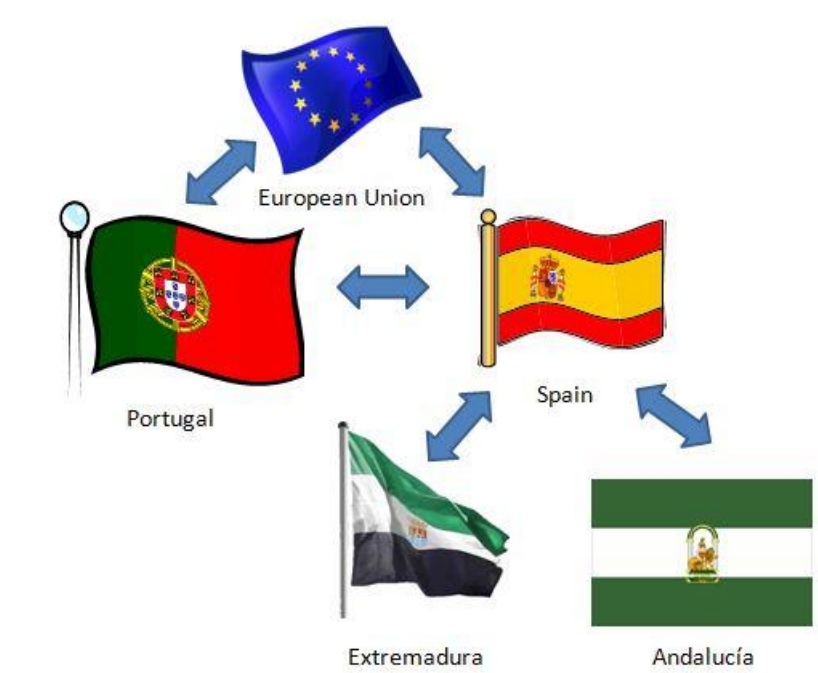


Figure 2: Multi-level governance (EU, national, regional)

To understand the reasons and motivations underlying the absence of an agreement between both countries, semi-qualitative interviews were conducted in the study area. Some members of the Portuguese and Spanish delegations of the CADC commission minimum flow working group were interviewed as well as some independent experts. Interviews were conducted between October 2012 and February 2013. 11 out of 19 contacted stakeholders were interviewed with 4 questions on the agreement (table 1 and 2).

Discussions on minimum flow are held in a technical workgroup that is organized at the national level (related to the CADC commission) with representation of regional governments at the Spanish side (Andalucía and Extremadura). The European Union is represented through specific requirements for ecological flows linked to the funding of the Alqueva reservoir and more generally through WFD prescriptions.

Table 2: Interview questions on the (absence of) an agreement on ecological flows

Since water is vital for many economic, social and environmental activities, society has different and sometimes conflicting interests over the water use. How would you describe different interests in this case? Do you think that these different interests were represented in the work group? How? By whom? And Why?
Why could the working group not reach an agreement over the Pomarão region? What makes this region different from the others where an agreement was attained?
What are the Portuguese/Spanish propositions to get an agreement over the Pomarão section? What are the Spanish/Portuguese arguments to not accept Portugal's propositions?
Is anybody benefiting from postponing the definition of flow regimes? Who would that be and why? And is anybody or group of persons harmed by it? Who and why?

Results – interviews and multiple games

- Tradeoffs of past agreements (1968 and 1998) complicate an agreement in the Pomarão → Portugal needs to be compensated
- Difficulties to commensurate the impacts over the estuary (fisheries, irrigation, erosion)

"...after 2008 Portugal has systematically refused to discuss this issue" MAGRAMA02
"...the Albufeira convention does not clearly state the amount of water that can be used by Portugal and Spain downstream of the Pomarão section." EXPERT03
"...diálogo de sordos." (dialogue between the deaf) MAGRAMA02
"Portugal and Spain only want to negotiate about transboundary waters in the drought periods, but during these periods agreements are not reached because of the increased stakes on both sides. However, they can easily agree on any transboundary issue in wet periods, but they do not feel the need to negotiate it" EXPERT01

BOX 1 Quotes from stakeholders and experts during 2012-2013 interviews

- Irrigation development in the Spanish region of Andalucía has lead to increased pumping in the (temporary) Boca Chanza pumping station (figure 3), beyond initial consent of Portugal.
- Water quality issues seems to be more relevant than water quantity, but countries are discussing quantity to achieve quality
- The power bargain of both countries are reduced due to the unique power relations of both countries in this particular case (due to supra national and regional interests and inversed geographic position)

Discussion

Multi-level games complicate the negotiation of an agreement. Within Spain the regions of Extremadura (defending irrigation upstream of the Alqueva dam) and Andalucía (pumping water from Boca Chanza to new development irrigation areas) have different interests (figure 4). Although EU has a large impact on paper (WFD and Alqueva funding require minimum flow), its role on the field is minimized as both countries perform incomplete or optimistic reporting on the (absence) of the minimum flow.

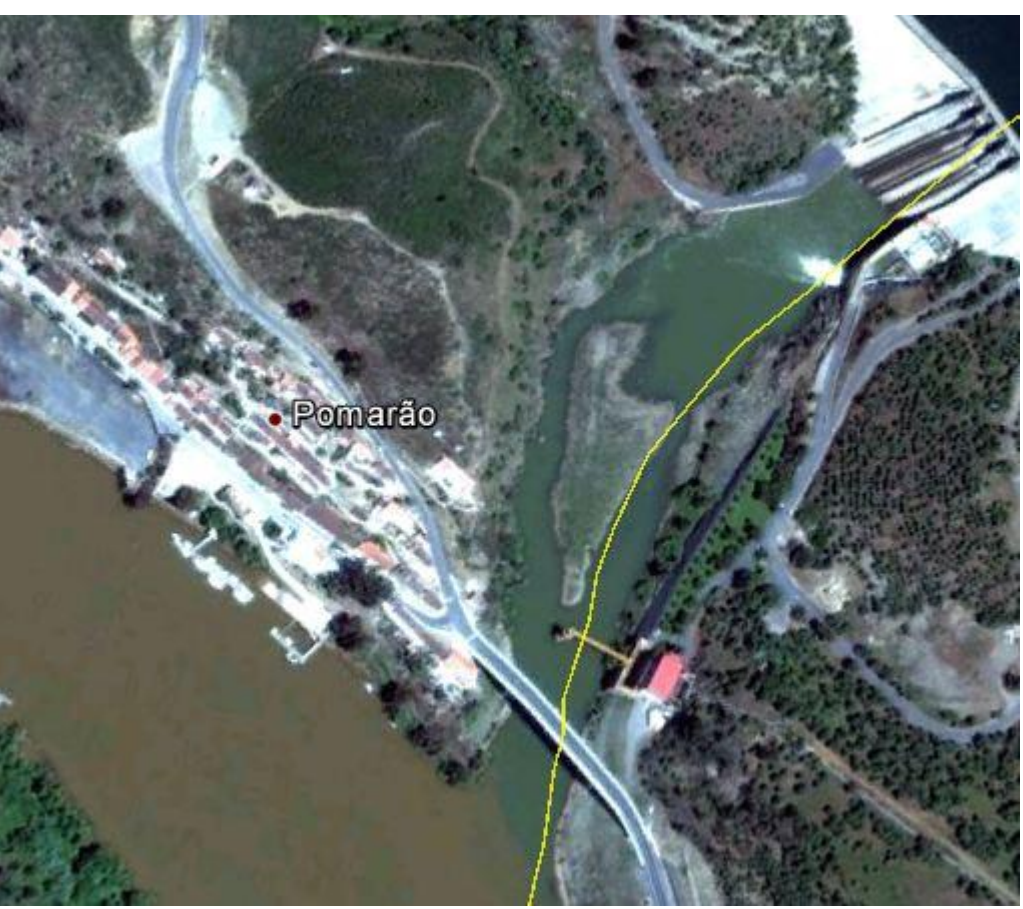


Figure 3: Areal view of the Pomarao section and Boca Chanza pumping station

More generally, issues linkage and benefit sharing tools have a time dimension in themselves and future agreements that may change past agreements are harder to reach. Participation may hold back trade-offs as the local stakeholders do not accept to receive the costs, however it was impossible to confirm with fishermen and farmers in the Pomarão section during this research. Power relations may influence the outcome of the negotiations even if the stakeholders are not at the negotiation table and uncertainties (e.g. related to climate change) complicate negotiations on minimum flows.

The applied framework allowed a better understanding of the problems regarding the countries' bargaining positions, uncertainties in water availability and variability, and possible trades offs. It proved essential to consider interlinkages between dimensions. An identified weakness of the applied framework is its inability to capture the importance of political willingness and leadership during the negotiation process over the Pomarão section.

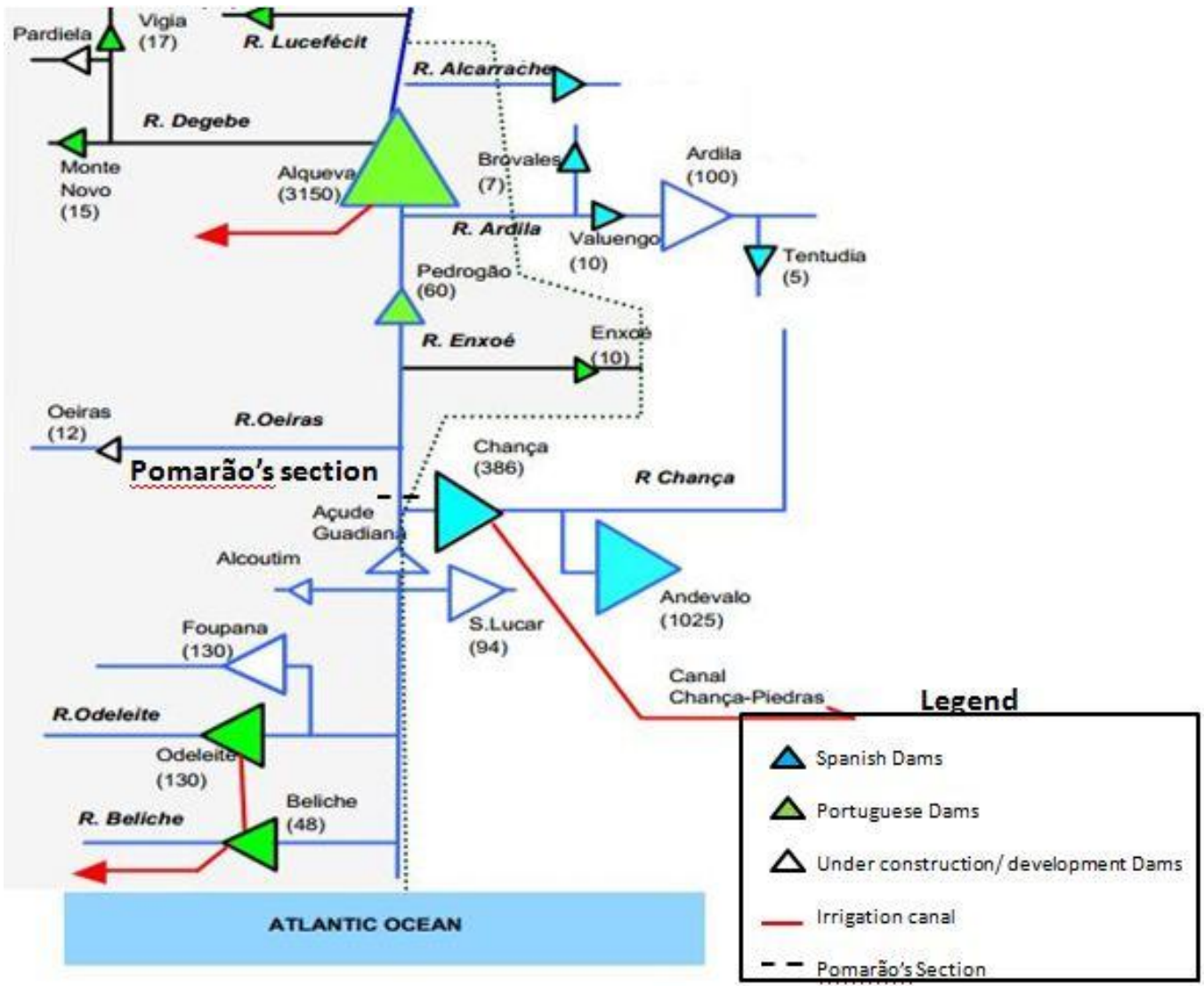


Figure 3. Scheme of lower Guadiana river and dams

Concluding remarks

- Tradeoffs over the past define the bargaining positions of both countries.
- Multi-level games are identified at different decision making levels and local participation is perceived as barrier for national trade-offs
- Reduction in political will and leadership from 2008 explaining factor for current blockage