

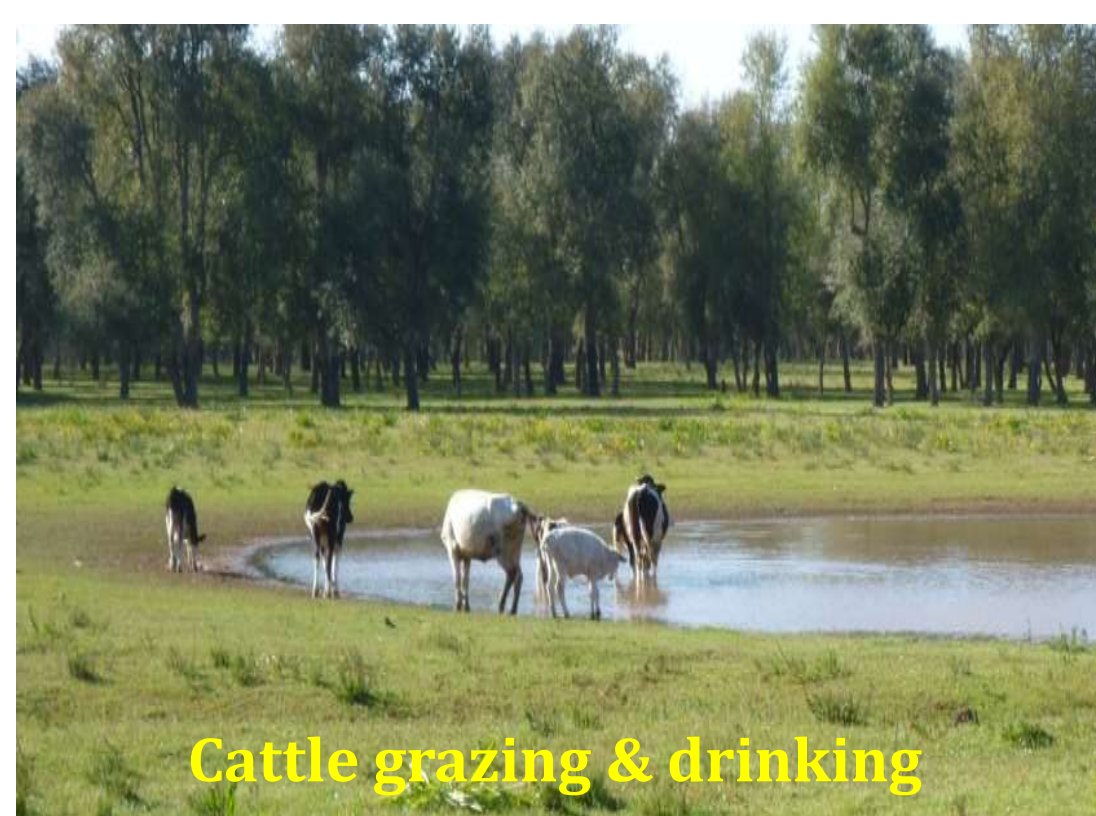
Raising awareness for Mediterranean temporary ponds in Morocco

Rhazi Laïla¹, El Madihi Mohammed¹, Van den Broeck Maarten², Rhazi Mouhssine³, Waterkeyn Aline^{2,5}, Abdessadeq Boudjaj¹, Mohammed Ben Bammou³, Saber Er-Riyahi⁴, Moukrim Said¹, Wahby Imane¹, Grillas Patrick⁵, Brendonck Luc²

¹ Laboratory of Botany, Mycology and Environment, University Mohammed V-Rabat, Morocco; ² Laboratory of Animal Ecology, Global Change and Sustainable Development, University of Leuven, Belgium; ³ Moulay Ismail University, Faculty of Sciences and Techniques, Department of Biology, BP 509, Boutalamine, Errachidia, Morocco; ⁴ Moulay Ismail University, Faculty of Letters and Human Sciences, Department of Geography, BP 11202, Zitoune Meknès, Morocco; ⁵ Tour du Valat, Research Centre for Mediterranean Wetlands, Le Sambuc, 13200 Arles, France

Introduction

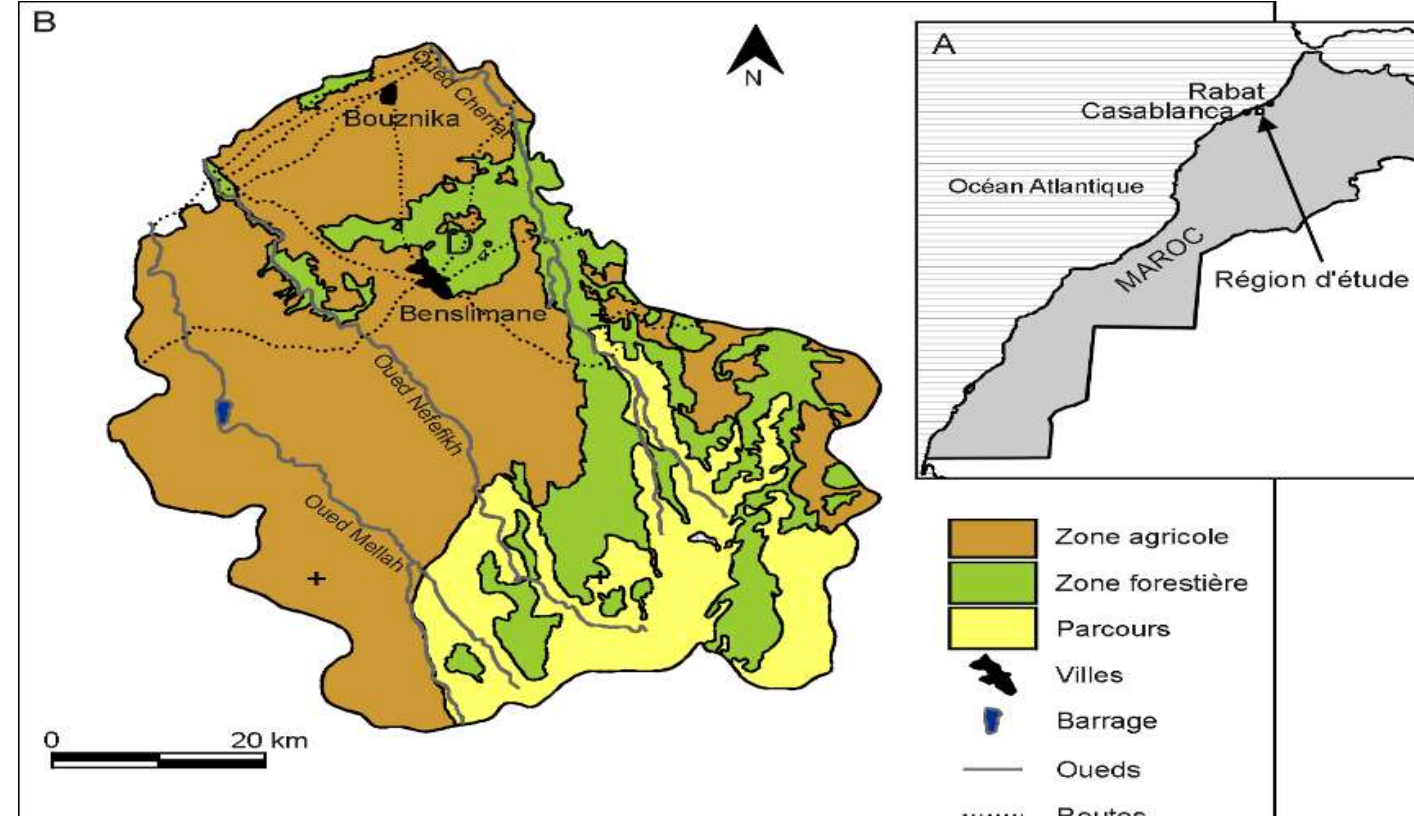
At the scale of the Mediterranean basin, Morocco stands out because of its high density of temporary ponds scattered throughout almost all of its territory, from the Atlantic plains to the eastern high plateaus and the mountainous regions. They are especially abundant in western Morocco, mainly in the province of Benslimane, where they exhibit a diversity of sizes, shapes, depths, uses and ecological characteristics. These habitats house a high biodiversity and provide several ecosystem services benefiting the local people (e.g. grazing and water supply for cattle, harvesting medicinal plants, farming, recreation). However, these ponds are exposed to increasing anthropogenic pressures, such as drainage, intensification of agriculture and urban development. Unlike in Europe, where Mediterranean temporary ponds are included as priority habitat in the Habitats Directive, these habitats are left unprotected in Northern Africa. In the province of Benslimane a loss of 23% in number and 61% in surface area of temporary ponds was quantified over a period of 50 years (1955-2001). Additionally, a socio-economic survey revealed that 30% of the local people had negative perceptions of these ponds (e.g. as being mosquito breeding areas or as wasted arable land). This explains why ponds are often destroyed. In this context, the aim of a 2-year VLIR-UOS project was to promote pond conservation through (1) raising awareness on the socio-economic and ecological functions and values of these habitats and (2) involving stakeholders (local authorities, users, scientists) in a workshop to identify the key issues for effective long-term conservation of the ponds.



Cattle grazing & drinking



Recreation & washing



Geographical location of the province of Benslimane



Water extraction



Landfilling

Some examples of uses of temporary ponds

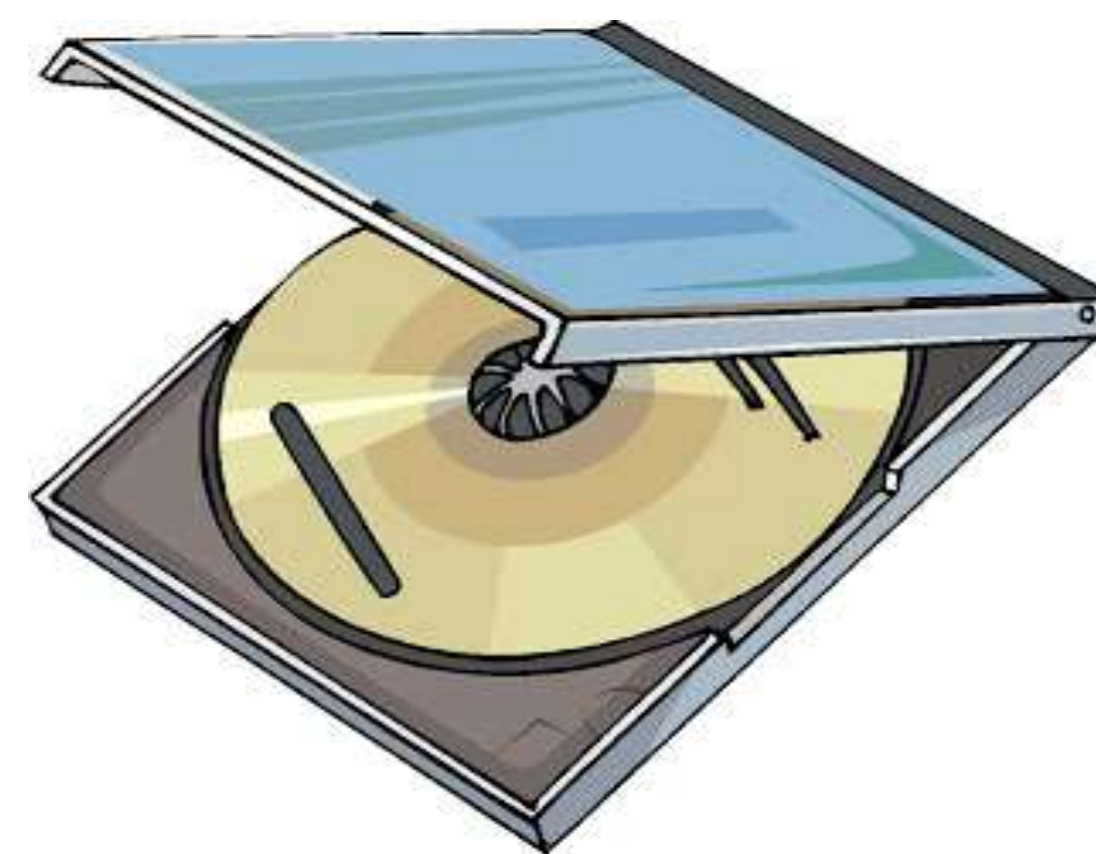
Some threats to temporary ponds in Benslimane

Awareness campaigns

In order to promote the conservation of the ponds, awareness campaigns were organized. Firstly, courses and field visits were organized in schools and universities to explain the ecological and socio-economic roles of temporary ponds. Also, a short film documentary and leaflets were made to inform the local people.



Courses organized in schools



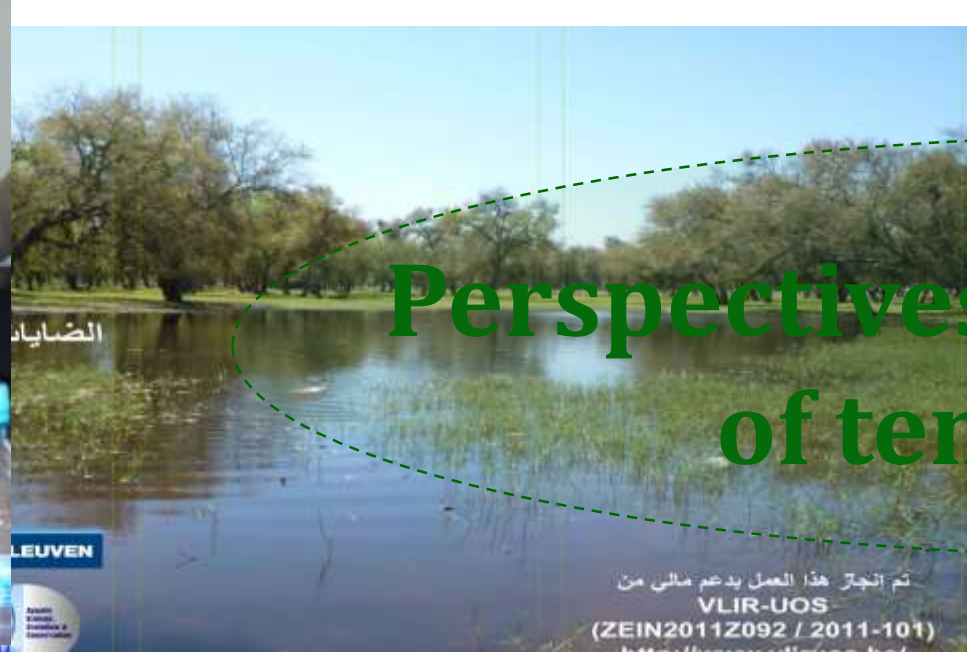
Film documentary « Life under water in temporary ponds »



Courses and field visits organized in universities

Stakeholders meeting

Findings on the current status and threats of temporary ponds in Benslimane were delivered during a stakeholder meeting involving 32 people, including scientists, decision makers, NGOs and users. A brainstorming session with this group resulted a general consensus on the need to conserve these habitats, although views were sometimes more divergent on the appropriate management.



Perspectives for the conservation of temporary ponds



Taking into consideration the social context of rural populations and the need for economic development of the Province, the stakeholders meeting suggested that the main actions needed for the conservation of the Benslimane ponds are:

- ✓ Continue raising awareness in order to ensure a lasting change in the population's perception of the ponds
- ✓ Improving life quality of the local population which is dependent on the services provided by the ponds
- ✓ To integrate these ponds in communal development plans and strategies for agricultural development in the Province