Conservation and management of riparian zones in the Ayuquila-Armeria river basin, western Mexico.

Claudia Irene Ortiz-Arrona
L.M. Martínez-Rivera; P. R.W. Gerritsen, O. Cárdenas Hernández, O. Ponce Martínez
Overview of the Presentation

• Context of the riparian zones in the Ayuquila-Armeria watershed
• Lake Simcoe -Ayuquila-Armeria River Basin Twinning Project
• Riparian ecological status assessment
• Riparian zone’s conservation and management proposal
Riparian Zones in the Mexican context

- 45% of riparian ecosystems are potentially altered in Mexico (Garrido et al. 2010)

Edited from:
Gonzalez del Tanago & Garcia de Jalon (2007)
Ayuquila-Armeria River Basin

- Covers an area of ≈10 000 km²
- Large steep river with a length of 300 km
- Sierra Madre del Sur - Neovolcanic physiographic provinces
- Biodiversity: Natural Protected Areas (5)
- 21 municipalities, 480 000 hab.
- 32% agriculture, 13% cattle ranching, 52% forest
- Use of water: agriculture 95% (sugar cane, horticulture) and drinking water 5%.
Riverprize International Twinning Project

• Twinning River Approach: Lake Simcoe (Canada) & Ayuquila-Armeria River Basin (Mexico)


- Guiding document for river basin management, restoration and protection initiatives.

- Recognition about the anthropic impact of the riparian habitat due to illegal appropriation of federal lands of rivers and streams.
Riparian Ecological Assessment: River Types
Riparian Ecological Assessment

Riparian Quality
- Very good (4%)
- Good (23%)
- Moderated (49%)
- Poor (24%)

Brisbane, Australia | 20-24 October 2019
Action on the Ground

- Riparian restoration project in the agricultural valley
  - Riparian segment’s prioritization
  - Farmers participation
  - Native multipurpose tree species
  - Monitoring and evaluation (ecological and social perceptions)

Ortiz-Arrona & Martinez
Action on the Ground

- Participatory conservation at El Cangrejo Creek: rural and urban water source

Carrillo-Aldape (2019)
Riparian Zones Conservation Actions

- Legal framework: River’s federal zone vs illegal land appropriation
- CONAGUA: Municipality’s role in riparian zone ➔ Community protection
- Riparian zones management protocols for city councils and other authorities

**FEDERAL (PROPERTY) ZONES**
ART. 3 XLVII NATIONAL WATER LAW
Edited from:
Gonzalez del Tanago & Garcia de Jalon (2007)
The Challenge

• Riparian zones protection on the ground
• Engagement and joint collaboration between government, key stakeholders and local communities in the basin
• Search of environmental service payments mechanisms to reduce pressures and impacts on the riparian habitats
Thank you

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cortiz@cucsur.udg.mx