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RIOB-INBO

Agriculture and water in Martinique
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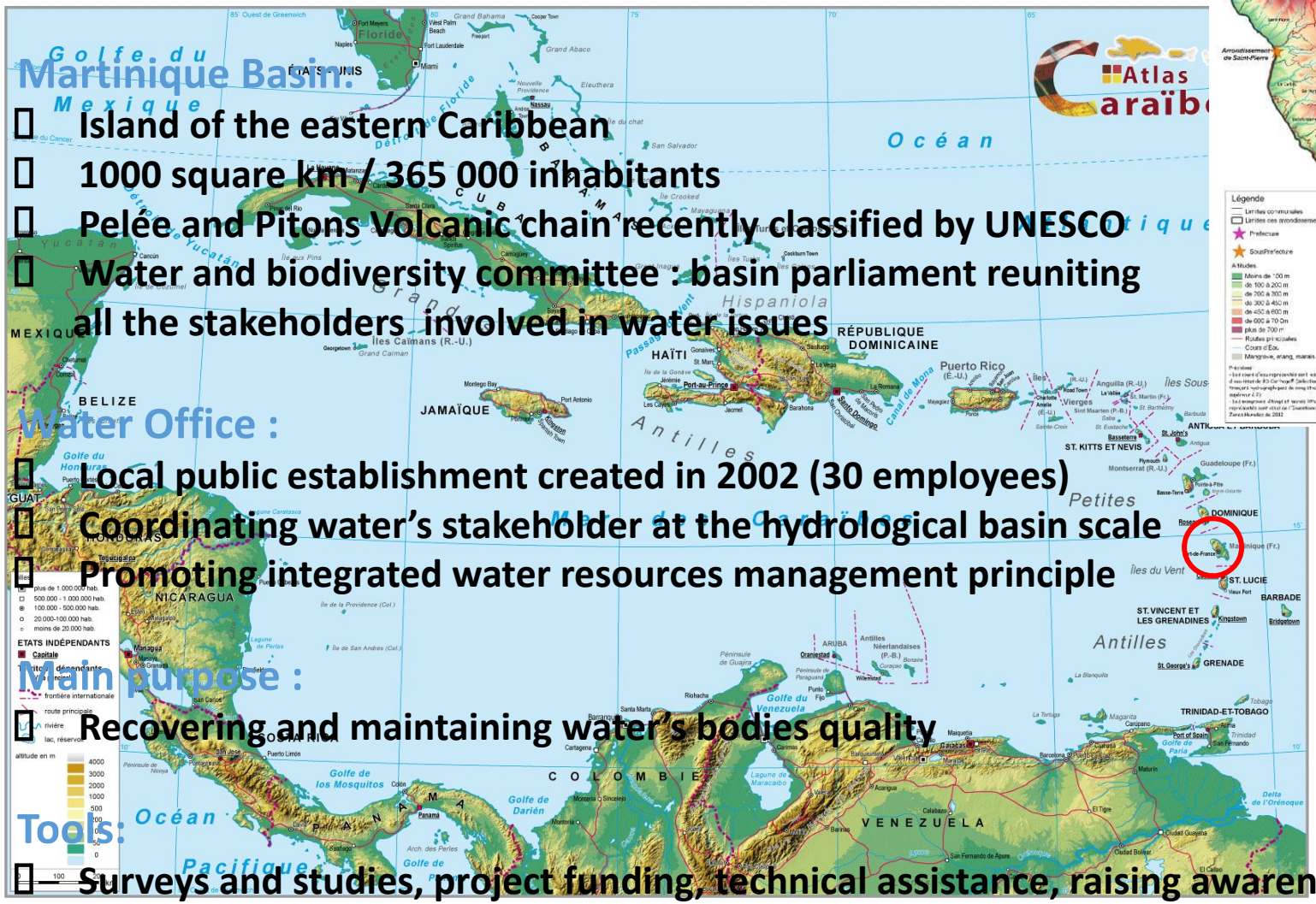
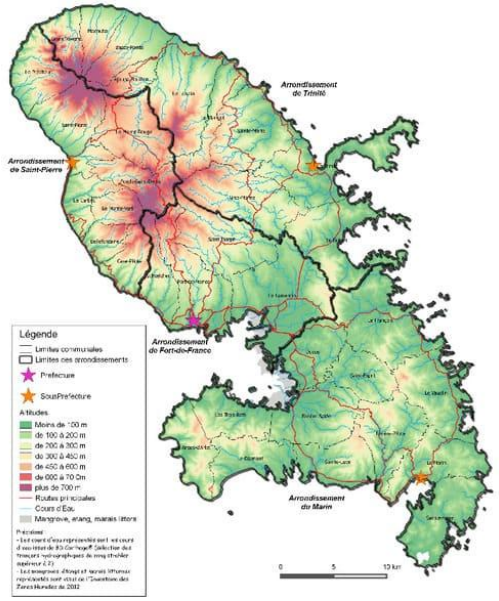
From traumatism to resiliency ?

Thursday October 8th 2024
Bordeaux - France

Martinique Island Basin and Martinique Water Office





Martinique Basin:

- Island of the eastern Caribbean
- 1000 square km / 365 000 inhabitants
- Pelée and Pitons Volcanic chain recently classified by UNESCO
- Water and biodiversity committee : basin parliament reuniting all the stakeholders involved in water issues

Water Office :

- Local public establishment created in 2002 (30 employees)
- Coordinating water's stakeholder at the hydrological basin scale
- Promoting integrated water resources management principle

Main purpose :

- Recovering and maintaining water's bodies quality

Tools:

- Surveys and studies, project funding, technical assistance, raising awareness, collecting and diffusing data

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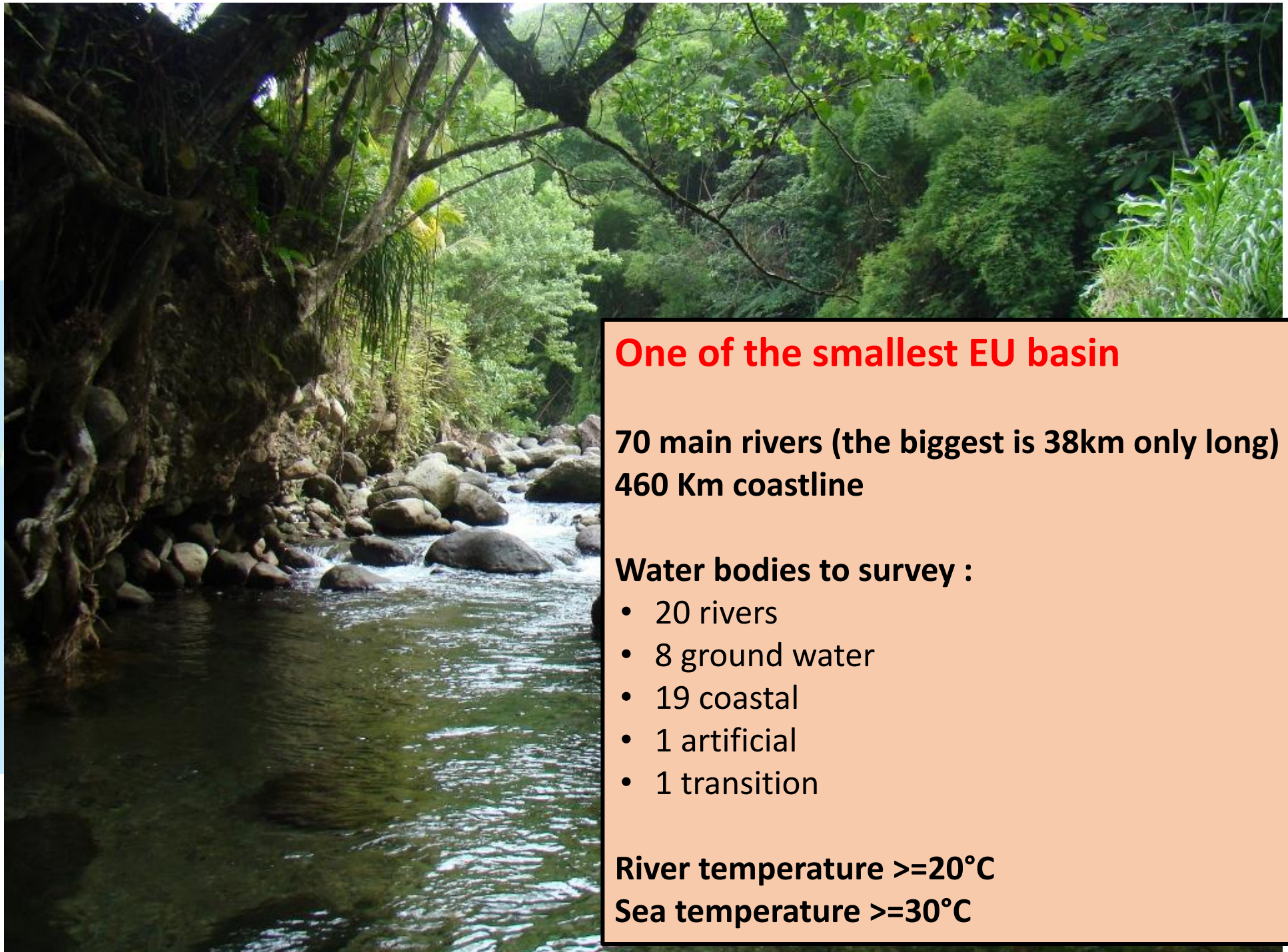


One of the smallest EU basin

70 main rivers (the biggest is 38km only long)
460 Km coastline

Water bodies to survey :

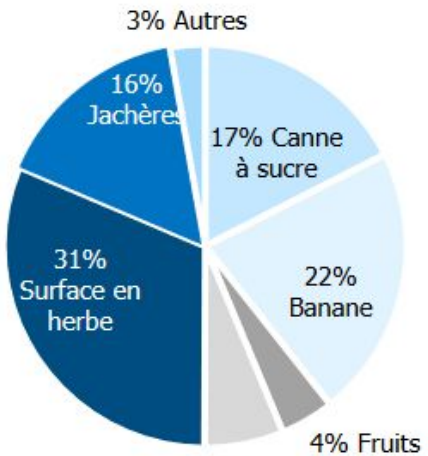
- 20 rivers
- 8 ground water
- 19 coastal
- 1 artificial
- 1 transition

River temperature >=20°C
Sea temperature >=30°C

Key figures of Agriculture in Martinique

- UAA (Utilized Agricultural Area): 23,000 hectares, representing 23% of the territory
- Progressive decrease over the last 30 years (-0.7% per year between 2012 and 2022)
- Agriculture dominated by industrial or export sectors (sugarcane and bananas) with the largest farms
- Nearly 70% of fruits and vegetables are imported, and over 80% of animal products are imported for local consumption

Surfaces agricoles utilisées en 2022

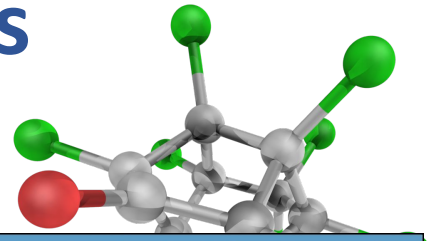


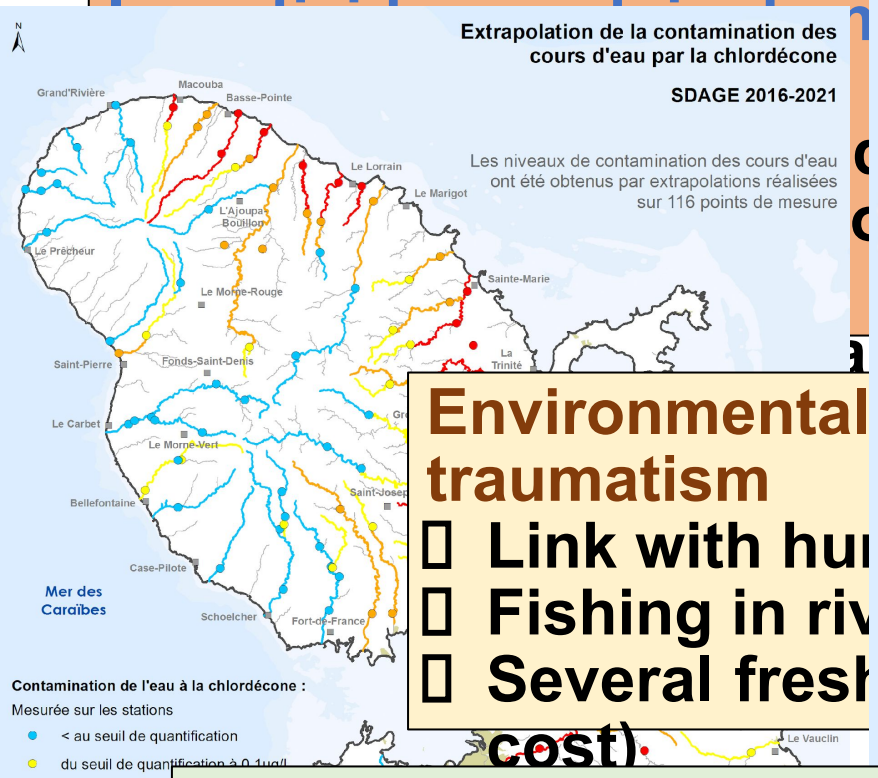
Source : DAAF

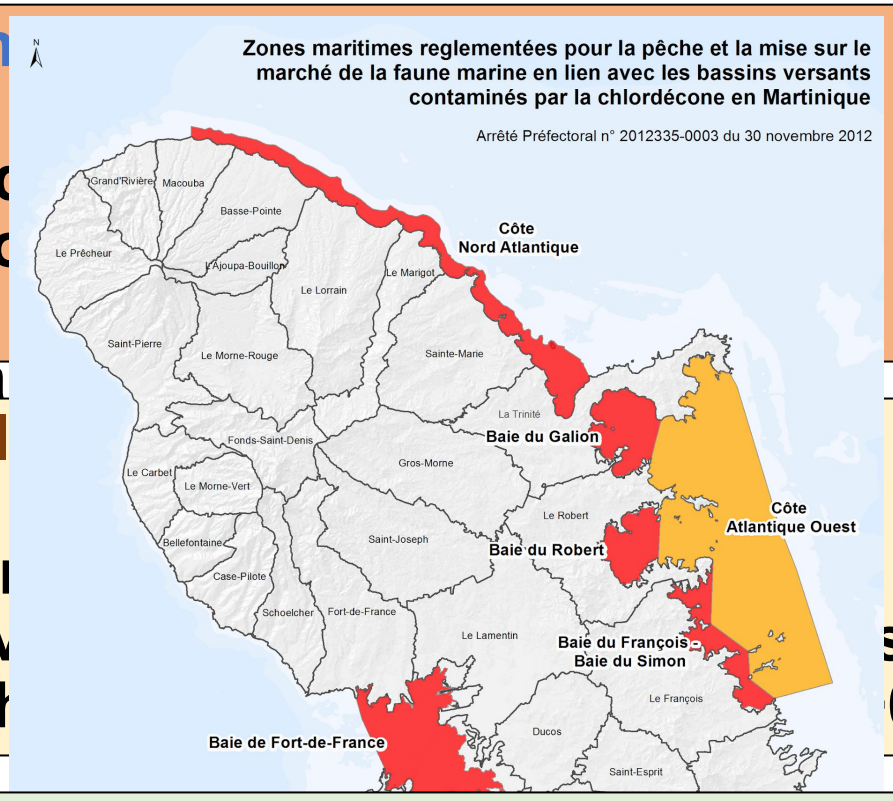
- 55% of the UAA is dedicated to bananas and sugarcane
- 80% of EU subsidies for crops are allocated to bananas
- More than 50% of EU investment subsidies are captured by the banana and sugarcane sectors

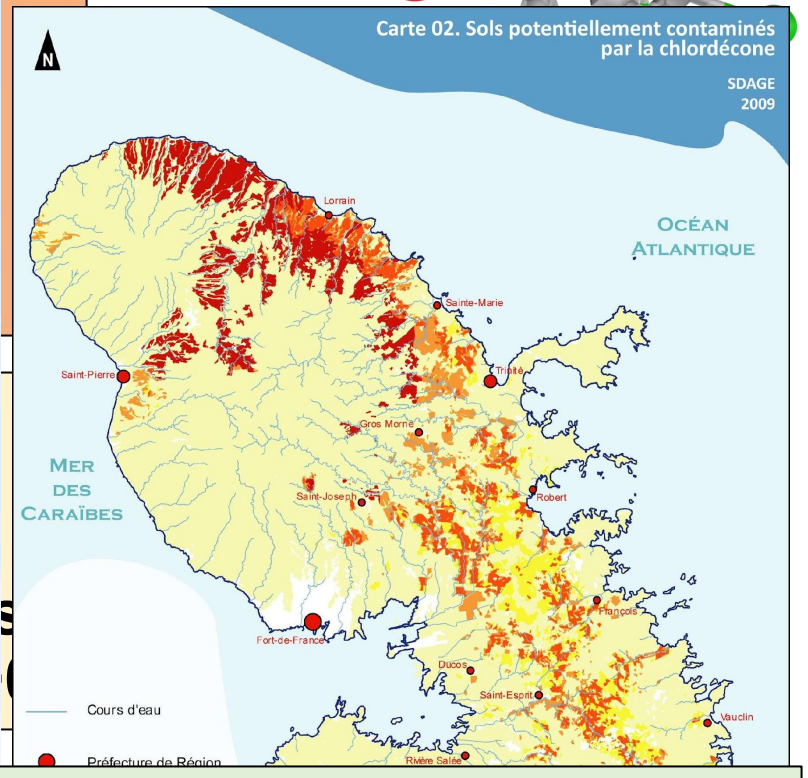
- More than 2,000 small farms following the Creole model are poorly supported and vulnerable.

Pressures on water and aquatic ecosystems
The case of Chlordecone major pollution







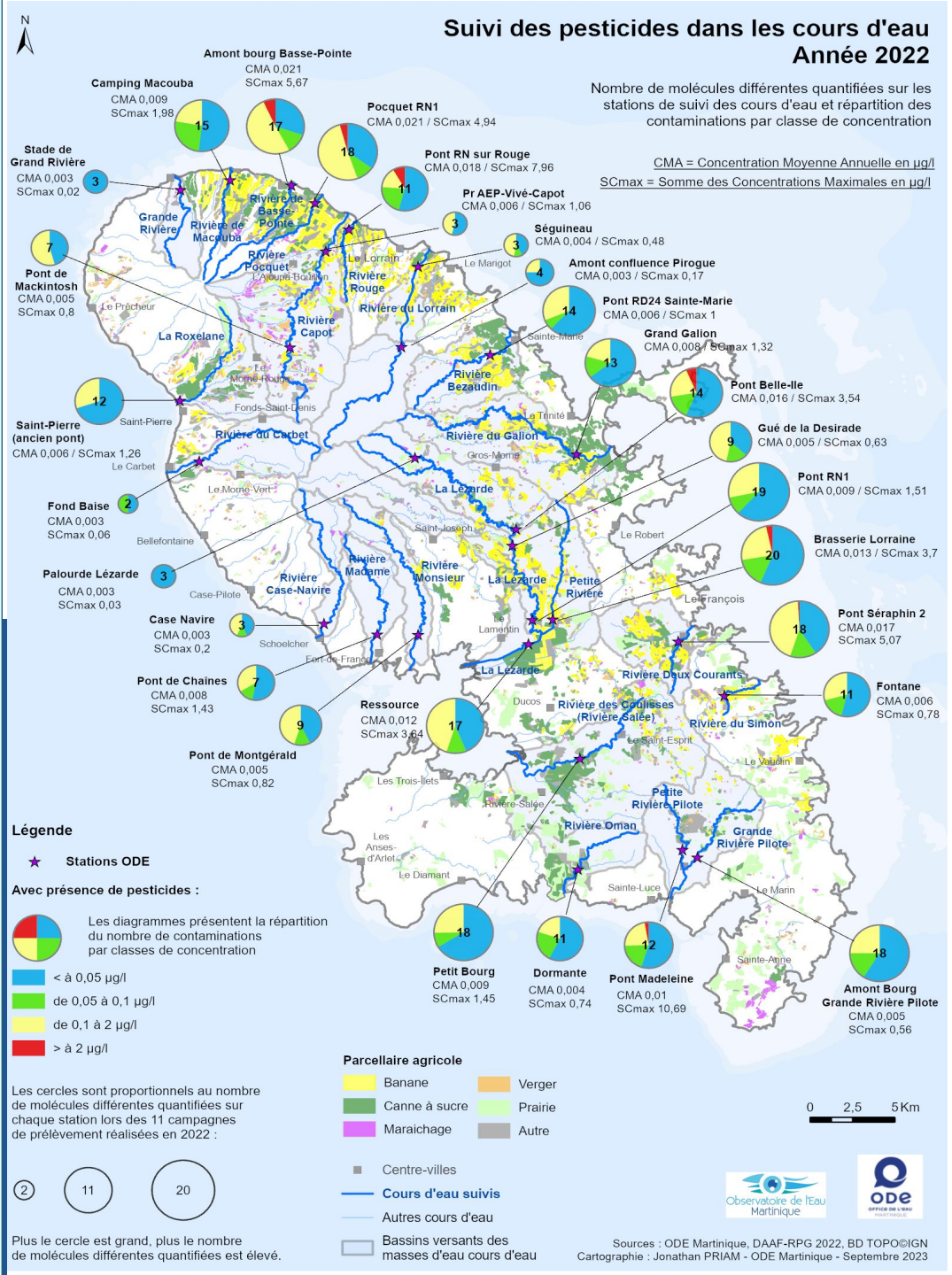


Environmental traumatism

- Link with hu
- Fishing in riv
- Several fresh cost).

In terms of basin monitoring and management

- Ten years struggle for recognition in the EU water bodies quality monitoring system
- **Declassification of more the half the water bodies**
- **Impossibility for short or medium terms quality targets**
- **Focus on chlordecone ? risk to mask other pressures**



Other pesticide pressures on water and aquatic ecosystems

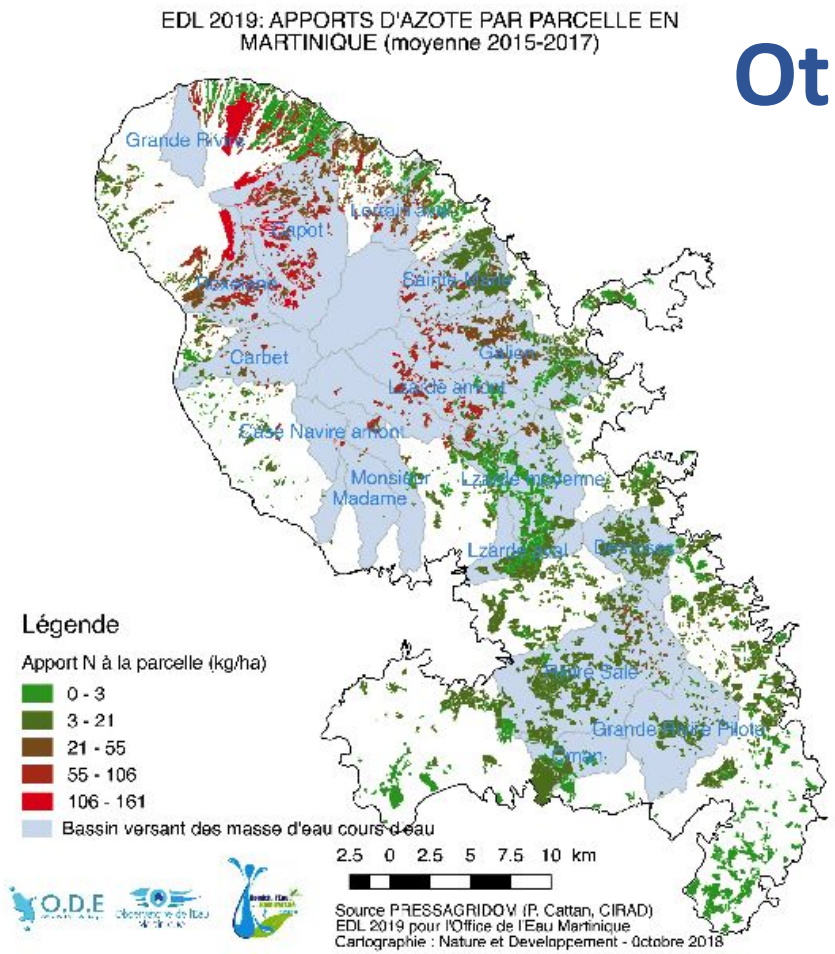
- 43 different substances quantified in water
- 19 of them are authorized
- 21 stations overall 24 investigated present contamination over 0,1µg/L and 6 over 2µg/L

Except Chlordecone and HCH

- Herbicides (mostly Glyphosate) are the more detected pesticide
- Fungicides used in banana conditioning for export (in storage shed not in field) are very often detected

- 50 T of active substances sold in Martinique in 2023
- 20 T (40%) is Glyphosate
- Fungicide for banana conditioning only 2-3%

Other than pesticide pressures on water and aquatic ecosystems



Water catchment

- 94% in rivers
- 6% groundwater pumping
- Contrary to manly region over the world agricultur require only 1/3 of domestic needs
- But serious competition in dry season – droug and very low water level in mostly rivers

	Martinique	France	Monde
Eau potable (usage domestique)	73%	36%	12%
Usage agricole (irrigation, bétail,...)	24%	49%	69%
Usage industriel	3%	15%	19%

- 15% annual rainfall by 2050

Nitrogen and Phosphorus

- Low level in groundwater
- Low level in manly rivers but need to stay

Erosion and gullying

- Not well quantified at this time
- But very strong impact over costal ecosystems
- Bad practices at the field : excessive plowing, soils without any vegetation for month even in rainy season….

Going back to agronomy basics

Excessive use of pesticides + uncontrolled irrigation + soil erosion
= lac of agronomics know how and alternatives implementation on the field

What have been done yet for a structural change

- Introducing **fallow** (every 4 year) and **pheromone trap** in banana crop
- **stopping pesticide spreading by plane** or helicopter in banana crop
- Use of **soil cover plants** in banana crop development
- Implementation of the **Ecophyto National Plan** : demonstration farms, training, funding research on alternatives
- Development of **under three crops and agroforestry** : Coffee, Cocoa, vanilla, …
- Recent development of **biological agriculture** (+285ha in 2023 / 2022)

The role of the Martinique Water Office in the transition

Recently supported projects

- Technical and financial support to the banana planters for **modernization of banana packaging sheds**
- Funding **water saving** and use of **alternative waters**
- Technical support and funding of the **territorial scheme for irrigation** based on a transformation of the system scenario (more crops for local consumption)
- Financial agreement with the local agriculture chamber for the development of agroecological agriculture and irrigation control
- Financial agreement with the French Association for Agroforestry for the **implementation and gestion of tree hedges and riverside forest**
- Financial agreement with the French service for agriculture for **cross funding agroecological and climate friendly measures and biological agriculture**
- Financial agreement with the local agricultural land company for **land claim when environmental issues exist** (water catchment, wetland proximity)

Mèsi !

TANKS FOR YOUR ATTENTION !

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