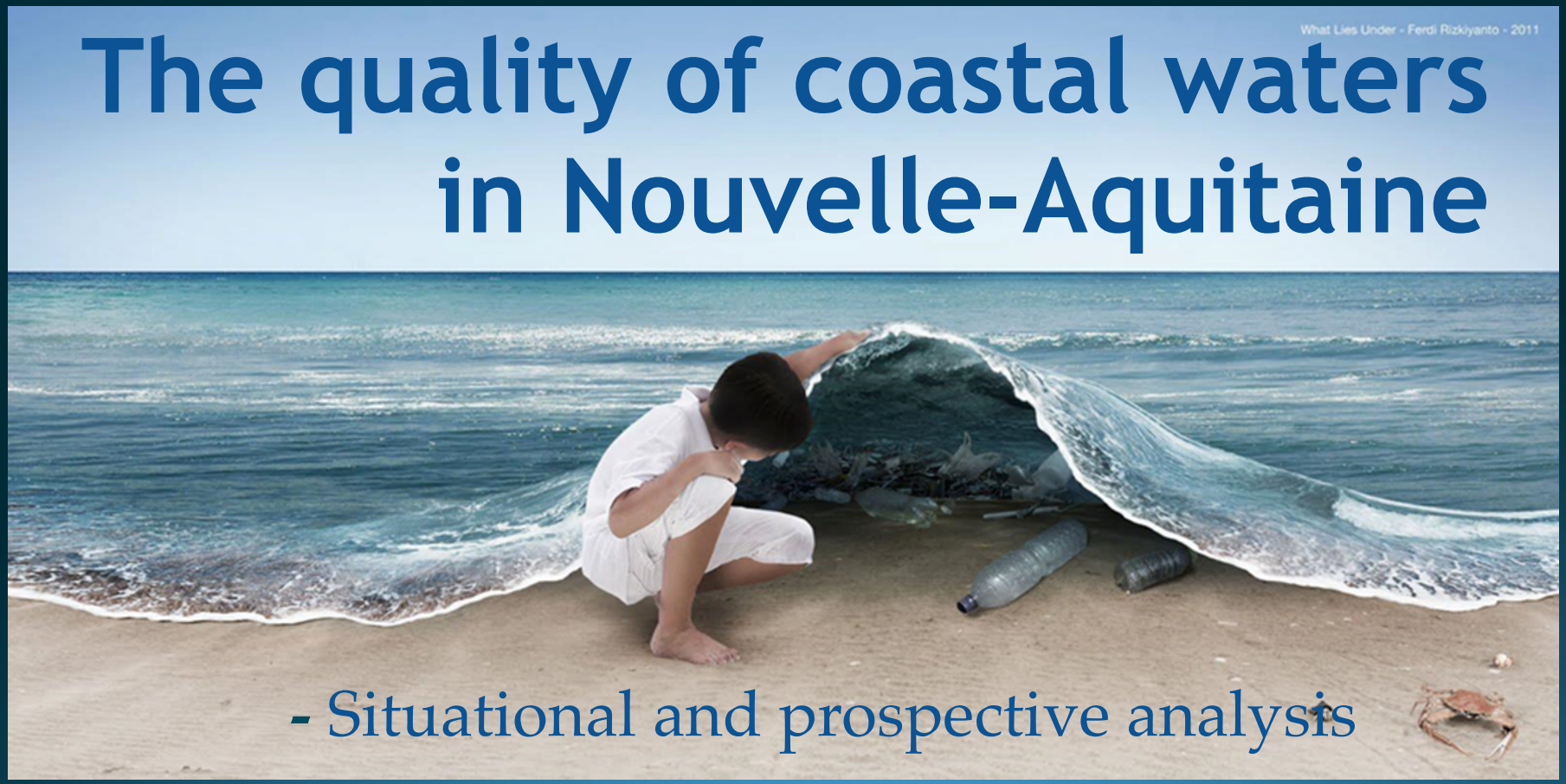
The quality of coastal waters in Nouvelle-Aquitaine



- Situational and prospective analysis

- The coastline is subject to various pressures:

  - Population increase
  - Activities: the sea inspires, the coastline attracts
  - Nuisances, pollution:
    - → all go into the sea
  - Climate change:
    - → less freshwater

- Considering the high death rate of molluscs (oysters, mussels) and the shared sense that coastal ecosystems are deteriorating:
  - Coastal waters: definition
  - Water quality: or rather, “the different water qualities” and a true complexity

- Very high stakes:
  - Environmental
  - Heritage-related
  - Economic
  - Social
  - Societal

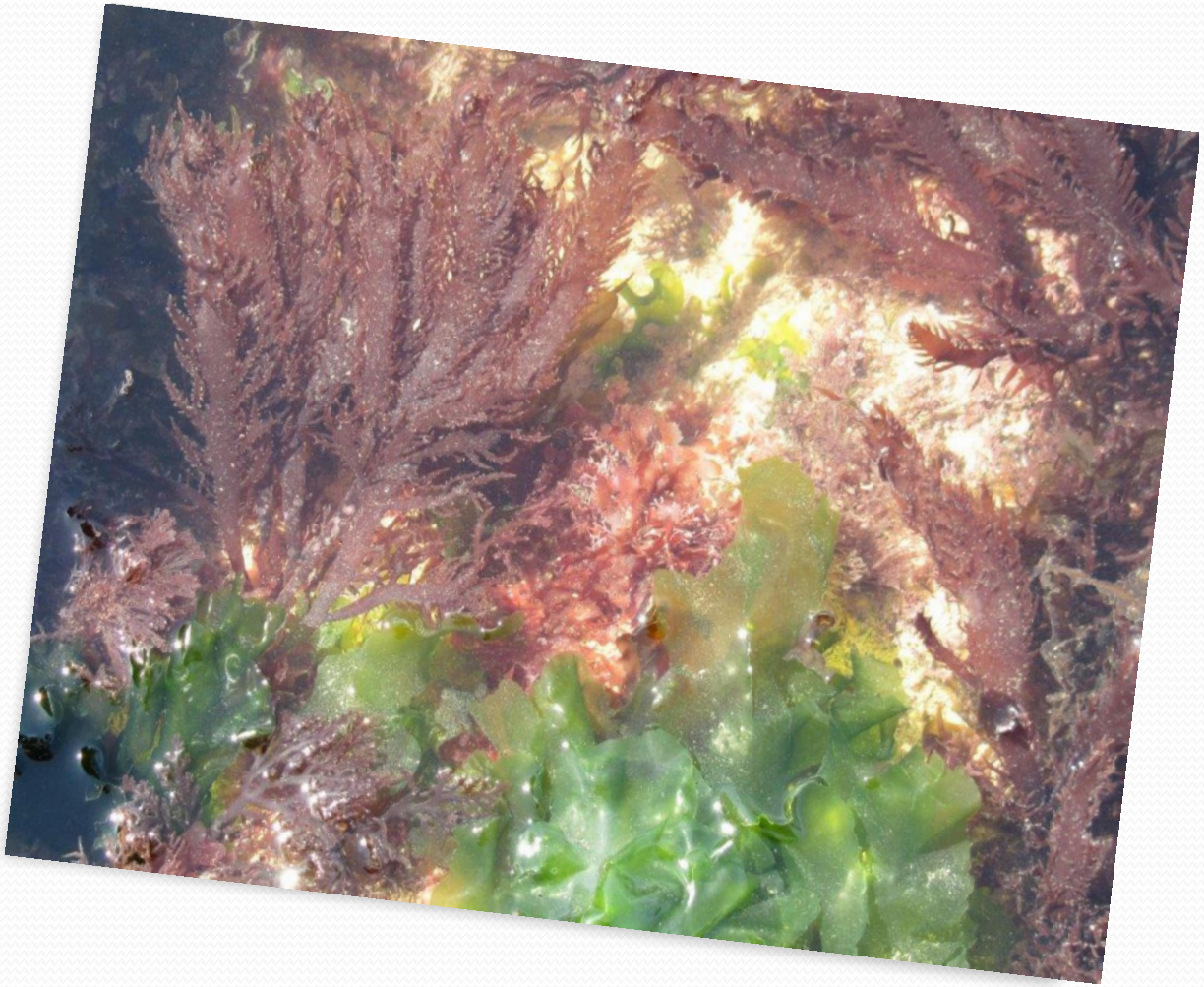
→The sea – a source of life and a living space with all its producers, consumers, and users

• The sea as a source of life:

- Beneath the water's surface: diverse ecosystems, a very rich biodiversity
- A source of life in the past, present, and future

↓

- Future challenges hinge primordially on the biological quality of coastal waters and ecosystems



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- Essential freshwater:
  - Quantity and quality of running water with its nutrients for coastal ecosystems: shellfish, fish, etc. to ensure a healthy coastal ecosystem

! Conflicts in water use

(agriculture, industry, tourism, communal)

- The quality of waters and ecosystems, which are dependent on many nuisances, pollution, consumption (f

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Various forms of deterioration

By origin	By duration of contamination persistence	Other factors to consider
- Urbanisation / artificialisation of soil - Waste water - Run-off - Industrial waste - Agricultural pollutants - Maritime transport - Fishing/aquaculture - Recreational craft - Offshore oil exploration - Waste - Air pollution	• Persistent pollutants - Heavy metals - Hydrocarbons and their derivatives - Tributyltin (TBT) - Crop protection products • Biodegradable and point-source pollutants - Green tides (algae) - Micro-organisms - Bacteria and viruses, pesticides - Crop protection products	• Climate change - Variations in freshwater inflows - Rises in sea levels - Increase in the frequency and intensity of storms - Coastline erosion - Temperature increase - Increase in salinity of coastal waters

Various forms of natural contamination

By nature	• Chemical contamination	• Organic contamination	• Biological contamination	• Physical contamination (particle contamination)
	- Heavy metals [1] - Hydrocarbons and their derivatives (PAHs) - Synthetic organic substances - Micropollutants	- Excessive use of agricultural fertilizers - Overflows from sewage treatment plants - Riverine inputs - Run-off on agricultural and impervious land - Maintenance of green spaces	- Imbalance in or excess of nutritive salts - Introduced species - Toxic algae and plants - Ballast water (invasive species)	- Dredging/piling - Underwater works (excavation, extraction of aggregates, etc.) - Waste (plastics)

ZOOM

- Sanitation (water treatment plants, run-off):
  - strengths and weaknesses.
  - Dredging and excavating:
  - chemical and particle pollution

- Dredging and excavating:
  - chemical and particle pollution

ZOOM

- Agricultural practices and their impact on water quality:
  - nitrates, phosphates, crop protection products,
  - impact of shellfish farming on water consumption

shellfish farming, “the environmental watchdog”

- Public stakeholders in water policy
  - Many stakeholders involved with inland waters, few with coastal waters

- Questions, failures, obstacles, and “selfish interests” exist:
  - Relating to coordination, highly (too?) varied sources of information, and the silence of the State and local authorities
  - Lack of analyses (pollution that has not been addressed)

Preliminary assessment -

- Certainties:
  - human health is preserved in the short term (monitoring chemical, bacteriological and biological pollution)
- Concerns regarding medium-term/long-term human health:
  - micropollutants, “cocktail” effect, crop protection products, hormones, etc.
- Concerns regarding ecosystems’ health and economic activities (shellfish farming, fishing, tourism, etc.)

Maintain the quality and functionality of coastal ecosystems

➔ MONITOR AND FOLLOW UP ON THE HEALTH OF ECOSYSTEMS

➔ MONITOR AND FOLLOW UP ON THE BIOLOGICAL QUALITY OF COASTAL WATERS

Maintain the quality and functionality coastal ecosystems (continued)

→<u>LOCAL ACTION PLANS</u>

- Shellfish farming
- Development of biological agriculture
- Appropriate irrigation
- Do not oppose use

Maintain the quality and functionality of coastal ecosystems (continued)

➔ <u>ADVANCE KNOWLEDGE ON MICROPOLLUTANTS AND THEIR IMPACT ON ECOSYSTEMS</u>

- Support Research and Development that focus on knowledge of new pollutants and their combined effects (gain a better understanding of the effect that direct and indirect pollutants have on living organisms).
- Improve the diagnosis of emerging substances (hormones, nanoparticles, medicinal products, endocrine disruptors, etc.) and support innovation in treatment methods.

Anticipate nuisances and contaminations

Prioritise preventative policies over remedial policies by:

- integrating different types of contamination, be they chemical, organic, biological, or physical macro- or micro-waste,
- seeking to reduce the negative effects of dredging and excavating,
- encouraging and supporting innovation in water treatment and recycling systems

The responsibilities and the conditions of effective action by the State and local authorities

- Real coordination (data, measures, etc.)
- Transparency of the public authorities regarding water quality
- A drive for research on untreated but monitored pollutants

Conclusion:
Address 5 major challenges

- Improve (or preserve) the health of coastal ecosystems, especially including the biological quality of coastal waters,

- Ensure the quantitative and qualitative supply of freshwater,

- Wage a sustained fight against coastal water contamination,

Conclusion (continued)

- Call on the State and coastal and hinterland authorities to promote the restoration of water quality
  - ✓ Consultation organised by the Regional Council of Nouvelle-Aquitaine to develop a new regional water policy
  - ✓ Fulfilling the commitment to an action plan and a timeline for its implementation

Conclusion (continued)

- Training and raising awareness
- Essential upstream-downstream solidarity
- Impact of climate change

Quality of coastal waters

Strategies and defined policies will only be useful and truly effective if operationally implemented!

The sea is a source of life of yesterday, today, and tomorrow

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