Regional MSPforum – Africa & the Adjacent Island States

Contribution of Marine Spatial Planning to Marine Protection and Restoration and Blue Economy

Pr Amel Hamza-Chaffai
Senior Expert
Innovation House Consulting®
TUNISIA
(amel.chaffai@gmail.com)

With the support of:

UNESCO

Regional MSPforum – Africa & the Adjacent Island States

MSPRoadmap (2022-2027)

The MSPRoadmap (2022-2027) covers a set of six priority areas divided into cross-cutting and thematic pillars:

- Cross-cutting
  1. Knowledge support
  2. Capacity development and awareness
  3. Transboundary cooperation

- Thematic
  4. Climate-smart MSP
  5. Marine protection and restoration
  6. Sustainable blue economy

Amel Hamza-Chaffai 2022
The Mediterranean Sea, Important facts

- **0.8%** of Oceans
- **BUT**
- **7.3%** of the Specific Biodiversity
- **236 Marine Protected Areas**

**4%** Vertebrates

**6%** Invertebrates

**11%** Algae

Uniqueness
Anthropogenic pressure
Some Observed Effects
Pollution Monitoring
Biomonitors
Biomarkers
Validation
Limits

MSProadsmap (2022-2027)
© IOC-UNESCO/European Commission, 2022
Marine Protection and Restoration
Examples to Share

1-Marine Protection

- Pollution Monitoring
- Biomonitors
- Biomarkers
- Validation
- Monitoring Programs

Anthropogenic Pressure

- Offshore Aquaculture Anthropic Impacts
- Offshore Aquaculture Integrates and multi trophic
- Water treatment Plants Endocrine Disruptors !!
- Toxic Blooms

Amel Hamza-Chaffai 2022
Necessity for Monitoring Programs
Tunisia, since 1995

- 1350 Km of Coast
- National monitoring program
- (INSTM, Inst Pasteur, In rech Vétérinaire)
- Exists since 1995
- Frequency: monthly, twice a month, and weekly in case of alert
- 60 sites (30 in the north and 30 in the south)
- 5 categories of
  - REPHY toxic phytoplankton
  - REMI microbiology
  - RECNO metals, Hydrocarbons, pesticides
  - REBI biotoxins (in case of alert)
  - REPIDEMIO parasites

Water Treatment Plant’s effluents

Thousands of Emergent Pollutants
- not eliminated with treatment!!
- Transformed in a more toxic form
Water Treatment Plant’s effluents

* Work on reducing pollution in effluents in order to decrease anthropogenic pressure on the ocean

*Particular attention to xenohormones And ED (WG1)

Amel Hamza-Chaffai 2022

Offshore Aquaculture = A SOLUTION and a PROBLEM

Chelon labrosus

Sparus aurata

Dicentrarchus labrax

A Hamza-Chaffai - 2022
Offshore Aquaculture = A solution and a Problem

- # To adopt Best practices for offshore aquaculture such as Integrated Multi trophic Aquaculture in order to protect seabed and benthic communities

Amel Hamza-Chaffai 2022

Les Blooms phytoplanctoniques

Les Dinoflagellés (89%)
Le dinoflagellé *Karenia selliformis* (64% des cas), serait la cause de mortalité des poissons dans le golfe de Gabès. Les toxines attaquent les cellules sanguines des poissons...

Amel Hamza-Chaffai 2022
FEW KEY POINTS

1-Marine Protection

• Implement Monitoring Programs with early warning Tools (in interaction with other Sea users)
• Standardized protocols at National and Regional level
• Implements Best practices for offshore aquaculture such as Integrated Multi trophic Aquaculture
• Improve treatment of effluents (Innovative processes)

Amel Hamza-Chaffai 2022
Ecosystem Disruptions linked to some Invasive species

*Metapenaus monoceros -- Penaus keraturus*

For particular high economic value species, enrich the ocean without disrupting the ecosystem balance

*Pecten maximus* | *Crassostrea gigas*

*Slamno trutta*
II- Sustainable Blue Economy

ENTREPRENEURSHIP TO REACH

A Hânsa-Chaffai - Venice 2020

1
2
3
8
10
14
AFRICA

Possible solutions

% Young population

Unemployment of Graduates

Job Creation
Value Creation

Huge natural Resources

Endless Opportunities

ENTREPRENEURSHIP

# Optimal use of sea food waste and Promote related research

Extreme Fat Blocker CHITOSAN x4

Optimal use of sea food waste and Promote related research

20
BOOTCAMP ABOUT BLEU ENTREPRENEURSHIP

Drawing the Project

ELEVATOR PITCH
Combining Technical and Soft Skills to Turn Ideas into Business©

Pr Amel Hamza-Chaffai

<amel.chaffai@gmail.com>
**FEW KEY POINTS**

- Waste/Co product Valorization
- Promote Blue Entrepreneurship
- Turning Ideas into Business Concept©
- Empowering young graduates in African countries
- Catalyze Job creation

*Amel Hamza-Chaffai 2022*

---

**Regional MSPforum – Africa & the Adjacent Island States**

Thank you! ¡Gracias! Merci!