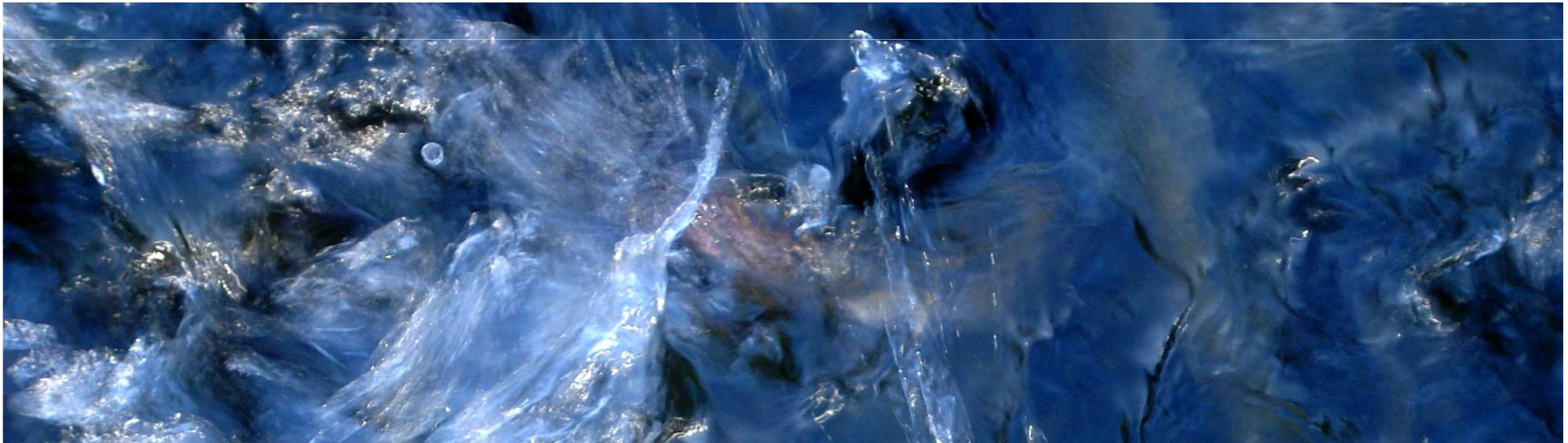




# Looking at synergies between aquaculture and conservation

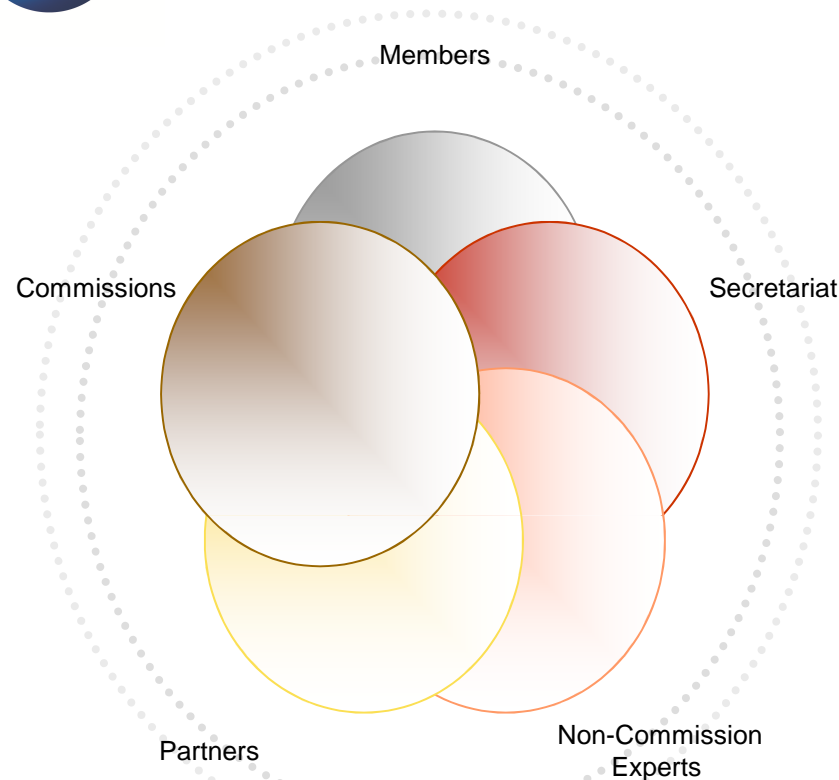
F. Simard and R. le Gouvello, E-bAG Ecosystem-Based Aquaculture Group



EU-EATiP Day at Aquaculture Europe '19 (October 9, Berlin) : Low impact – High output; Promoting food security and new value chains in aquaculture



# What is IUCN ?



Created in 1948

1,200 member organizations  
1,000 staff  
10,000 Commission members  
Maybe 5,000 individuals in partner organizations  
**Many Experts who are not members of Commissions**

In 180+ countries

**Official Observer of the UN General Assembly**

***To influence, encourage and assist societies in achieving both the conservation and sustainable use of natural resources, and sustainable development.***



**Commission de Gestion des Ecosystèmes (CEM)**

400 Membres. <http://www.iucn.org/themes/cem/>

**E-bAG Ecosystem-Based Aquaculture Group**



# Looking at synergies between aquaculture and conservation

- ✓ Convention on Biological Diversity's Aichi target 11 on Marine Biodiversity Protection and target 6 on Sustainable Fisheries by 2020,
- ✓ Sustainable Development Goal (SDG) 2 on Food Security and 14 on Oceans, by 2030
- ✓ Aquaculture may meet all SDGs... (cf Hambrey 2017, Brugère et al. 2018)

**Need to Reconcile Nature Conservation and Sustainable Development, including aquaculture component**

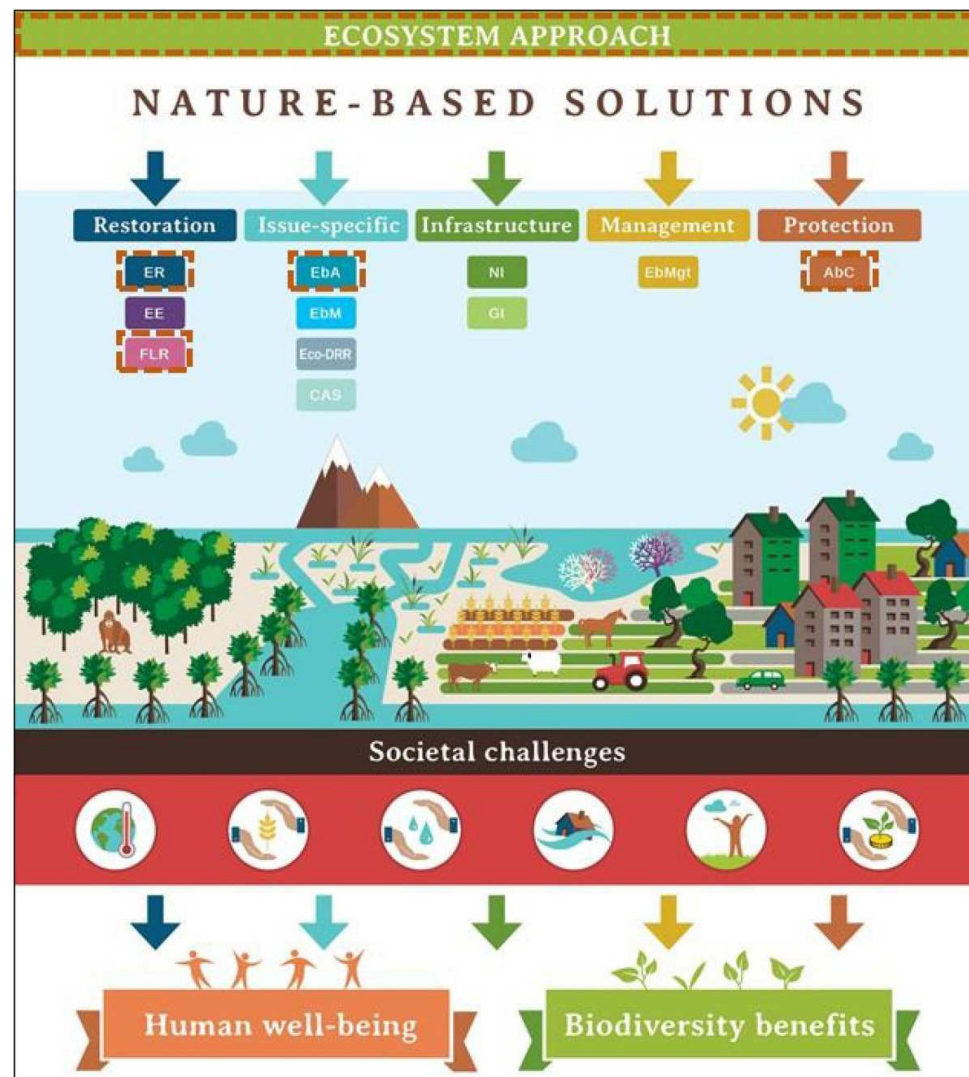


# Pioneering Nature-based Solutions (NbS) to global and local challenges

IUCN defines NbS as:

***“Actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.”***

(Cohen-Shacham et al. 2016, 2019).





# Our current project :

## 1. Phase 1 : Aquaculture and MPAs

## 2. Phase 2 : Aquaculture-Conservation- Coastal communities livelihoods AquaCoCo project

- How and why aquaculture in marine protected areas is an attractive and sustainable alternative for coastal communities?
- **How can aquaculture in coastal areas be a “Nature-based Solution” in support of socio-ecological resilience and climate change adaption?**





# Successive phases and deliverables

## **Phase 1 (2015-17) :**

- A technical and Policy Brief issued in 2017
- A publication in Aquatic Conservation Special issue, 2017

## **Phase 2 (2018-2020):**

- A Zanzibar study case report and a State of the Art (with the French Development Agency) and a documentary film
- A session at the World Conservation Congress, Marseille, 2020 ?

## **Prospects (2020 - ):**

- A motion at the World Conservation Congress 2020 ?
- Potential project proposals on different locations to further explore the topic, new study cases ?



# The current project :

## 1. Phase 1 : Aquaculture and MPAs



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WILEY

### SUPPLEMENT ARTICLE

## Aquaculture and marine protected areas: Potential opportunities and synergies

Raphaëla Le Gouvello<sup>1,2</sup> | Laure-Elise Hochart<sup>2</sup> | Dan Laffoley<sup>3</sup> | François Simard<sup>2</sup> | Carlos Andrade<sup>4</sup> | Dror Angel<sup>5</sup> | Myriam Callier<sup>6</sup> | David De Monbrison<sup>7</sup> | Davide Fezzardi<sup>8</sup> | Ricardo Haroun<sup>9</sup> | Alasdair Harris<sup>10</sup> | Adam Hughes<sup>11</sup> | Fabio Massa<sup>12</sup> | Emmanuelle Roque<sup>6</sup> | Doris Soto<sup>13</sup> | Selina Stead<sup>14</sup> | Giovanna Marino<sup>15</sup>

<sup>1</sup>STERMOR (IUCN expert) and AMURS-URQ, France

<sup>2</sup>IUCN, Global Marine and Polar Programme, Gland, Switzerland

<sup>3</sup>IUCN, World Commission on Protected Areas, Gland, Switzerland

<sup>4</sup>Centro de Maricultura da Cultura, Madeira, Portugal

<sup>5</sup>University of Haifa, Haifa, Israel

<sup>6</sup>IFREMER, UMRI MARBEC, F-34293 Palavas les Flots, France

<sup>7</sup>IRL, Ingenierie, Nîmes, France

<sup>8</sup>Aquaculture Consultants Food and Agriculture Organization of the United Nations, Rome, Italy

<sup>9</sup>EL-SCOAQUA, Universidad de las Palmas de Gran Canaria, Spain

<sup>10</sup>Blue Ventures, London, UK

<sup>11</sup>SIAMS, UK

<sup>12</sup>General Fisheries Commission for the Mediterranean, Food and Agriculture Organization of the United Nations, Rome, Italy

<sup>13</sup>INCAR, Chile

<sup>14</sup>Newcastle University, Newcastle upon Tyne, UK

<sup>15</sup>ISPRA, Rome, Italy

Correspondence:  
Raphaëla Le Gouvello, International Union for Conservation of Nature, Gland, Switzerland.  
Email: raphaela.legouvello@iucn.ch

Funding information:  
Foundation Albert II Prince of Monaco

### Abstract

1. To meet the Convention on Biological Diversity's Aichi Target 11 on marine biodiversity protection and Aichi Target 6 on sustainable fisheries by 2020, as well as the Sustainable Development Goal (SDG) 2 on food security and SDG 14 on oceans by 2030, there is an urgent need to rethink how best to reconcile nature conservation and sustainable development.
2. This paper argues for effective governance to support processes that apply principles of sustainable development and an ecosystem approach to decide about economic activities, such as aquaculture. It describes opportunities, benefits and synergies between aquaculture and MPAs as a basis for wider debate. The scope is not a comprehensive analysis of aquaculture and MPAs, but rather to present examples of positive interactions between aquaculture activities and MPAs. The unintended negative consequences are also discussed to present balanced arguments.
3. This work draws from four workshops held in 2015 and 2016 and used to collect information from about 300 experts representing various sectors and perspectives.
4. It is recognized that aquaculture is an important activity in terms of sustainable development. It can play a role in providing food security, poverty alleviation and economic resilience, in particular for MPA local communities, and contribute to wild stock enhancement, as an alternative to overfishing and for providing services to the ecosystem.
5. This study showed that there is a need from both aquaculture and MPA sides for clarity of objectives and willingness for open and extensive dialogue. The paper concludes by describing a number of tools and methods for supporting greater synergies between aquaculture and MPAs.
6. The results from this work have already helped to build a common understanding between conservation and aquaculture and initiate a rapprochement for increasing synergies.

### KEYWORDS

aquaculture, ecosystem approach, environmental impact assessment, littoral, marine protected area, ocean, sustainable

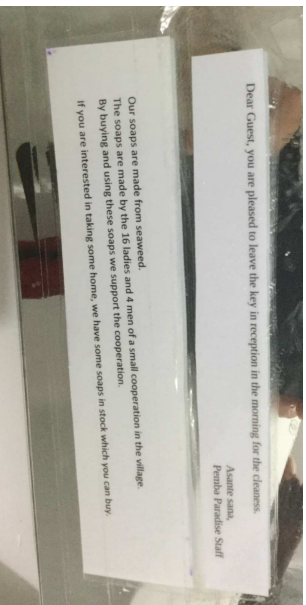


Figure : Map of Unguja showing MCA s (in EcoAfrica, 2012 p. 26)





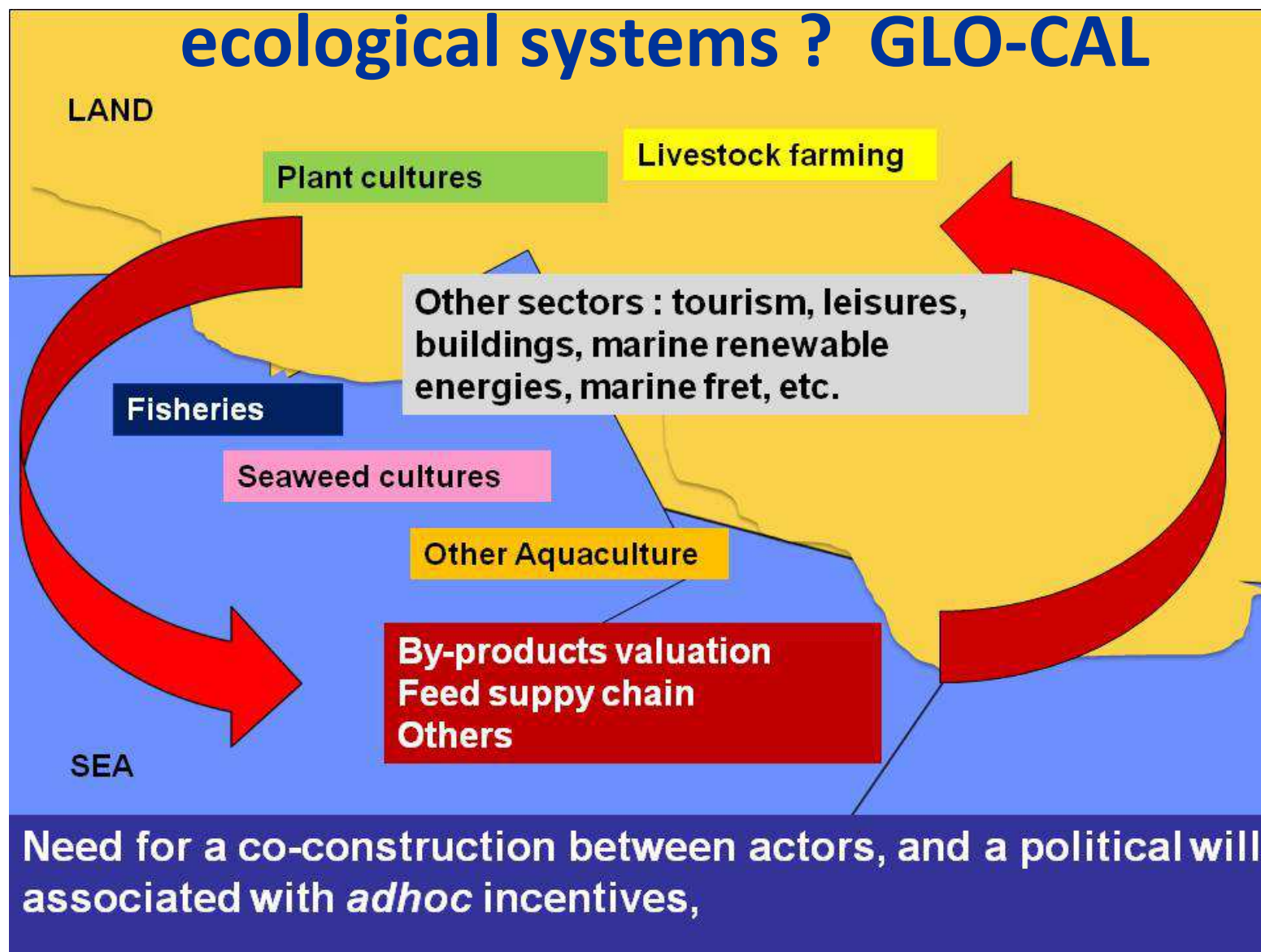
# Exploring needs and opportunities for aquaculture and conservation through interlinked concepts and tools,

**Existing** : Ecosystem Approach to Aquaculture (EAA), Marine Spatial Planning (MSP) with Integrated Coastal Zone Management (ICZM), Environment Impact Assessment (EIA), Good practices ... certification, Life Cycle Analysis (LCA) or Ecological Footprint, ...

**Emerging** :

- **Sustainable value chain analysis, equity, shared value,...**
- **Ecosystem services valuation with aquaculture,**
- **Social-ecological systems, circular economy,**
- **And Nature based Solution (NbS) ...**

# An approach through local social-ecological systems ? GLO-CAL



Cf : Le Gouvello&Simard, 2017 and Le Gouvello, 2019



## Take away key messages

- no simple answer ...
- **benefits of, and limits to the diverse combination of conservation and aquaculture types to be further explored and investigated like “aquaculture-related NbS”**
- Closing these gaps for measurable benefits
  - creating a better understanding,
  - a better vision of the real impacts of aquaculture,
  - a richer understanding of the role and importance of MPAs and conservation tools,
  - the opportunity to develop new innovative projects and perspectives for the **common good : A GOOD HEALTHY ENVIRONMENT**
- **Being opened to other interlinked initiatives such as Biodiversity targets, EU directives, Ocean governance, Blue Growth, Blue economy, Bio-economy, Circular economy, NbS, etc.**





**Merci pour votre attention**  
**Thank you for your attention**

[www.iucn.org](http://www.iucn.org)

[francois.simard.suisse@gmail.com](mailto:francois.simard.suisse@gmail.com)

[raphaela.legouvello@wanadoo.fr](mailto:raphaela.legouvello@wanadoo.fr)

