Ifremer in French Polynesia

By

Dominique Buestel & Marc Taquet
35 Ifremer scientists
2 PhD students

47 Ifremer scientists
8 Fishery Department scientists
1 Pearl Department scientist
4 Lese-IRSN scientists (in 2009)
4 PhD students
The COP in Tahiti opened 37 years ago

1972 76 80 84 88 92 96 00 04 2009

- Pearl oyster culture
- Shrimp culture
- Fish culture

1990 PGRN 1999
Biology Carrying capacity

1995
Pathology

1999
Pearl Quality

2003 PERDUR ADEQUA FED

2004 PLATAX
Zoo-techny Pathology

1990 LATES 1996
Zoo-techny Pathology

1972

OTEC 1980 - 1985
Thermal energy from the sea
Ifremer-ERGOCEAN

ECOTAP 1995 – 1999
Thuna fishery research
Ifremer-IRD-SRM

ZEPOLYPH 1996 – 2004
Cartography and resources of the Polynesian EEZ
Ifremer-IRD-SHOM –UPF SPE

- Water depth
- Zoology
- Nutrition Pathology Genetic Eco-physiology
- Thermal energy from the sea
- Thuna fishery research
Ifremer’s programs in French Polynesia
Research for the local development

Pearl culture: to comfort the existing production

Fish culture: to create a new production of lagoon fish for the local market

Shrimp culture: to develop the production for the local market

The main partners
Polynesian Pearl Department
Polynesian Fishery Department
University of French Polynesia
IRD
CNRS-EPHE
Research in pearl culture
Ifremer and the French Polynesian Pearl department partnership

Securing
- Creation of the sanitary network
- Transfer to Polynesian Pearl Department in 2007

Ensuring long term stability
- To model growth and reproduction of pearl oysters
- To optimize the fixation of the post-larvae on artificial collectors in the lagoons

Increasing profitability
- Domestication of this species: controlling the hatching process
- Genetic selection: pearl color and growth
- Optimization of the graft
- Improvement of the pearl quality
Research in pearl culture

Ifremer supports the Polynesian Pearl Department in order to federate the research

**Pearl quality**
Adequa GDR

Ifremer - PRL - EPHE - CNRS - French Polynesia, Caen, Montpellier, Orsay, Dijon, Perpignan universities - Skultech - Texinfine

**Genetic resources**
REGENPERL Program

Ifremer - EPHE - CNRS - PRL - French Polynesia, Dalhousie Univ.

**Environment**
FED Program

IRD - Ifremer - CNRS - PRL - French Polynesia, Occidental Brittany, La Rochelle, Caen, Marseille universities. AIMS (Australia), NIES (Japan), HIMB (Hawaii), SARL (Korea)
Fish and shrimp culture

Ifremer and the French Polynesia Fishery Department partnership

Fish culture of the *Platax orbicularis* « Paraha peue »

Shrimp culture of *Paeneus styloprostris*

- Controlling the rearing cycle
- Controlling the quality of product
- Studying the environmental impact

- Preserving the Polynesian genetic strains of *Paeneus styloprostris*
- Controlling the rearing cycle in cages in the lagoons

The French Polynesia is building a new **Aquaculture Technical Center** which will be the link between the research-development (Ifremer-SPE) and the farmers. This aims to provide the local market with exceptional quality products.
The COP is a wonderful research platform dedicated to the scientific community

Exceptional natural site

Laboratories (Bacteriology, Histology, Molecular biology, Biometry, Biochemistry, Environment)
Experimental hatcheries (pearl oysters, shrimp, fish)
Rearing pools
Cages and long line in the lagoon

The equipment and laboratories are secured by an automatic and centralized management unit

Future IRSN laboratories

Logistic team
Diver team
Wharf for medium size oceanographic vessels
Accommodation facilities

Area of the futur Polynesian Aquacultural Technical Center
Strategic plan for 2009-2012

Creation of a new research group with the French Polynesia university and the scientific community aiming to the study of the global pearl system

News research topics for Ifremer in French Polynesia

Environment and Biodiversity

Renewable Energy

Marine Protected Areas

Enhancement of the collaborations between Ifremer teams in French Polynesia and New Caledonia
Maururu!