# **IPSI Case Study Summary Sheet**

## Basic Information

Title of case study (should be concise and within approximately 25 words)

Fish farming in Rio das Cobras Indigenous Land, State of Paraná, Brazil

Submitting IPSI member organization(s)

Universidade Federal da Fronteira Sul - UFFS

Other contributing organization(s) (IPSI members and/or non-members)

## Author(s) and affiliation(s)

Betina Muelbert, Maude Regina de Borba, Marcos Weingartner and Cristiano Augusto Durat are Professors at Universidade Federal da Fronteira Sul, Brazil with experience in freshwater fish production systems, nutrition, reproduction and Indigenous History, respectively. Ilda Cornélio holds a Master in Agroecology and Sustainable Rural Development and is a resident of the Rio das Cobras Indigenous Land.

Format of case study (manuscript or audiovisual) manuscript Language English

Keywords (3-5 key concepts included in the case study)

Aquaculture, food security, training courses, pond management

Date of submission (or update, if this is an update of an existing case study)

Web link (of the case study or lead organization if available for more information)

http://uffs.edu.br/ppgadr

## Geographical Information

Country (where site(s) or activities described in the case study are located – can be multiple, or even "global")

Brazil

Location(s) (within the country or countries – leave blank if specific location(s) cannot be identified)

Nova Laranjeiras do Sul, State of Paraná

Longitude/latitude or Google Maps link (if location is identified)

25°18'32.9"S 52°36'20.2"W

Ecosystem(s) (please place an "x" in all appropriate boxes)

Forest	Χ	Grassland	Agricultural	In-land water	Χ	Coastal	
Dryland		Mountain	Urban/peri-urban	Other (Please specify)			

Socioeconomic and environmental characteristics of the area (within 50 words)

Subtropical Mixed Forest, four small rivers cross the area, belonging to the Iguazu river basin, average temperatures is 19 °C and rainy index of 1,500 millimetres per year. The population is approximately three thousands of Kaingang and Guarani Mbya ethnic groups.

Description of human-nature interactions in the area (land-use, traditional resource management practices etc. – within 50 words)

The land is of collective use and property of the state. Most of the locals' income comes from handicrafts, a few agriculture production. They are used to fish with "Pari", a trap made with bamboo to catch fish, which is then usually cooked roasted with corn, a basic food item for these communities.

#### Contents

Status ("ongoing" or "completed") On going Period (MM/YY to MM/YY) 02/2014

Rationale (why activities or policies described, or information shared in the case study are needed – within 50 words)

Fish is part of Rio das Cobras Indigenous Land's food habits. Most of the fish consumed by these communities come from fishing, however catches have decreased rapidly due to water pollution. Fish farming can be an important source of animal protein as fish growth in ponds can be managed and controlled.

Objectives (goals of activities or policies described, or of producing the case study – within 50 words)

We aim to introduce fish farming as an activity that will contribute to food security and enhance fish consumption in Rio das Cobras Indigenous Land to 12 kg.person<sup>-1</sup>.year<sup>-1</sup> and enable youngsters from these communities to learn and share best management practices of fish farming production within the community.

Activities and/or practices employed (within 50 words)

Establishment of a polyculture system in the five communities being a combination of native species and carps. Training courses were given involving high school students on basic fish farming topics such as best management practices, and a guide on fish farming was developed, which will be translated into *Kaingang* and *Guarani* language.

Results (within 50 words)

The main result is the implementation of fish farming as an activity in the communities. A system of harvesting and stocking procedures will be going on for at least two more years as well as training courses for students. In terms of capacity building this project has allowed members from the Rio das Cobras Indigenous Land to have greater involvement with the University and develop applied research within their territory.

Lessons learned (factors in success or failure, challenges and opportunities – within 40 words)

Despite the limitations the work represents a major advance in current fish farming practices and we hope that this will stimulate further production activities within the community.

Key messages (within 40 words)

Relationship to other IPSI activities (if the case study is related to any other IPSI collaborative activities, case studies, etc.)

Funding (any relevant information about funding of activities or projects described in the case study)

# Contributions to Global Agendas

## CBD Aichi Biodiversity Targets (<a href="https://www.cbd.int/sp/targets/">https://www.cbd.int/sp/targets/</a>)

The table below shows based on the self-evaluation by author(s).  $\bullet$  and  $\blacksquare$  indicates the "direct" or "indirect" contributions to the CBD's Aichi Biodiversity Targets respectively to which the work described in this case study contributes to.

	Strategi	c Goal A		Strategic Goal B						
		<b>1</b> 3			<b>6</b>	<b>7</b>	8		10	
Strategic Goal C										
Str	ategic Goa	ıl C	Str	ategic Goa	l D		Strategi	c Goal E		
Str	ategic Goa	ıl C	Str	ategic Goa	l D		Strategi	c Goal E		

### UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

The table below shows based on the self-evaluation by author(s).  $\bullet$  and  $\blacksquare$  indicates the "direct" or "indirect" contributions to the SDGs respectively to which the work described in this case study contributes to.

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENTRY	8 DECENT WORK AND ECONOMIC GROWTH	9 NOUSTRY INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 UFE ON LAND	16 PEACE JUSTICE AND STRONG INSTITUTIONS	17 PARTINERSHIPS FOR THE GOALS	