PROTECTING BIODIVERSITY

Making sure that regulation rhymes with appropriation

All too often, there is a gulf between biodiversity regulations and the actual practices of local people. As we look to move beyond this rift, recent experiments in New Caledonia offer an instructive example.



Workshop with young people in Lifou, New Caledonia.

Establishing a clear policy for managing natural spaces and species is all well and good. But what's more important is to ensure that this policy is appropriated and applied by local people. The three provinces of New Caledonia are currently experimenting with a variety of approaches to creating environmental policies which are more relevant to the social and ecological challenges they face.

The environmental codes in place in the North (2008) and South (2009) provinces include special dispensations for the catching of certain protected species for use in "customary ceremonies." These dispensations recognise the values and practices associated with certain species by local people, including the green turtle *Chelonia mydas*. Nevertheless, implementing this law is no easy matter either for the customary authorities responsible for processing the requests, or for the technical agents in the provinces who are responsible for assessing them. How do we define what constitutes a customary ceremony? How many individual animals should they be allowed to take? Who has the authority to make such requests?

In order to provide legitimate answers to these questions, researchers must be capable of precisely describing and analysing the environmental values at stake, allowing for an informed discussion. In the Southern province, for example, before the process of local consultations was launched a team of anthropologists and geographers conducted a study

••• In New Caledonia, new approaches are being pioneered based on dialogue between researchers and key stakeholders such as the provincial institutions, customary councils and local people. Their goal is to regulate the use of environmental resources, on land and at sea. •••



Fishermen with nets in Belep, New Caledonia.

based on lengthy, semi-directive interviews with local residents and provincial agents. This study allowed the researchers to establish precisely which events required one or more turtles and why, and to grapple with the factors which have caused these practices to change over time. The study also provided an insight into the diverse array of potential misunderstandings and mix-ups liable to lead to conflict. The presentation of this study to local residents – in conjunction with a study led by a biologist which highlighted the imbalance in the local turtle population – paved the way for a subsequent consultation between the provincial and customary authorities focused on the fine details of the regulations and criteria for the size of individual turtles to be caught.

Loyalty Islands Province has adopted an even more innovative approach, making Kanak culture and lifestyles the basis of the province's environmental code. To achieve this, the province turned to specialists in environmental law and a broad array of scientists, working to reconcile existing local practices with constitutional and international standards.

Taking local knowledge and know-how on board and co-constructing regulations in a negotiated manner can help us to make more sustainable choices, achieving consensus rather than compromise, and ensuring that environmental rules are appropriated and integrated into the lives of local people.

PARTNERS

Loyalty Islands Province

North Province

South Province

The Customary Consultative Council for Environmental Issues

The New Caledonia Agronomical Institute

Fondation de France



BIODIVERSITY IN THE GLOBAL SOUTH Research for a sustainable world

IRD Éditions INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT FRENCH RESEARCH INSTITUTE FOR SUSTAINABLE DEVELOPMENT

Marseille, 2020

Written by Viviane Thivent/Les Transméduses

Editorial coordination Corinne Lavagne

Design and page layout Charlotte Devanz

The photos in this publication come from the Indigo image bank (IRD), unless otherwise specified

Cover photo Swim At The Lake - Henri Robert Brésil By courtesy of www.naderhaitianart.com

As the law of 1st July 1992 (intellectual property code, part one), pursuant to paragraphs 2 and 3 of article L. 122-5, only authorises, on the one hand, "copies or reproductions reserved strictly for the private use of the copyist and not intended for collective use" and, on the other hand, "analyses and short quotations in a purpose of example and illustration", any representation or complete or partial reproduction, made without the approval of the author or their successors or legal claimants, is prohibited (paragraph 1 of article L. 122-4). Such representation or reproduction, by whatever process, would therefore constitute counterfeit punishable under title III of the above law.

© IRD, 2020 ISBN print : 978-2-7099-2874-8 ISBN PDF : 978-2-7099-2875-5

LIST OF SCIENTIFIC CONTRIBUTORS

New tools for studying biodiversity

Swimming in a stream of information

Anne-Elisabeth Laques, landscape geographer, UMR Espace-Dev Stéphanie Carrière, ethno-ecologist, UMR Gred Danielle Mitja, ecologist, UMR Espace-Dev Pierre Couteron, ecologist, UMR Amap Éric Delaitre, specialist in the use of remote sensors for terrestrial analysis, UMR Espace-Dev

Artificial intelligence to the rescue for biodiversity

Morgan Mangeas, mathematician specialising in artificial intelligence, UMR Entropie Corina Iovan, specialist in remote sensing and artificial intelligence, UMR Entropie Laurent Vigliola, marine biologist, UMR Entropie

The Nagoya protocol, reconciling ambition with effective action Jean-Louis Pham, plant geneticist, Nagoya scientific advisor, UMR Diade

Listening to the environment Amandine Gasc, eco-acoustician, UMR IMBE

A botanist in my smartphone Jean-François Molino, ecologist, UMR Amap

Using genetics to identify the adaptative capacities of coral

Véronique Berteaux-Lecellier, geneticist, UMR Entropie Gaël Lecellier, geneticist, UMR Entropie Oliver Selmoni, geographer, UMR Entropie and EPFL Stéphane Joost, geographer, EPFL

Protecting biodiversity

Converting waste water into fertiliser for leafier cities

Didier Orange, eco-hydrologist, UMR Eco&Sols

Of dams and fish

Pablo Tedesco, biologist, specialist in aquatic ecology, UMR EDB

Cataloguing the French Guiana forest

Raphaël Pélissier, ecologist, UMR Amap

Birds and tourists as research topics

Martin Thibault, ecologist and population biologist, UMR Entropie Philippe Borsa, population geneticist, UMR Entropie Catherine Sabinot, ethnoecologist and anthropologist, UMR Espace-Dev Éric Vidal, ecologist and population biologist, UMR Entropie

Making sure that regulation rhymes with appropriation

Catherine Sabinot, ethnoecologist and anthropologist, UMR Espace-Dev Jean-Brice Herrenschmidt, geographer, GIE Oceanide, UMR Espace-Dev Gilbert David, geographer, UMR Espace-Dev Fabrice Brescia, ecologist, Institut Agronomique Néo-Calédonien (IAC), Arboreal team

The proportion of birds

Philippe Cury, marine ecologist, UMR Marbec

Biodiversity and health

Nature's abundance protects us against pandemics

Benjamin Roche, biologist, specialist in the ecology of pathogenic agents and health threats, UMR Ummisco and Mivegec

At the cutting edge of ethnopharmacology Geneviève Bourdy, ethnopharmacologist, UMR Pharma-Dev

Christian Moretti, eethnopharmacologist, UMR EIO, retraité

Tracking infectious diseases

Oleg Mediannikov, microbiologist, expert in infectious diseases, UMR Mephi

Controlling the inevitable Laurent Granjon, biologist, UMR CBGP

Biodiversity to feed the world

Trees, the backbone of agriculture Geneviève Michon, ethnobotanist, UMR Gred

Moving towards sustainable aquaculture Marc Legendre, fish physiologist, UMR Isem

Adaptive fishing in Peru Arnaud Bertrand, marine ecologist, UMR Marbec

Pastures and humans drip-fed by glaciers Olivier Dangles, ecologist, UMR Cefe

Custodians of agricultural diversity Serge Hamon, plant breeder, UMR Diade

Yves Vigouroux, population genomicist, UMR Diade

Rice as a common good Alain Ghesquières, geneticist, UMR Diade

The potential of the world beneath our feet Alain Brauman, soil ecologist, UMR Eco&Sols

Éric Blanchart, soil ecologist, UMR Eco&Sols

Mangroves, a new Eldorado? Marie-Christine Cormier-Salem, geographer, UMR Paloc

Plant symbiosis Éric Giraud, microbiologist, UMR LSTM

The Hidden Agriculture of the Amazon Forest Laure Emperaire, ethnobotanist, UMR Paloc