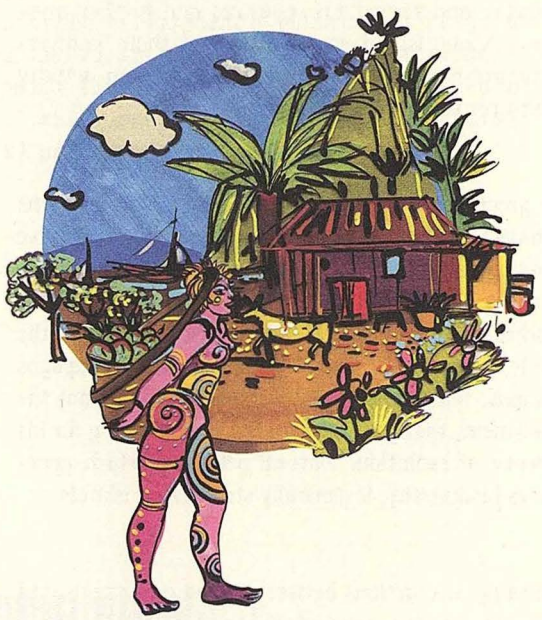
resource transfers and a charter on intellectual property rights. It undertakes to abide by the rules of access to biological resources and has made it a rule to draw up agreements for biological resource transfers. One voluntary measure is to mention the origin of the biological resources in any application for intellectual property rights over the results of scientific research. CIRAD's biodiversity databases are produced in a clear and open manner, by studying the rights of each contributor, local communities particularly, over the traditional knowledge associated with the biological resources. Participation in setting up biological resource centres is a way of conserving resources. In choosing to voluntarily implement the principles of biodiversity rights even where there are no restrictive rules, CIRAD intends to make meaningful the general goals of biodiversity conservation and utilisation, and so bolster biodiversity legislation.

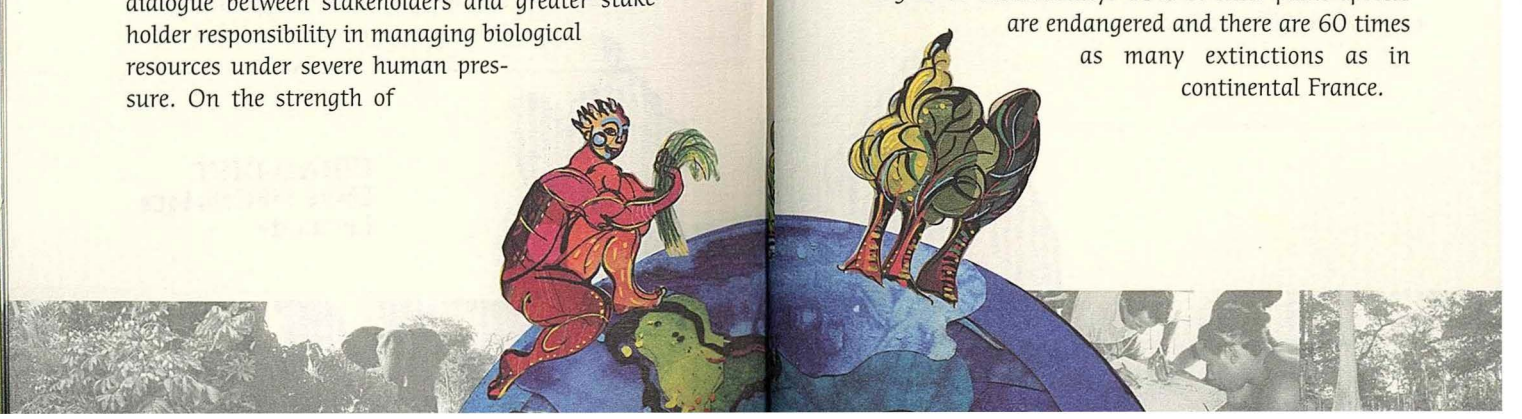
In their farm and forestry policies, stakeholders approach the conservation and sustainable use of biodiversity in various ways. Under its mission to assist public policy, CIRAD recommends an overall, territorial approach and focuses attention on such varied issues as conserving agrobiodiversity, upkeep of landscapes, pest control, reducing human pressure on land, and certification of farm and forest products. Its researchers consider the representations, discourse and practices of stakeholders so as to understand the living world at different scales. These approaches are partly based on the management of biodiversity as heritage, and they put into perspective the incompatibilities and complementarities that can arise between property rights, access rights and utilisation claims.

CIRAD therefore works in the field and assists stakeholders involved in managing biodiversity to negotiate the establishment of innovative, integrative intervention frameworks. In practice this means working at the local, national and international levels, making scientific knowledge available and introducing mediation processes that foster discussion and knowledge sharing among stakeholders. By developing tools and methods adapted to the specific features of a locality, CIRAD thus aims for dialogue between stakeholders and greater stakeholder responsibility in managing biological resources under severe human pressure. On the strength of numerous experiments conducted in tropical environments under a variety of legal and regulatory frameworks, CIRAD means to stimulate the production of viable laws and to foster stakeholder ownership of norms and regulations.



3/ Biodiversity and tropical islands

Islands are distinctive ecosystems. Because of their small, clearly demarcated land area, these ecosystems are highly sensitive to natural factors and the impact of human activity. Tropical islands are often subject to violent climatic events, and also enjoy exceptional biodiversity. For example, the Canary Islands are home to more than 12,600 species, 3,545 of which are endemic. The Caribbean islands rank fifth among the world's biodiversity hotspots. The French tropical islands are home to five times as many endemic plant species and 26 times as many fish species as continental France, with a high proportion of endemics and also a high degree of vulnerability: 13% of their plant species are endangered and there are 60 times as many extinctions as in continental France.



Human activity is a major factor on tropical and sub-tropical islands - farming in particular has a serious impact on both terrestrial and marine environments. These need to be protected, and sometimes their legitimacy asserted, since farmland is often in direct contact with natural areas. Population growth and migration rates are high. Tourism, urban spread and land use changes, inadequate waste management and over-use of marine and terrestrial resources add further pressure. Many island ecosystems, and their biodiversity, are more seriously affected by human activity than continental ones.

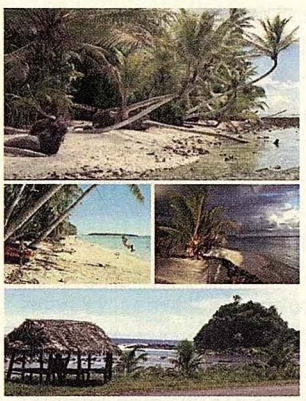
The greatest dangers for island biodiversity, and the hardest to control, are the introduction of invasive exotic species and the disappearance of native habitats and species. Colonisation of empty ecological niches by invasive species can be very rapid. It was the wide diversity of finch species on the Galapagos islands, made possible by relative isolation from the continent, that gave Darwin the underpinning for his theory of evolution. Natural selection, which generates biodiversity, is generally stronger on islands.

Analysing interactions between island ecosystems and human activity, particularly the relations between agriculture and biodiversity, can provide vital information for sustainable development policy. The primary need is to model, evaluate and forecast the consequences for island biodiversity of major global changes linked to human activity, and to use these models to predict likely trends in other environments.

CIRAD has been working for many years on tropical islands, including several where widespread farming has had a strong impact on the terrestrial and marine environment. These islands have universities as well as research and environmental management institutions. These institutions host tropical genetic resources collections, many of them quite unique. They offer optimum conditions for conducting research into biodiversity and its interactions with man. They also provide opportunities to study the introduction of biodiversity in crops so as to reduce the negative impact of chemical inputs on the environment and biodiversity.

For example, the Pôle Biodiversité Antilles brings together researchers, land managers and government representatives. Its mission is to coordinate biodiversity research in the French Caribbean islands, make it more efficient and increase its impact.

The work is part of an international discussion about sustainable management of biodiversity on tropical and sub-tropical islands. This is an important development issue for research institutions and local authorities, and has to be considered in the framework of Europe's ultra-peripheral regions.



• *The coconut palm is omnipresent along the shores of tropical islands. A symbol, and a tree with a thousand uses.*

• *There is an abundant fauna specifically associated with it, particularly the famous coconut crab* Birgus latro.