

ACTION PLAN WALLIS & FUTUNA

AUGUST 2014 → **JANUARY** 2018









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PACIFIC COMMUNITY (SPC) NOUMEA NEW CALEDONIA/2017

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Original text: French Pacific Community Cataloguing-in-publication data New Caledonia – INTEGRE/Project Action Plan /August 2014 > January 2018

This report is the product of work coordinated by the SPC (INTEGRE)

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Cover photo: Beach on Wallis © SPC - INTEGRE

Published by the Pacific Community – BP D5 Noumea, New Caledonia

Noumea, New Caledonia – 2017

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WALLIS & FUTUNA



INTEGRE IN WALLIS & FUTUNA

2 pilot sites Wallis Islands Islands of Futuna and Alofi EUR 1.23

HIGHLIGHTS

Located approximately 2100 km from New Caledonia and 2800 km from French Polynesia, Wallis & Futuna Territory is made up of two island groups located at the heart of the Pacific Islands, 230 km apart with a surface area of 140 sq. km. They host remarkable land and marine biodiversity. Wallis is a low island while Futuna is more mountainous. The population of 12,200 is divided into three kingdoms. The islands are under human pressure that is jeopardising the ecological equilibrium and may be a threat to freshwater sources.

Integrated coastal management is about using the coast sustainably by reconciling social and economic development with biological, environmental and cultural conservation for the good of current and future generations.

INTEGRE (French acronym for Pacific Territories Initiative for Regional Management of the Environment) provides support for integrated coastal management (ICM) initiatives in the four European Pacific overseas countries and territories (OCTs) and promotes ICM in the Pacific region.

Funded by the European Union to the tune of EUR 12 million (XPF 1.4 billion), INTEGRE runs from 2013 to 2018 and is driven by French Polynesia, New Caledonia, Wallis & Futuna and Pitcairn so as to focus on supporting sustainable environmental management.

INTEGRE's regional activities (regional workshops, bilateral exchanges) focus on strengthening regional cooperation in integrated coastal management and promoting sustainable development for the benefit of communities.

Other activities are conducted at a territory level and locally. On Wallis and Futuna, the environmental impacts of unregulated landfills, watershed erosion, pig-farm effluent and the lack of resources for effective waste management, particularly for disposing of hazardous waste like oil and batteries, raise the risk of freshwater pollution and are major issues. INTEGRE supports public and traditional policy through a number of activities implemented at the Wallis Island and Futuna pilot sites and throughout the territory aimed at:

- developing an integrated coastal management plan;
- improving the waste management process and containing pollution hazards;
- preserving water resources and biodiversity;
- containing shoreline erosion;
- educating the population about the environmental issues; and
- helping develop the organic farming sector.



UNDERSTANDING THE BACKGROUND AND ISSUES IN WALLIS & FUTUNA

1

WALLIS & FUTUNA'S ORIGINALITY AND UNIQUENESS

Wallis & Futuna are remote islands stretching over 140 sq km at the heart of the Pacific Ocean with their own specific social, political and economic systems and natural environment. They face a number of man-made hazards that are upsetting the environmental equilibrium along their coasts and could pose threats to available resources, including fresh water. Below is an overview of the forces at work there:

GEOGRAPHY

SOUTH PACIFIC VOLCANIC ISLANDS

Located approximately 2100 km from New Caledonia and 2,800 km from French Polynesia, the Territory of Wallis & Futuna is made up of two island groups located about 230 km apart. First Wallis Islands, which appeared about two million years ago, consist of one main 78 sq m low island (highest point: 150 m) and about 20 small coral or volcanic islands. The lagoon covers some 220 sq km. Then there are the Horn Islands including the island of Futuna (46 sq km), which is mountainous (524 m) and has a permanent river system, along with the uninhabited island of Alofi (18 sq km), located some 1.8 km south-east of Futuna. These three main volcanic islands are located astride the Australian and Pacific plates, whose clash even today leads to occasionally violent earthquakes that can give rise to tsunamis.

With a total annual average rainfall over 3000 mm and an average temperature of nearly 27°C, Wallis & Futuna has a warm, wet equatorial climate and temperatures vary little year round. Although rainfall is lighter from June to September, there is no dry season as such. Both the diurnal variations and temperature range are small.

POPULATION

70% OF THE POPULATION LIVES ON WALLIS

Wallis & Futuna have a population of 12,000 (2014 census), 70% of whom live on Wallis, mainly on the island's eastern coastal fringe. The island group has experienced a major exodus over the last 15 or so years, with nearly one-fifth of the population leaving between 2003 and 2013 to settle in New Caledonia or mainland France. There are currently 22,000 Wallis & Futuna Islanders living in Noumea and its outskirts (2014 census), i.e. nearly twice as many as in their home territory.

The population is almost entirely of Polynesian descent and Roman Catholic. The official language is French and two local languages, i.e. Wallisian and Futunan, are spoken. Ancestral cultural practices (custom) are still very much alive in the islands and punctuated by religious feast days. The chiefs are still the lynch-pin of traditional organisation in society.

GOVERNANCE

THREE KINGDOMS AND ONE PREFECT

Wallis & Futuna are a group of three separate kingdoms, two on Futuna (Alo and Sigave) and one on Wallis (Uvea). It is a French overseas territory with special status, in which local custom law is applied side-by-side with French law. Custom law is enforced by three kings assisted by traditional ministers, district chiefs and village chiefs. Each kingdom has ministers responsible for the environment, agriculture and fisheries, etc. Traditional chiefs have particular jurisdiction over land tenure.

Wallis & Futuna is governed by a Prefect representing the French Government, who is the islands' chief administrator and head of the executive. The territory has a Territorial Assembly with 20 elected members, i.e. 13 from Wallis and 7 from Futuna. At the French national level, the territory is represented by a member of Parliament, a senator and a member of the Economic and Social Council. The Catholic Church is very active, as primary school education has been delegated to it. Wallis & Futuna has a European Union overseas country and territory (OCT) status.

C

Governance in Wa	3 district chiefs						
				Torritorial Council for		21 village chiefs	
CATHOLIC CHURCH	→	Profect	-	the Environment and Sustainable Development	•	Civil society	
		Delegate (Futuna)				Kingdom of Alo (Futuna)	
		Secretary-General		Chair: Prefect		The King	
		Deputy Delegate		Deputy Chair: Speaker of the TA		5 ministers	
		Territorial Assembly (20				1 elected chief	
		members elected for 5 years)		High Chiefs, department		9 village chiefs	
		Government	heads, associations		1 master of ceremonies		
			departments				Civil society
						Kingdom of Sigave (Futuna)	
IA me		the budge		es on the various issues related		The King	
		,		to environmental protection, natural heritage, renewable en-		5 ministers	
						1 elected chief	
				recycling and sustainable devel- opment.		6 village chiefs	
						Civil society	

ECONOMY

FAMILY FARMING AND PUBLIC AID

Wallis & Futuna mainly has a subsistence economy based on small-scale farming, livestock activities, and fishing, essentially for home consumption and customary exchange ceremonies. Government jobs play a major role. In 2013, 60% of the islands' 2155 wage earners (for a population 12,835) were employed by the government (public service and teaching staff). Private company workers are mainly employed in the primary and secondary sectors (livestock operations, a sawmill, construction and public works).

Government revenue is mainly derived from Customs duty (imports are rising while exports are virtually non-existent). The only export commodities are dried sea cucumbers (beche-demer/trepang) and trochus shells. Wallis & Futuna's economic difficulties are due to their remoteness from potential markets like Australia and New Caledonia and a small tourist industry. In 2013, the French Government contributed XPF 12.4 billion to the economy.

Kingdom of Uvea (Wallis)

The King (Lavelua)

6 ministers



BIODIVERSITY

EXCEPTIONAL BUT POORLY KNOWN BIODIVERSITY

The island group's marine and terrestrial biodiversity is still scarcely known, but recent scientific research has revealed a remarkably high endemism rate for the territory's size. In 2004, the Wallis & Futuna Freshwater Biological Quality Mission identified 39 fish and decapod crustacean species, four of which were new to science and endemic to Futuna.

Wallis and Futuna land flora and fauna inventory (Wallis & Futuna ecosystem profile, 2016)

	Plants	Molluscs	Reptiles	Seabirds	Mammals	Fish and crustaceans
Number of known species	650	51	15	24	14	39
Number of endemic species	7	20	1	4	0	4

Marine biodiversity can be found on the islands' fringing and barrier reefs and in some mangroves and sea-grass beds. Some 136 coral species have been recorded and 648 reef-fish species from 79 families (Williams et al., 2006), so fish diversity is high for the lagoon's surface area. In 1993 three new endemic fish species were discovered in deep water at 500-600 m (Richer de Forges, 1993). The marine flora contains 197 macrophyte species, i.e. flowering plants, cyanobacteria and seaweed.

	Macrophytes	Coral	Sea cucumbers	Molluscs	Reptiles	Sea-birds	Marine mammals	Fish and crustaceans
Number of known species	197	135	15	310	6	12	13	648
Number of endemic species	0	0	0	-	0	0	0	5

Wallis and Futuna land flora and fauna inventory (Wallis & Futuna ecosystem profile, 2016)

"Fish diversity is high for the size of the lagoon."

MAN-MADE THREATS

Certain types of man-made pressure are directly threatening the territory's natural resources and biodiversity and include:

- Pollution caused by inadequate waste management, pig-farm effluent and the lack of a community sewerage system
- Invasive species that were assessed by a 2014 study at 150 in the islands, including fire ants and giant African snails
- Ever-faster natural environment destruction caused by urban sprawl and farming (bush clearance and fire)

Natural phenomena can also have devastating effects, particularly in the marine environment. The swell generated by tropical depressions and cyclones can destroy coral and dramatically erode the coastline. A magnitude-6.5 earthquake in 1993 raised Futuna some 50 cm, totally exposing the flats during spring tides and killing off much of the coral. A tsunami on 30 September 2009, following a magnitude-8 underwater earthquake, generated a more than 4.5 m wave on Alofi's east coast and flooding it to 85 m inland with the brine burning all vegetation.



INTEGRE

IMPROVING SUSTAINABLE ENVIRONMENTAL MANAGEMENT FOR COMMUNITIES' WELL-BEING

SUSTAINABLY MANAGING ISLANDS AND COASTAL AREAS

The human footprint on natural coastal environments is increasing, causing disturbances that are jeopardising mankind's ability to access available resources, develop sustainable economic activities and preserve our traditions. A number of approaches that could help sustainably manage the environment are discussed below.

CHALLENGES

A COVETED HERITAGE

OCT coastlands and islands are where human populations live, levers for economic development and environmentally and culturally high-value natural heritage. They draw on a number of monetary, heritage-related, aesthetic and spiritual resources (cf. table below) and one of the major challenges is managing to fully preserve this capital by strengthening its assets while reducing threats to such coveted areas.

COASTLAND CAPITAL									
Economic assets	Biological and ecological assets	• Cultural and intangible assets	- Threats						
 Tourism Fishing Agriculture Aquaculture Industries Trade, ports Real estate BTP Public services Raw materials 	 Outstanding ecosystems (e.g. forests, coral reefs, mangroves) Endemic biodiversity Rare species Iconic species (e.g. humpback whales, manta rays) Ecological services: e.g. water purification, carbon cycle, climate regulation, pollination 	 Traditional Pacific-islander knowledge Scientific knowledge Listed features: UNESCO World Heritage, RAMSAR, etc. Beautiful landscapes, Sacred places Leisure, well-being 	 Pollution Habitat destruction Invasive species Resource overuse overuse Biodiversity loss Ecosystem disturbances and loss of ecosystem services Climate change Loss of cultural values Natural disasters (e.g. tsunamis, tropical cyclones) 						

MANAGEMENT

SUSTAINABLY MANAGING THIS COMMON HERITAGE

In an environment with so many unique economic, social and environmental factors to contend with, sustainably managing common resources for the well-being of all its users is a vital concern. How can different interests and uses be reconciled? How can public support and involvement be elicited around common projects without causing tensions and frustration? New approaches and territorial governance forms that involve local stakeholders and users in the decision-making process are increasingly being used to meet this challenge. They are based on a democratic, participatory model and aim at developing local solidarity, overcoming initial ill-feelings, finding consensus-based solutions, building a shared vision and sharing the benefits fairly. Integrated management and local development are two of the participatory models promoted and implemented by INTEGRE.

DEFINITIONS

INTEGRATED COASTAL MANAGEMENT

Integrated coastal management (ICM) involves sustainably using an area (land, shore or sea) or resource (e.g. water, forests and lagoons) by involving local stakeholders in the decision-making process and reconciling social and economic development with natural and cultural heritage conservation.

ICM takes a global ridge-to-reef view of coastal areas and works to intertwine the visions of the various economic, environmental, social, cultural and scientific sectors. It serves as a collaboration and planning tool as well as a way to help prioritise uses and management measures while integrating cultural reference points and traditional knowledge. ICM encourages sustainable development initiatives by drawing on success stories elsewhere and requires local stakeholders to jointly define their objectives with sufficient community support to be legitimate, accepted and abided by. Over the past 20 years, ICM has been implemented in a number of programmes in the South Pacific.



"Integrated coastal management (ICM), is a territorial governance tool for sustainable development and resilience to global change."

SUSTAINABLE LOCAL DEVELOPMENT

Local communities can sometimes find the notion of integrated coastal management difficult to embrace, either because they do not understand it or view it as remote from their day-to-day concerns. On islands, all land is a "coastal zone" that receives inputs from the mountains to the reefs and so "integrated island management" resonates better with communities. In the islands, this approach can be seen as "sustainable local development", which may be more readily understood and accepted. It is defined as a previously-discussed and shared strategy that aims to create social, economic, cultural and environmental harmony among all the stakeholders, who interact in a specific human-scale region without jeopardising their future well-being.

INTEGRE

INTEGRE (French acronym for Pacific Territories' Initiative for Regional Management of the Environment) provides support for integrated coastal management (ICM) initiatives in the four European Pacific overseas countries and territories (OCTs) and promotes ICM in the Pacific region.

PROJECT OBJECTIVE

INTEGRE is a participatory project for implementing new governance forms and developing an activity programme designed and monitored by a large number of partners. Its main objective has both regional and local components: help-ing manage or sustainably develop OCT environments for the benefit of their communities.

"Helping manage or sustainably develop OCT environments for the benefit of their communities "

REGIONAL COMPONENT

Pacific OCTs seldom turn to the regional organisations they belong to for help. There is fairly little discussion or collaboration between them, despite the regional environmental challenges they face. The project's regional component aims to strengthen regional cooperation in sustainable development and ICM matters and consists of two main activities:

- Creating forums for exchanges and collaboration between the OCTs and between them and the region's other countries by holding regional sector-based workshops to share experience in terms of sustainable tourism and organic farming, etc., providing regional expertise for OCTs in hazardous-waste management, etc. and holding bilateral exchanges between OCTs and between them and other countries in the region.
- Improving OCT input to regional exchange and collaboration networks by taking part in regional cooperation work, creating exchange mechanisms, showcasing lessons learnt through result maximization and reporting and by incorporating existing regional networks such as in organic farming, etc. Progress on regional work is indicated in follow-up tables published in annual progress reports.



New Caledonia's Southern Tip INTEGRE aims to strengthen UNESCO management-committee's involvement in the Great Southern Lagoon management plan, improve knowledge and management of visitor traffic and recreational uses in marine and coastal areas and hold discussions on a sustainable development strategy for the southern tip of the main island.





Beautemps-Beaupre and Ouvea atolls

INTEGRE is providing assistance for operationally implementing management of the UNESCO World-Heritage-listed site. The Loyalty Islands Province, traditional leaders and associations, assisted by scientists, have joined forces to tackle erosion and invasive-species regulation, provide awareness training and showcase the island's iconic sites so as to support ecotourism development.



North-eastern coastal area INTEGRE is assisting the Northern Province and local management committees strengthen participatory management of this UNESCO World-Heritage listed site. Lagoon-health monitoring, waste-management and watershed-restoration activities are being conducted with local stakeholder involvement.



Wallis Island and its lagoon INTEGRE is assisting with implementation of a sustainable development strategy for the island's communities in areas identified as priorities, such as water-resource preservation and shoreline protection.



Futuna

INTEGRE is helping sustainably manage and develop the environment to preserve the pristine setting and the quality of the territory's environments. INTEGRE is assisting the communities in areas identified as priorities, such as waste management, waterresource preservation and shoreline protection and restoration.

LOCAL COMPONENT

Small-scale trials through action and ownership are an approach that local stakeholders view as tangible, so each territory proposed a selection of pilot sites where INTEGRE could provide support to local experiments and the communities could play an active role in their own development.

The local component involves conducting experimental ICM and development projects on a total of nine pilot sites and the projects follow a framework, i.e. a local action plan developed closely with partners at the site. The local component involves:

- conducting small-scale experimental ICM and development projects on pilot sites
- improving environmental-management governance

Lessons learnt on the ground under the local component are fed back into the regional component and the methods and results maximized and promoted in the Pacific. Progress on regional work is indicated in follow-up tables published in annual progress reports.

THE NINE PILOT SITES





Raiatea-Taha'a islands

INTEGRE is providing assis-

tance to the islands' sustainable

economic development in agri-

culture, fisheries and tourism

and support for reducing pollu-

tion from business operations

and developing sustainable

and their lagoon

economic activities

TO TO STORE SHOW

FRENCH POLYNESIA

Tahiti Peninsula INTEGRE is helping develop sustainable lagoon use on this site by reducing human pressure and developing sustainable and innovative economic activities.



Opunoho Bay and Valley INTEGRE is helping develop sustainable tourism by implementing environmental protection activities on the site, developing ecotourism and improving the community's living standards.



Pitcairn Islands

INTEGRE is helping develop and promote this remote and historically-significant island group in three main areas, i.e. waste management and recycling, soil-erosion control and sustainably promoting natural and cultural heritage features.

LOGFRAME

A logframe is a project management tool recommended by donors, including the European Union, which provides consistency between the various project levels by stating clearly-defined objectives and the expected activities and outcomes. It can be used to:

- · identify the resources required for achieving the objectives
- monitor project progress and assess the results

The project's two-tier (regional and local) structure is based on a sequence of objectives, activities and expected outcomes and so each activity can contribute to attaining several objectives. External reviews organised and funded by the European Commission are scheduled at different stages in the project.



GOVERNANCE

INTEGRE is being carried out in all four OCTs from 2013 to 2018 and is driven by French Polynesia together with New Caledonia, Wallis & Futuna and Pitcairn. Implementation has been coordinated by the Pacific Community (SPC) with a specially recruited five-person team: a coordinator, a project

assistant and three deputy coordinators, i.e. one for each territory.

A geographical three-tier (region, territory and pilot site) governance approach has been taken as outlined in the figure below:



IMPLEMENTATION

Activities are implemented in several different ways. They are set out in action plans (regional and territorial) approved by the Steering Committee and by MOUs signed by SPC and the four territorial authorising officers.

The different implementation methods are:

- Direct implementation by SPC (mainly for regional activities or when no local technical partner has been identified to carry out an activity)
- Implementation by local partners , supervised by:
- implementation agreements which provide for delegation of management of INTEGRE funding linked to implementing the identified activities
- accreditation documents, signed by SPC and the technical operators, make it possible to delegate implementation of identified activities without delegating funding, which will continue to be administered by SPC. Accreditation documents make it possible to fund activities carried out by technical departments without having to go through the central local government budget and to work with small local organisations

The accreditation documents and implementation agreements are closely monitored administratively.

BUDGET

Funded by the European Union to the tune of EUR 12 million (XPF 1.4 billion), INTEGRE has been implemented in four OCTs from 2013 to 2018. SPC provides financial control for the project and audit reports are submitted to the European Commission with each disbursement request. The implementation agreements with managing operators are not individually audited, but project audits contain substantial material on these grants. Managing operator expenditure is recorded in SPC accounts once the supporting documents required by the organisation's procedures have been submitted.

MONITORING AND EVALUATION

Based on operator outputs and following discussions with and approvals by the partners, the INTEGRE team provides and disseminates various deliverables, including quarterly progress reports, steering committee minutes, annual reports and workshop/forum reports. The materials produced by the project, including slideshows, scientific publications, posters, photos and videos, are regularly posted on the project website (www.integre.spc.int) and are freely downloadable.

External reviews of INTEGRE organised by the European Commission are planned to monitor progress and ensure the outputs match the objectives.

INTEGRE IN WALLIS & FUTUNA

The environmental impact of unregulated landfills and the high risk of irreversibly contaminating freshwater stocks with hazardous waste proved to be major concerns for Wallis & Futuna. INTEGRE developed activities at territory level, though other, more specific activities were aimed at more local issues. An overview is provided below.



SPECIFIC OBJECTIVES

INTEGRE was presented to the Territorial Environmental and Sustainable Development Council (CTEDD) in 2014 and its action plan was approved by the Wallis & Futuna Prefect and all CTEDD members. It is founded on two components:

Local component

Two INTEGRE pilot sites

- Wallis Island
- Island of Futuna

On pilot sites, INTEGRE is working towards the following objectives:

- Improving waste management and educating the community about this issue;
- Limiting the risks of pollution, particular for the groundwater pollution hazard;
- Helping preserve natural resources;
- Helping contain coastal erosion;
- Helping preserve biodiversity.

Territorial and cross-sector component

In the territory as a whole, INTEGRE aims to:

- Develop an integrated coastal management plan;
- Improve waste management;
- Educate the population about environmental issues and the ICM approach;
- Help develop the organic farming sector.

BUDGET

INTEGRE - Wallis & Futuna has a budget of XPF 146 million, i.e. EUR 1.23 million.

LOCAL GOVERNANCE ARRANGEMENTS

INTEGRE provides support to existing arrangements, such as management plans and regulations as well as to territorial authorities, government departments, and environmental associations. A geographical three-tier (region, territory and pilot site) governance approach has been taken in Wallis & Futuna.

Wallis & Futuna Project governance

REGIONAL LEVEL / ONCE A YEAR

STEERING COMMITTEE (COPIL)

- President of French Polynesia (COPIL Chair)
- · President of the Government of New Caledonia, Prefect of Wallis & Futuna, Governor of Pitcairn (Authorising Officers)
- Head of the European Commission Office
- Focal technical departments: Wilderness Conservation Agency (New Caledonia), Office of the Environment (French Polynesia) and Department of the Environment (Wallis & Futuna)
- SPC (facilitation and secretariat), INTEGRE (observation)

TERRITORIAL LEVEL/ 4 TIMES A YEAR

TERRITORIAL TECHNICAL COORDINATION COMMITTEE (CCTT)

For Wallis & Futuna: this committee is the Territorial Environmental and Sustainable Development Council (CTEDD)

- Chair: Prefect
- Vice-Chair: Speaker of the Territorial Assembly
- 3 councils of chiefs
- Head of Territorial departments
- Associations
- INTEGRE Coordinator

LOCAL LEVEL/ REGULARLY

LOCAL/SITE COMMITTEES

- Local level/regularly
- Consultancy and local committees
- Department of the Environment (INTEGRE focal department)
- INTEGRE Deputy Coordinator for Wallis & Futuna
- Technical officers from the appropriate departments
- Local stakeholders involved in environmental management
- · Public and/or private operators tasked with implementing activities





PILOTSITE WALLIS

WALLIS ISLAND

The Wallis pilot site focuses mainly on Uvea Island where a delicately-balanced biological and environmental situation is threatened by a freshwater-stock pollution hazard. INTEGRE supports the authorities, appropriate government departments and local stakeholders involved in preserving the territory's environment and resources. More details are provided below.



GEOGRAPHY AND ECONOMY

The Wallis group is made up of the mainland, Uvea, with a surface area of 77.9 sq km and 19 small offshore islands dotted around a 220 sq km lagoon. The highest point, Mt Lulu, is not very high at 151 m. Wallis Island has a population of nearly 8600 (IEOM, 2014) located mostly on the island's east and living mainly from family farming and subsistence fishing for home consumption. Although it has no rivers, Uvea sits on a freshwater lens and is dotted with crater lakes, the largest of which is 400 m wide Lake Lalolalo. The lakes are precious freshwater stocks for the island. The economy is based on the public sector, fisheries, shell and sea-cucumber exports and imported-product trade.

BIODIVERSITY

Wallis is host to several plant formations on land, including primary forest remnants, secondary vegetation in the form of coconut plantations, fern heaths and Caribbean pine (*Pinus caribea*) plantations. The wetlands contain a total of 43 ha of crater lakes and there are 23 ha of mangroves on the shore. These ecosystems are host to original biodiversity, including several endemic species of cicada, land molluscs and plants. The coral and volcanic offshore islands are also a refuge for nesting seabird colonies (noddies, sterns and brown boobies). Its seabed is also rich with diverse fish fauna featuring 648 coastal fish species from 79 families (Williams et al., 2006). The lagoon and its associated ecosystems (shoreline, seagrass beds and mangrove swamps) do, therefore, raise major biodiversity challenges (Egretaud et al., 2007).

ENVIRONMENTAL PRESSURE

Wallis Island is under threat from various hazards and constraints:

- The freshwater-stock pollution hazard from unregulated landfills, untreated hazardous waste such as batteries stocks, and household and pig-farm effluent
- Shoreline erosion due to coral quarrying for development and

construction as well due to natural phenomena such as climate change, tsunamis, earthquakes and cyclones

 Overfishing for subsistence fishing and for shell and sea cucumber (bèche-de-mer/trepang) exports



LOCAL GOVERNANCE ARRANGEMENTS

Management plans have been developed in recent years under several programmes with targeted funding so as to work towards the common goal of mitigating environmental impacts and preserving natural environments. They are listed in the table below:



Themes	Programmes	Funding
Waste	Waste management plan started in 2010	
Water resources	 Approving the water resource development and management plan (SAGE), following various studies: SAGE review on Wallis Island (2010-2012) Additional studies including a hydrogeological assessment of the water table (2012-2014) Developing a GRED database (2009-2012 water and waste management) 	Territory French Government French Ministry of Overseas/Territory/ University of New Caledonia (UNC)
Effluent	Study on pig-farm slurry	French Ministry of Overseas/Territory/ UNC
Land environment conservation	RAMSAR wetland listing project (2010)	
Marine environment conservation	 Marine area management plan (since 2008) IFRECOR (French Coral Reef Initiative) local action plan (including inventory and reef health activities, etc.) Study on Pacific coral reef trophic mechanisms and the possible introduction of contaminants to tropic systems (FOTROCO programme) 	French Ministry of Overseas/Ministry of Ecology and Sustainable Development/ Territory/UNC
Shoreline protection	 Planting nursery-grown mangrove trees and shoreline protection programme started. Shoreline monitoring by IFRECOR 	
Development sustainable	• Developing the territory's SD strategy in 2002 updated in 2008, that provides the broad policy outlines for reconciling development and resource preservation.	

INTEGRE IMPLEMENTATION

INTEGRE is part of a multi-stakeholder networking and consultation process and aims to develop sustainable environmental management in this fragile and remote island group.

SITE ASSESSMENT

The local site committee held a methodology consultation and implementation workshop in February 2014. A SWOT (strengths, weaknesses, opportunities and threats) analysis was carried out as the evaluation and decision-making aid.

SWOT ANALYSIS FOR THE WALLIS ISLAND SITE, WALLIS & FUTUNA

STRENGTHS	WEAKNESSES
Environmentally sound site (unspoiled marine environment, quality mangroves, primary and secondary vegetation and endemic species) Marine habitats known, baseline survey Regulations and planning exist or need to be reactivated: SAGE (water development and man- agement) plan, Environment Code, waste (CET - territorial landfill site, management plan) Island means preservation Participation and discussion: management and discussion bodies (Env. Council, local environmen- tal committees, local committees, Ifrecor) Government and traditional bodies well entrenched and accepted (communities involved, information passed on) Land: land tenure system = security	 Land-sea integration, interdepartmental integration, coordination and organisation: no territorial land use plan, little liaising between departments Political co-ordination: poor coordination of areas of responsibility (departments) Regulation: environment code not fully enforced, insufficient resources, inadequate consultation at the beginning Lack of human resources and funding: e.g. waste, limited resources, no waste management operators, landfill cell full SAGE plan implementation needs to be continued/ regulations Need to raise awareness: change behaiours Island means isolation Land tenure system Ageing population, falling birth rate Fragile balances: workforce emigration, sustainability and innovation issues Employment: 30% of the population
OPPORTUNITIES	THREATS
Partnerships: SPC, SPREP, ADEME, French Gov- ernment, WF-NC collaboration (specific agree- ments), private sector INTEGRE: priority action facilitator Mobility, training: training programme for 40 local professionals, continuing education Tourism/heritage	 Waste pollution hazard Water resource management Land erosion Overfishing hazard Certain farming and livestock practices (effluent, erosion) Handierofte, pressure on natural resources

.

ism, pollution Climate change

public priorities, confusion

External pressure: invasive exotic species, tour-

Economic development: industrial pressure (ICPE) Communications problems: INTEGRE, unclear

• Environmental awareness

OBJECTIVES

This analysis helped better define the project strategy and make future activities more consistent. So the following specific objectives were selected by the Territory for the project site:

- Improve waste management by processing long-standing stocks of hazardous substances and starting up shipping-related businesses
- Preserving the shoreline from erosion caused by manmade pressure from sand quarrying for construction purposes;
- Develop an integrated coastal management plan to curb the overuse of marine resources (shellfish, sea cucumbers and fish)

Educate the community about sustainable development (information and communications campaigns on priority topic, in particular pollution)

- Preserve water resources, as the water table, the island's only water source, is fragile
- The first two objectives are related as improving the waste processing system will lessen the risk of irreversibly polluting the water table, thereby addressing two of the territory's priority issues

ACTION PLAN AND BUDGET

An action plan was developed to achieve these objectives based on two main activities.



ACTIVITY 1

→ Improving waste management

INTEGRE supports the following projects:

- Improve livestock operations for better effluent management by starting up green and organic waste treatment and recycling businesses
- Support for developing the landfill by helping to procure appropriate equipment and building staff capacity; and
- Develop a technical waste management-facility that is suited to the territory and build a new landfill cell
- Awareness and outreach activities for the community (shoot a TV ad, produce sorting posters)
- Set up and equip a waste collection and sorting network in the island's villages (joint project with Futuna pilot site)



ACTIVITY 2

→ Preserving freshwater resources

- INTEGRE supports the following projects:
- Mark out the protective boundaries of four water catchments on Wallis, enforce regulations and set up facilities to prevent the resource from becoming contaminated
- Assessing household sewerage systems by undertaking an exhaustive baseline study to propose an appropriate blueprint

Budget:

XPF 3.04 M (i.e. EUR 25,500)

Operator: Wallis & Futuna Department of the Environment

Budget: XPF 22.80 M (i.e. EUR 191,125) Operator: Wallis & Futuna Department of the Environment



FUTUNA ISLAND

On Futuna, the natural biological and environmental equilibrium is essentially under pressure from pollution-related hazards. INTEGRE supports the authorities, appropriate departments and local stakeholders involved in preserving the territory's environment and resources. More details are provided below.

GEOGRAPHY

Futuna, with a surface area of 46 sq km, is located 230 km from Wallis and has steep terrain rising to 524 m. It has a river network made up of permanent rivers and temporary water courses. In 2014, it had a population of 613 living mainly

in the south-west. Some 1.8 km south-east of Futuna lies the small, uninhabited island of Alofi with a surface area of 18 sq km. These rugged volcanic islands are protected by a ring of fringing reefs but have no lagoon.

BIODIVERSITY

Futuna's deep, narrow valleys are covered in dense forest and its plateaux with secondary forest made up of coconut groves, fern heaths, Caribbean pine (*Pinus caribea*) plantations and food crops. Downstream from the water courses lie irrigated taro fields (Dentrand, 1999). Futuna and Alofi have outstanding endemic species rates with four bird sub-species, seven flowering plant, four freshwater fish and

ENVIRONMENTAL PRESSURE

Various threats to and constraints on Futuna's biodiversity:

- The water pollution hazard from unregulated landfills, long-standing stocks of untreated hazardous waste, such as batteries, household and pig effluent;
- Watershed erosion from deforestation and shoreline erosion;

11 land and freshwater mollusc species (Mary et al., 2005). Along Futuna's south-west coast, a fringing reef is formed by coral structures that were damaged in a 1993 earthquake. The island sustained extensive physical damage from Tropical Cyclone Thomas in 2010 that affected the north-eastern coast even more severely, particularly in terms of infrastructure and housing.

- Invasive species such as the black rat that are harmful to native biodiversity;
- Natural disasters like earthquakes, tsunamis and tropical cyclones;
- Overfishing for subsistence fishing and for shell and sea cucumber (beche-de-mer/trepang) exports.

INTEGRE IMPLEMENTATION

INTEGRE is part of a multi-stakeholder networking and consultation process and aims to develop sustainable environmental management in this fragile and remote island group.

SITE ASSESSMENT

The local site committee held a methodology consultation and implementation workshop in February 2014. A SWOT (strengths, weaknesses, opportunities and threats) analysis was carried out as the evaluation and decision-making aid.

SWOT ANALYSIS

STRENGTHS	WEAKNESSES		
 Knowledge base: baseline survey completed, problems identified (erosion, waste and water resource management), endemic species Little pressure on the environment (no population pressure) Regulatory instruments, strategy: an environmental code Consultative bodies, communication channels (chiefs: community involvement, information relays) Existing waste processing facility (territorial landfill site) 	 Coordination issues/differing interpretations: inter- departmental relations, law enforcement (resourc- es, penalties) Communication: little environmental awareness in the community, few associations Man-made pressure: erosion (farming methods, dirt roads) Waste and waste management: limited landfill site use (rough access road), Nanu'u landfill site use No drinking water/no SAGE (water resource devel- opment and management plan) Lack of human resources and funding Need to raise awareness: change behaiours Island means isolation Land tenure system Ageing population, falling birth rate Employment: 28% of the population No private sector 		
OPPORTUNITIES	THREATS		
 Regional partnerships: SPC, SPREP, ADEME, French Government, WF-NC collaboration (specific agreements) Synergy with other programmes: SPREP: waste management INTEGRE: methodology support, supervision, funding in response to needs Local land tenure: traditional management 	 Waste pollution hazard Logistics: no landfill site access road Water resource management: no SAGE survey Coral reef and marine resource damage Soil erosion (need for reforestation) Natural resource use for handicrafts Certain farming and livestock practices (effluent, erosion) External pressure: alien invasive species black 		

- Climate change (tsunami and earthquake hazards)
- High emigration, workforce loss

rats

• Progress in society and social change

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OBJECTIVES

The assessment helped better define the project strategy and keep future activities consistent. The following specific objectives were selected by the territory for the site's projects:

- Improve waste management by processing long-standing stocks of hazardous substances and starting up shipping-related businesses;
- Preserve water resources and freshwater biodiversity. The structures in Leava and Vainifano rivers for water supply and hydroelectricity purposes prevent endemic goby fish from migrating naturally;
- Preserve marine biodiversity by the curbing sediment pollution caused by watershed erosion from bush clearance,

random earthworks and crops planted on hillsides and by reducing the ciguatera hazard;

- · Develop an integrated coastal management plan;
- Awareness training for all stakeholders involved in freshwater management and area planning as well as the community to curtail pollution-causing behaviour (information and outreach campaigns on waste, sewage, farming practices and earthworks).

The first two objectives are related as improving the waste processing system will lessen the risk of irreversibly polluting the island's water courses and soil, thereby addressing two of the territory's priority issues.

ACTION PLAN AND BUDGET

An action plan was developed with the territory to achieve these objectives based on three activity groups.

ACTIVITY1

To improve waste management, INTE-GRE supports the following activities:

- Restoring the 20-year-old Nanu'u landfill prior to its permanent closure to put an end to chemical, physical and organic pollutants entering the ocean
- Strengthening the Futuna landfill (improved access, equipment purchases and staff training)

Budget:

XPF 26.13 M (i.e. EUR 219,052) Operator: Wallis & Futuna

ACTIVITY 2

To preserve freshwater resources, IN-TEGRE supports the following initiatives:

- A review of the Futuna and Alofi water resource development and management plans (SAGE)
- Awareness training for schoolchildren, communities and traditional authorities in sustainable water resource management on Futuna based on recent restoration work to the water supply following damage sustained during Cyclone Thomas

Budget:

XPF 2.56 M (i.e. EUR 21,500) Operators: Wallis & Futuna Department of the Environment/Wallis & Futuna

ACTIVITY 3

To control watershed erosion INTEGRE supports the following initiative: Reforestation of Futuna's watersheds

to curb soil leaching, strengthen biodiversity, develop a local timber industry and foster climate-change and cyclone resilience

Budget:

XPF 2.66 M (i.e. EUR 22,349) Operator: Wallis & Futuna Department of Agriculture

5 **COOPERATE AND MAXIMIZE REAULTS** TO ENSURE A TERRITORY-WIDE REACH AND SHARE KNOWLEDGE

CROSS-SECTOR ACTIVITIES TO ENSURE A TERRITORY-WIDE REACH

INTEGRE also implements cross-sector theme-based activities to create bonds between the various pilot sites, help Wallis & Futuna join OCT regional networks and make use of Pacific knowledge. More information is provided below on these cross-sector activities:

ACTIVITY 1

→ Hazardous waste collection and disposal

This activity involves developing a territory-wide hazardous waste management strategy and setting up sustainable shipping businesses. Hazardous waste management, i.e. of used oil, batteries and hospital waste, etc., is a major issue in terms of potential impact on the environment and human health and the reason why territory-wide activities have been implemented. As a result, the long-standing stocks have been analysed, packed and shipped and sustainable collection and shipping business set up.

Used oil and battery processing is covered by international regulations. Wallis & Futuna do not have the required infrastructure for processing hazardous waste, which need to be shipped overseas to other countries with approved processing companies such as New Caledonia, New Zealand and Australia. Also, dangerous waste shipment and

disposal are covered by the Basel Convention that governs transboundary movements of hazardous waste and its disposal to specific standards. European Union member countries and, therefore, OCTS have ratified the convention and are required to enforce it. The chemical composition of used oil needs to be analysed to be classified and processed in the most appropriate manner. Oil contaminated with PCBs must undergo highly specific processing and so must be sent to approved companies. Decontamination is very costly.

Total

INTEGRE share: **XPF 58.35 M (i.e. EUR 489,000)** Territory share: **XPF 13.72 M (EUR 115,000)** Operators: Wallis & Futuna Department of the Environment Socadis New Caledonia and Pacific Community

ACTIVITY 2

→ Integrated coastal management plan

- Develop a climate-change adaptation strategy by writing a framework document outlining the various vulnerabilities and adaptation options in the territory for responding to climate change. Several action plans will flow on from the document at several levels, be they territory, island or village.
- Set up integrated management plans at two sites on Futuna by participatively developing two action plans and management measures that are conducive to sustainable local development and environmental conservation and to maintaining quality living conditions
- Build local stakeholder capacity by providing awareness training to civil-society players, training to government departments and support to the territory's decision-making and consultative bodies

Budget: XPF 9.28M (i.e. EUR 77,800) Operator: Pacific Community

ACTIVITY 3

→ Setting up a pilot organic farm network

This activity is part of efforts to enhance and develop organic farming across the South Pacific region. The aim is to develop sustainable, environmentally-sound organic farming that is suited to island settings. There are three activities:

- Promote and develop organic farming in the three French-speaking Pacific OCTs
- Strengthen technical knowledge in organic farming and disseminate it to farmers and technicians in the territories
- Strengthen the POET-Com regional network (Pacific Organic and Ethical Trade Community) by ensuring the French-speaking OCTs participate in it.

Three pilot organic farms have been set up in the OCTs, namely at Houailou Agricultural High School, New Caledonia; Wallis Agricultural High School, Wallis & Futuna; and Opunohu Agricultural High School, French Polynesia. Farming trials, vocational and technical training courses and experience sharing have been implemented. The lessons learnt are shared across the Pacific and discussed at regular regional exchanges.

In the case of Wallis & Futuna, the following activities are planned:

 Conduct farm trials at the Wallis & Futuna Agricultural High School in three areas, namely fertility, disease/pests and plant material

- Provide technical assistance for implementing the Research-Action Plan (trials, data collection and analysis, training and information)
- Hold technical information sharing meetings, training sessions for farmers, students and technicians and share the knowledge produced locally and regionally on the network.

Budget: XPF 20 M (i.e. EUR 167,602) Operators: Pacific Community and New Caledonia Chamber of Agriculture

ACTIVITY 4

→ Communication and information campaigns

This activity consists of conducting information campaigns to heighten awareness in the community and schools of the following issues:

- protecting the environment
- waste management
- water resource preservation.

Awareness is crucial, as it contributes in many cases to the project's success by involving the whole community.

Budget: XPF 4.6 M (i.e. EUR 34,000) Operators: Pacific Community and Wallis & Futuna Department of the Environment

SHARING AND DISSEMINATING

INTEGRE is conducting various trials and different results have arisen from the project's implementation. Communication actions help share this new knowledge and these new skills more widely.

TARGET GROUPS

Communication efforts should be aimed at a specific audience, such as partners, experts and decision-makers, but also at the general public who are increasingly concerned about environmental issues. Communication is designed for consumption at local pilot-sites, territory-wide (Wallis & Futuna), regionally in the South Pacific and internationally. As a result, the target groups are varied:

- Local project partners, e.g. local committees, operators, partners involved
- Local decision-makers and public authorities that are directly or indirectly concerned by the project and their departments, i.e. the Office of the Prefect, territorial technical departments, kings, custom ministers, territorial assembly and councils, French national-assembly members and senators, representatives of the French ministry of overseas territories and the European Union
- Local stakeholders involved in similar environmental projects, to facilitate exchanges and feedback in both direc-

tions, i.e. environmental associations, donors, project leaders, the scientific community, the educational community, tourist information bureaus and NGOs

- Local, regional, French overseas and international media, whether web-based, paper press or television
- General public and schools
- Economic stakeholders operating in the coastal-area pilot sites, e.g. mining companies, fishers and hotels
- Regional project partners and groups formed for project purposes so as to learn lessons from everyone's experience and develop regional cooperation: New Caledonia, French Polynesia, Pitcairn, Wallis & Futuna
- Regional and European organisations that are directly or indirectly involved in the project such as regional cooperation departments, French Overseas Ministry and Europe-Pacific cooperation departments, SPC (New Caledonia and Fiji), the European Union, SPREP (Secretariat of the Pacific Regional Environment Programme), and POET-Com.

MESSAGES

Depending on the target groups, the messages will cover the following concepts:

- Wallis & Futuna has an outstanding natural heritage that needs to be preserved for future generations
- Integrated coastal management is an appropriate, tried and tested solution for sustainable development in South Pacific islands. It is environmentally-sound and benefits local communities
- The communities of Wallis & Futuna are closely and actively involved in making decisions and implementing activities for preserving and developing their environment and applying lasting solutions
- Solutions and activities successfully tried out on Wallis & Futuna can be used as examples and reproduced elsewhere, particularly in the Pacific region and other overseas territories
- INTEGRE provides assistance for local integrated management policies so as to strengthen and improve the process behind shared management of the environment. Environmental departments are also special project partners.
- Natural environment conservation helps societies become more resilient to global change and natural disasters. It also helps maintain traditional culture and fosters greater harmony
- It is beneficial to OCTs to cooperate with each other and other Pacific territories when introducing regional solutions to environmental and sustainable-development issues. The European Union and SPC provide them with support for developing their projects.

OPEN ACCESS TO INFORMATION

Various communication resources and materials have been set up:

- A website presenting the project and its progress by posting news items and downloadable documents
- A digital library offering open access to all the materials generated by project implementation including reports, posters, workshop minutes, slideshows, flyers and photo and video library
- A graphic charter and accessories bearing the INTEGRE logo to improve the project's visibility and branding

INTEGRE is promoted in Wallis & Futuna and its results disseminated by

- Issuing press releases to the local press, including WF 1ere TV, local radios, and to partners
- Posting content on the website
- The project management team and some of its other teams taking part in local, regional and international events to talk to the public and partners at agricultural and science fairs, forums, workshops and conferences. Appropriate materials are produced for these events.

Website homepage

INTEGRE ACTION PLAN • WALLIS AND FUTUNA 2014 > 2018

BALANCE SHEET AND APPENDICES

PROJECT OVERVIEW

Activities	Total INTEGRE activity	Total INTEGRE site			
WALLIS					
Strengthen the landfill and management facilities (cell; support for the landfill staff)	EUR 140,900/XPF 16.8 M				
Conducting awareness training with senior and junior secondary schools	EUR 11,225/XPF 1.3 M	EUR 186,625 XPF 22.3 M			
Waste processing and recycling (improve animal husbandry)	EUR 9,000/XPF 1.2 M				
Managing water resources (mark out protective watershed boundary; assess household sanitation facilities)	EUR 25,500/XPF 3 M				
FUTUNA					
Strengthen the Futuna Landfill and restore the Nanu'u Landfill	EUR 219,052/XPF 26.1 M	EUD 242 001			
Water resource management (SAGE water supply review; assistance for restoring the water supply system)	EUR 21,500/XPF 2.6 M	XPF 31.4 M			
Restoring a Futuna watershed	EUR 22,349/XPF 2.7 M				
ACTIONS TRANSVERSALES					
Waste processing (dispose of used oil and battery stocks and set up sustainable management. Strengthen waste sorting in the villages).	EUR 519,000/XPF 61.9 M				
ICM approach (develop an ICM plan)	EUR 77,800/XPF 9.3 M	EUR 781,642 XPF 93.3 M			
Environmental communication and awareness campaign on Wallis & Futuna	EUR 34,000/XPF 4.1 M				
Pilot organic farm project on Wallis	EUR 150,842/XPF 18 M				
Reserve (unallocated)	EUR 72/XPF 8592				

TOTAL BUDGET WALLIS & FUTUNA: EUR 1,231,240 / XPF 146,926,014

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Island territories are up against major issues. The islands' specific requirements can be catered for and local communities best served by addressing the issues through integrated environmental management. This project was set up to achieve this aim and tried to meet the challenge!

"

Julie PETIT INTEGRE Project Deputy Coordinator for Wallis & Futuna

Julie joined SPC in November 2013 as INTEGRE Deputy Project Coordinator for Wallis & Futuna. Prior to that she worked at CRIOBE (Island Research Centre and Environmental Observatory) as a project engineer responsible for ReefBase Polynesia. The project driven by CRISP and the World Fish Centre aimed at creating an international database on coral reefs and led to scientific collaboration with various French Polynesian government bodies and research organisations. At CRIOBE, Julie also conducted research on French overseas territory reef biodiversity and collaborated under many projects with French Polynesian ministries and agencies and international organisations (French Marine Protected Area Agency, French Coral Reef Initiative, Marine Mammal Research Centre, French Polynesian Ministry of the Environment, University of French Polynesia, Te Mana O Te Moana Association and the National Museum of Natural History).

Julie holds a master's degree in the Mediterranean environment and sustainable development, majoring in aquatic and marine environment mechanisms and management, and began her career as a research assistant at the Tropical and Mediterranean Biology and Ecology Centre. She has worked for the European BIOMEX Programme and on processing and setting up various research programmes, including facilitating an international research project in the South Pacific.

Her main areas of expertise are the Pacific region's biodiversity, naturalist descriptions of marine fauna, French Polynesian legislation on marine species, extension work, teaching, processing and setting up international databases and facilitating various research programmes.

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