



# INTPA-NEAR Environment & Climate Week

27-31 March 2023  
Brussels, Belgium



# Session: Nature-based solutions and marine/coastal restoration

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Examples from EUD Guyana

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## 2 projects examples

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RESEMBID (Caribbean  
OCT's)



GCCA+ (Suriname)



# First Project Example: RESEMBID

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RESEMBID (Caribbean  
OCT's)

# First project example: RESEMBID

The programme supports the sustainable human development efforts of the 12 Caribbean OCTs with a focus on three thematic priorities:

- Resilience
- Sustainable Energy
- **Marine Biodiversity**

The economies of the OCTs, in keeping with many small island developing states (SIDS) are disproportionately reliant on tourism and imported fossil fuels, and are highly exposed to extreme weather events – particularly tropical cyclones

These thematic priorities are designed to support the effort of the OCTs to address or mitigate these vulnerabilities. A fourth cross-cutting area was added with the outbreak in early 2020 of the COVID-19 Pandemic.

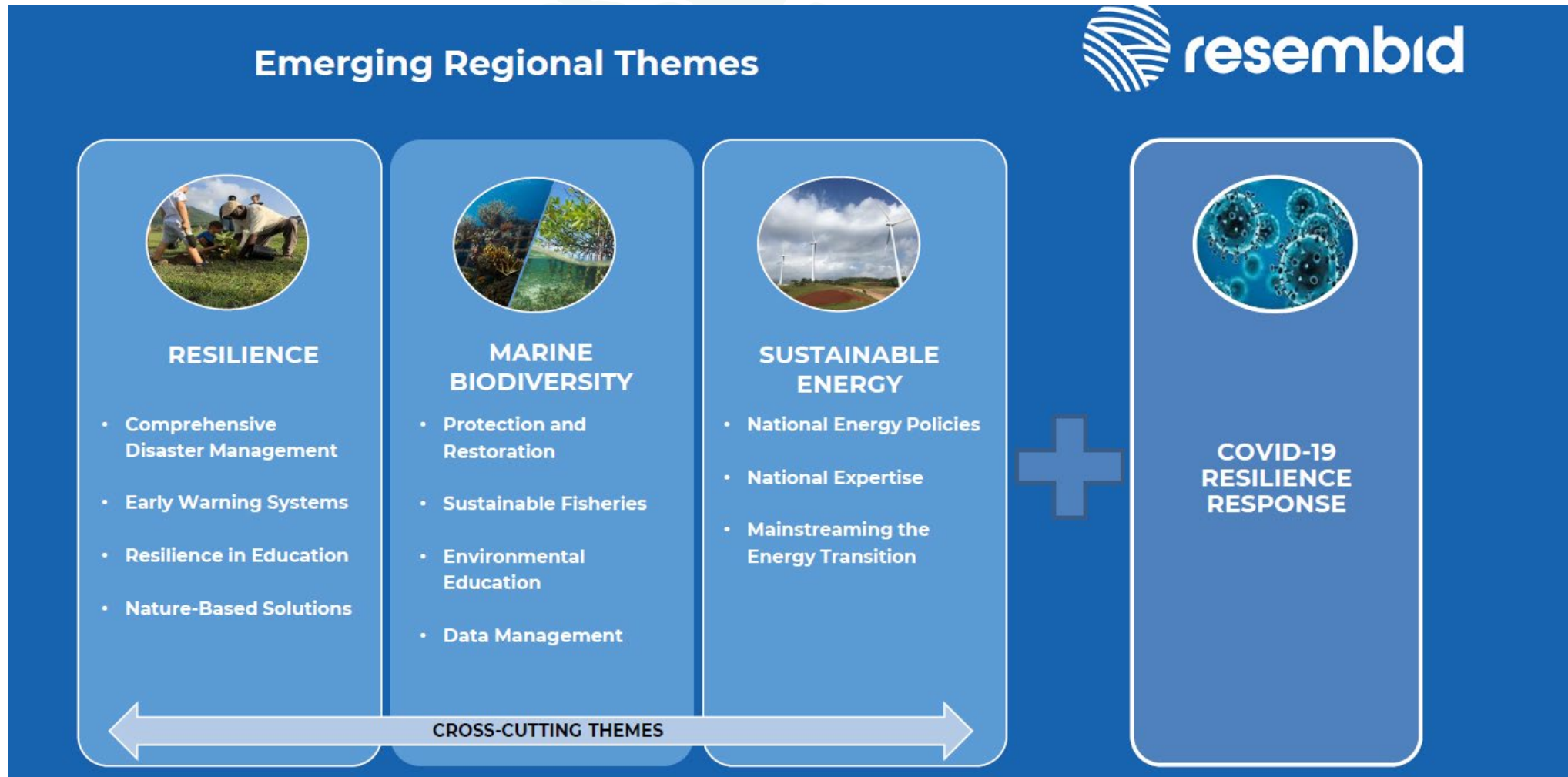
Overall budget Decision: **42,610,000 EUR**

Beneficiaries: **all 12 Caribbean OCTs (Anguilla, Aruba, Bonaire, British Virgin Islands, Cayman Islands, Curacao, Montserrat, Saba, Saint Barthelemy, Sint Eustatius, Sint Maarten, and the Turks and Caicos Islands.)**

Two Implementing Agencies:

- **Expertise France:** 39,610,000 EUR
  - Focus: all 3 components
- World Bank: 3,000,000
  - Focus: Disaster Risk Financing

# First project example: RESEMBID



# First project example: RESEMBID

## Marine Biodiversity Challenges in Caribbean OCT's (1/2):

- In general, many OCTs have noted limited capacity to sustainably manage their natural resources. This extends to limited supporting policies, limited capacity to implement and enforce policies/regulations; limited funds to manage natural resources; limited staff with sufficient experience on particular topics
- Living cover of Caribbean reef-building corals has declined by at least 50% since systematic reef monitoring began in the late 1970s, in large part due to ocean warming.
- Fisheries (like Queen Conch) are threatened by the absence of comprehensive stock assessments in many cases, due to limited resources for undertaking regular and large-scale detailed assessments
- Exponential growth in tourism has led to an increase in recreational pressures on coastal resources. This increase in use has led to eutrophication, trampling of seagrass, coral reef loss, mangrove dieback, and an overall loss of biodiversity and climate change resilience for many OCTs.
- Limited or no environmental data for Governments to make informed policy decisions
- Poor waste disposal systems
- Limited capacity to monitor, report, and verify information on environmental conditions (e.g. water quality, coral disease, marine park monitoring, fish stocks)

# First project example: RESEMBID

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## Marine Biodiversity Challenges in Caribbean OCT's (2/2):

- Sargassum inundation events have become a recurrent natural challenge for coastal communities throughout the OCTs
- Lack of a standardised school curriculums in the OCTs often lead to inadequate education on critical topics like climate resilience and the local environment
- Some OCTs do not have established sustainable area-based (spatial) management plans for their marine and coastal environments. This needs data and evidence-based policy development
- Limited to no structured education or awareness campaigns related to nature, environment and the impacts of climate change





# First project example: RESEMBID

**Marine Biodiversity** SHARE IN PORTFOLIO: 1/3

17 PROJECTS total

(of which) 2 REGIONAL

Under Implementation: 17

Total: **EUR 8.2M**

## Portfolio Themes:

- Marine biodiversity protection and restoration
- Sustainable fisheries
- Protected area management
- Environmental education
- Data management for decision making



# Marine biodiversity Protection & Restoration



BONAIRE



**Realising a blue economy on Bonaire:  
Restoring marine biodiversity and promoting sustainable recreation in Lac Bay**

€ 797,480

Project under implementation

STINAPA

Duration: 13 months

Start Date: 10/07/2022

End Date: 09/07/2023

**PURPOSE:**

To advance progress toward creating a blue economy on Bonaire

**TO ACHIEVE:**

1. Restored seagrass and coral reef habitats in Lac Bay
2. Functioning water quality monitoring programme
3. Enhanced institutional capacity to enforce environmental laws and regulations in and around Lac Bay
4. Improved public education on environmental conservation

**COMMENTS:**

Priority theme: Marine Biodiversity conservation / Protected Area Management  
NCE requested



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# Sustainable Fisheries





## Turks and Caicos Islands



### Sustaining queen conch (*Strombus gigas*) fisheries and livelihoods in the Turks and Caicos Islands

€ 364,742

Project under implementation

Joint Nature Conservation Committee

Duration: 14 months

Start Date: 11/05/2022

End Date: 10/07/2023

#### PURPOSE:

A viable and sustainable queen conch fishery informed by a comprehensive conch abundance survey and improved estimates of sustainable harvest levels sufficient to meet CITES requirements and support local livelihoods.

#### TO ACHIEVE:

In-country knowledge, capabilities and resources in place resulting in improved long-term sustainability and governance in the TCI queen conch fisheries and compliance with the complex requirements of CITES

#### COMMENTS:

Priority theme: Sustainable Fisheries  
NCE requested



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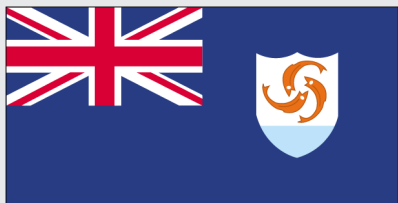


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# Protected Area Management



# ANGUILLA



## Transforming Anguilla's Marine Parks: Institutionalising sustainable and collaborative management solutions

€ 592,894

Project under implementation

Anguilla National Trust

Duration: 18 months

Start Date: 22/02/2021

End Date: 21/06/2023

### PURPOSE:

The protection and sustainable use of Anguilla's coastal and marine habitats and biodiversity through an integrated, collaborative management approach.

### TO ACHIEVE:

Transformation of Anguilla's marine park system from paper park status to an effective, financially-sustainable network based on already-tested collaborative management approaches.

### COMMENTS:

Priority Theme: Protected Area Management / Innovative Finance  
NCE requested



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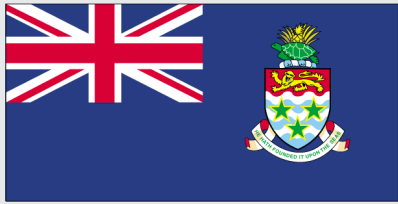
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# Environmental Education





## CAYMAN ISLANDS



### Adapting to Covid-19: Urgent technical assistance to support CCMI's capacity to be a regional leader in protecting marine biodiversity and improving resilience.

€ 203,384	Project under implementation	The Central Caribbean Marine Institute
Duration: 13 months	Start Date: 22/02/2022	End Date: 21/03/2023

#### PURPOSE:

To strengthen CCMI's capacity to manage the impacts of the global pandemic, by improving health and safety features of the facilities infrastructure and adapting emergency management processes, to support enhanced operational resilience in a Covid-19 environment.

#### TO ACHIEVE:

1. COVID-19 safe research and education facilities so that marine research can continue in the context of the COVID-19 pandemic
2. Lessons learned and training materials for other environmental research and education facilities in the OCTs



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# Data Management



ARUBA



### Validation of replicable methods for coastal ecosystem monitoring

€ 150,287

Project under implementation

Metabolic Foundation

Duration: 12 months

Start Date: 02/08/2022

End Date: 01/08/2023

#### PURPOSE:

To contribute to the increased resilience of Aruba's marine and coastal ecosystem to the impacts of climate Change

#### TO ACHIEVE:

Increased access by scientists and policy makers to publicly available data on Aruba's marine and coastal ecosystem to support improved environmental monitoring, conservation and stewardship

#### COMMENTS:

Priority theme: Data Management for Decision Making



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# Second project example: GCCA+ phase 2 Suriname

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GCCA+ (Suriname)



# Second project example: GCCA+ phase 2 Suriname

*“Resilience building through integrated water resource management, sustainable use of mangroves and coastal ecosystems management”*

- Implemented by UNDP Suriname
- Duration: April 2020
- October 2023
- Funding: European Union and UNDP
- Total Budget: 5,500,000.00 €

- Contribution to SDGs:





# Second project example: GCCA+ phase 2

## Suriname

### Challenges in Suriname:

- Small Island Developing States (SIDS)
- Sea level rise and increased storm surges lead to coastal erosion and flooding; decreased rainfall leading to lower river discharge and saltwater intrusion land inwards
- 90% of population lives on coastline
- Coastal ecosystems (mangroves, wetlands) are threatened and degraded by infrastructure development and other human activities
- Regional climate modelling has shown that the following effects of climate change can be expected in Suriname:
  - Increase in mean annual temperature of 4.8°C by 2080;
  - Decreases in rainfall in all seasons; up to 34% decrease in mean annual rainfall by 2080;
  - Likely increase in the frequency and/or magnitude of storm surge in the coastal areas;
  - Predictions about the magnitude of sea level rise vary up to 1.45m by 2100.

# Second project example: GCCA+ phase 2

## Suriname

### **GCCA+ Phase 1 Main Achievements (2016 – 2019):**

- 12 permanent Mangrove sampling plots installed for biodiversity monitoring.
- Mangrove Biodiversity Data Collected
- Improved patrolling and monitoring in 4 Coastal protected areas through purchase of boats and vehicles for the NCD
- Rehabilitation of mangrove in Beringhole, Nickerie and 3 sediment trapping units Installed
- Beekeepers trained in coastal districts Marowijne, Commewijne, Paramaribo, WanicaSaramaccaand Coronie
- Farmers trained in climate smart agriculture techniques
- National Mangrove Strategy endorsed by Ministry of Spatial Planning Land and Forest management
- Calibration of Hydro-Bid model for 4 Mayor river basins in Suriname: Nickerie; Coppename; Saramacca; Suriname
- District Disaster Risk Management plans developed
- Decades of Historic data digitized

# Main Objective phase 2:

To support Suriname in adapting to the main effects of climate change by improving management of water resources and coastal ecosystems in ways that increase the well-being of coastal communities through gender responsive capacity

COMPONENT I : Increased resilience of coastal systems and communities in the Nickerie and Coronie districts through gender responsive climate actions

COMPONENT II : Improved national governance in the of Integrated Water Resource Management (IWRM) Integrated Coastal Zone Management (ICZM).







## Activities Component 1

Red = Not achieved/Not started - Yellow = Ongoing - Green= Completed

Progress achieved in 2022 Outcome 1: Increased resilience of coastal ecosystems and communities in Nickerie and Coronie districts against the threat of sea level rise	
Outputs	Activities
Output 1.1: Improved regulatory framework, awareness and capacity for sustainable management and use of mangroves and coastal ecosystems	Activity 1.1.1: Support management of Multi-Use Management Areas (MUMAs), in line with the Bigi Pan and Noord Coronie MUMA Management Plans 2019 (including operational structure and financial support)
	Design & Implementation of the management structure of Bigi Pan MUMA & NCD Comm Strategy Coronie and Nickerie
	Support the set-up of small infrastructure (control station Coronie and enter Bigi Pan) for improvement MUMA management in the Western Districts.
	Operational support for the execution of policies and measures , including , capacity building NCD staff, provision of equipment, and tools for field control based on Annual Management Plan
	Activity 1.1.2: Support development of enabling regulations for the conservation, sustainable use and management of mangrove ecosystems in line with the National Mangrove Strategy and Environmental Law
	Procure legal support for execution review and formulation recommendations in line with Mangrove Strategy (Environment Act , Forest management act & entrencefee)
	Development Entrepreneurschip
	Support execution of recommendations for awareness raising and improvement of sustainable use of mangrove areas

Progress achieved in 2022 Outcome 1: Increased resilience of coastal ecosystems and communities in Nickerie and Coronie districts against the threat of sea level rise	
Outputs	Activities
<b>Output 1.1:</b> Improved regulatory framework, awareness and capacity for sustainable management and use of mangroves and coastal ecosystems	<b>Activity 1.1.3: Strengthen educational and awareness programmes on coastal ecosystems linked to climate action aimed at groups that employ economical activities in mangrove ecosystems and the general public (including women/men/youth)</b>
	Support NCD Nickerie office restauration and upgrade Education department
	Based on result activity 1.1.2 1.develop specific education and awareness programmes aimed at women, youth and entrepreneurs
	<b>Activity 1.1.4: Improve value-chains for sustainable economic development in Nickerie and Coronie coastal ecosystems, by supporting gender responsive entrepreneurship including in the nature tourism sector</b>
	Execution of actions under Call for proposal three thematic areas
	Contribution Restauration Dyke & cross over Bigi Pan Entrance
	Procure Technical Assistance for assessment to develop Gender Strategy and Action plan in relation to mangrove conservation, sustainable use , water management and disaster risk reduction

Progress achieved in 2022 Outcome 1: Increased resilience of coastal ecosystems and communities in Nickerie and Coronie districts against the threat of sea level rise	
Outputs	Activities
Output 1.2: Improved knowledge on the Surinamese mangroves and on the effects of climate change on the coastal ecosystem and wider coastal area	Activity 1.2.1: Improve and expand Mangrove Biodiversity Monitoring System to include field work, remote sensing and capacity building
	Mangrove Monitoring and expansion of Sampling plots with SBB Ongoing
	Activity 1.2.2: Improve hydrological monitoring of coastal ecosystems (including capacity strengthening of professionals in hydrological monitoring)
	Support CIMH for Hydro-Met departments Min of Public Works
	Installation of Hydro-Met Equipment
	Activity 1.2.3: Improve understanding of coastal ecosystems dynamics by integrating research results from 1.2.1 and 1.2.2, leading to proposed measures for climate action
	Disseminate preliminary research results

**Progress achieved in 2022 Outcome 1: Increased resilience of coastal ecosystems and communities in Nickerie and Coronie districts against the threat of sea level rise**

<b>Outputs</b>	<b>Activities</b>
<b>Output 1.3: Increased capacity of Nickerie and Coronie districts for effective and immediate gender responsive climate actions</b>	<b>Activity 1.3.1: Increase capacity of communities and local authorities in planning and preparation of adaptive management for immediate gender responsive climate action based on research results</b>
	Support Capacity DRR Operation Strategy in Nickerie and Coronie
	<b>Activity 1.3.2: Develop participatory early warning system for climate change impacts for Nickerie and Coronie Districts</b>
	Development Community Early Warning System
	<b>Activity 1.3.3: Increase capacity of communities and local authorities in implementation of social inclusive Disaster Risk Reduction (DRR) for Nickerie and Coronie</b>
	Capacity DRR Support District Commissioner's Offices





## Activities Component 2

Progress achieved in 2022Outcome 2: Improved national governance in the areas of Integrated Water Resource Management (IWRM) and Integrated Coastal Zone Management (ICZM)	
Outputs	Activities
<b>Output 2.1: Strengthened regulatory framework for Integrated Water Resource Management (IWRM)</b>	<b>Activity 2.1.1: Assess and monitor current uses of surface water (incl. area and water quality) with the objective to determine proposed water quality standards</b>
	2.1.1 a & b Support Ministry of Public Works
	2.1.1 c Procure additional equipment Min of Public Works
	<b>Activity 2.1.2:Review and provide recommendations to improve existing regulatory framework on water management in light of Integrated Water Resource Management (IWRM) requirements</b>
	Execution Water quality assessment and recommendations
	Review regulatory Framework, & prepare recommendation for Improvement/updating of regulatory framework Water management

Progress achieved in 2022 Outcome 2: Improved national governance in the areas of Integrated Water Resource Management (IWRM) and Integrated Coastal Zone Management (ICZM)	
Outputs	Activities
<b>Output 2.2: Strengthened institutional capacity and coordination for Integrated Water Resource Management (IWRM) in Suriname</b>	<b>Activity 2.2.1: Support actions and process leading to coordination of Integrated Water Resource Management (IWRM)</b>
	Procure Senior technical Support for coordination in governance and IWRM Min of Natural Resources
	Support (institutional and technical) the Water Department Min Nat Resources
	<b>Activity 2.2.2: Capacity strengthening of water professionals in Suriname, in line with the Integrated Water Resource Management (IWRM) Action Plan</b>
	Identify capacity gap based on IWRM Plan and support development Capacity strengthening strategy
	Training of water professionals in identified disciplines/specialization
	<b>Activity 2.2.3: Facilitate international collaboration and South-South exchanges to improve Integrated Water Resource Management (IWRM)</b>
	Water related Conference participation, participation of delegation Suriname in World Water Forum in Senegal; SIWI etc,

Progress achieved in 2022Outcome 2: Improved national governance in the areas of Integrated Water Resource Management (IWRM) and Integrated Coastal Zone Management (ICZM)	
Outputs	Activities
Output 2.3: Improved knowledge base of policy-makers for integrating latest research insights and up-to-date data	Activity 2.3.1: Strengthen data sharing platforms and develop knowledge materials for awareness raising in Integrated Water Resource Management (IWRM) and Integrated Coastal Zone Management (ICZM):
	Support operationalization of Suriname Environmental Information Network (SMIN)
	Explore increase digital access in Nickerie and Coronie Districts (target groups ITP communities, Farmers in remote locations)
	Awareness engagement for youth on climate change including effects of water resources
	Procure assistance for Development and Publication of Weather and Water reports MDS and WLA
	Activity 2.3.2: Execute robust awareness programmes on Integrated Water Resource Management (IWRM) and Integrated Coastal Zone Management (ICZM) for policy makers and media
	Activities related to: Technical assistance , printing, meetings, supplies, video and audio production; and training





## Communication & Visibility





# Examples:

- Handover of supplies to relevant Ministries
- World Water Day – Story writing Competition and Handover prizes Story telling competition
- Information session of the groundwater wells
- Participation in World Health Day event
- Promotion of environmental awareness and participation among the general public, including schools
- Handover of the prizes to the winners of the drawing competition in Nickerie and Coronie as part of World Mangrove Day activity



# Thank you

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