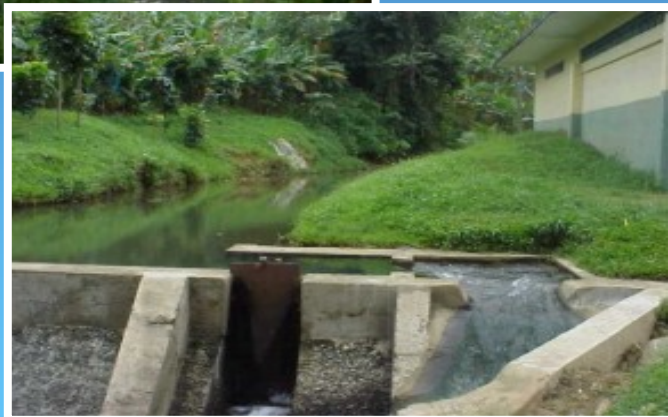


# Integrated Water Resources Management (IWRM) Planning

## What is an IWRM Plan – Why do we need one?



*SOPAC IWRM Planning Meeting*

Alofi, Niue

21<sup>st</sup> to 22<sup>nd</sup> July 2008

# Presentation Outline

## Part 1

- Water resources management in SIDS context
- Background on IWRM
- IWRM Planning
  - What is an IWRM Plan
  - IWRM Plan context
  - Elements of an IWRM Plan

## Part 2

- IWRM Roadmapping

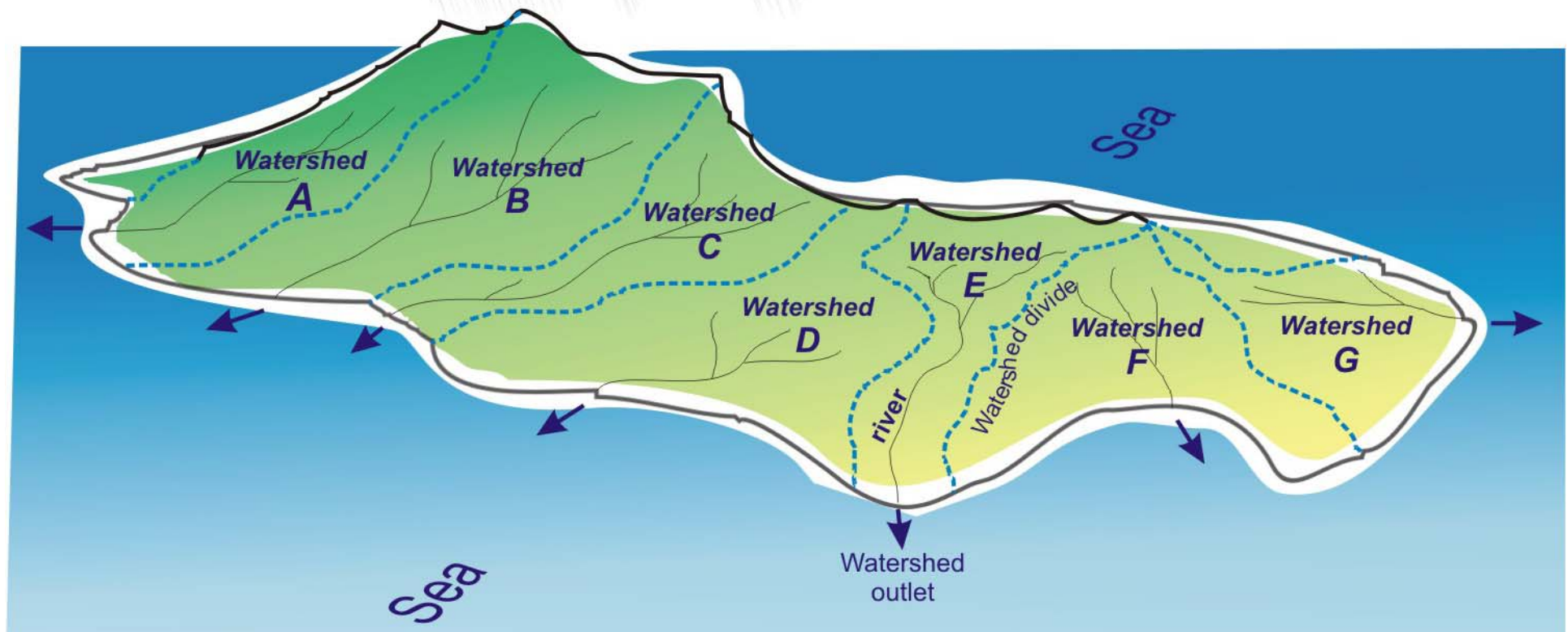
# Water resources management

## Context for SIDS

- Small size; limited land mass, populations
- Fragile diverse, unique, ecosystems
- Small, open, vulnerable economies
- Highly sensitive to climate change impacts
- Typically water-scarce
  - Limited reserves
  - Impacted by pollution

# Watershed approach to IWRM

- General concepts
  - “Ridge to Reef”
  - “White water to Blue water”
- Geographic management unit
  - Watershed and coastal zone “of most impact”





Look at:  
Water supply  
sources  
LBS of pollution  
and within  
watershed



3-D perspective

# Water supply

Upper watershed  
Surface sources

*Within forest areas or  
at margins*

Catchment  
area



Image © 2008 DigitalGlobe  
Image NASA

# Water supply

Lower watershed

**Ground water sources**

*Limestone, sands, fractured rock*

Aquifer recharge zone



Image © 2008 DigitalGlobe  
Image NASA

# Water supply

Coastal Interface  
*Desalination*





# Pollutant sources

**Upper watershed**  
**Forestry,**  
**agriculture**

Deforestation, soil erosion, sediment loading, chemical pollution



Image © 2008 DigitalGlobe  
Image NASA

# Pollutant sources

**Mid watershed**  
**Agriculture,**  
**settlement,**  
**industry (incl.**  
**mining/quarrying)**  
Soil erosion, waste  
discharge



Image © 2008 DigitalGlobe  
Image NASA

# Pollutant sources

**Lower  
Watershed  
Settlement,  
Commercial,  
Industrial**

Solid and liquid  
waste discharge



Image © 2008 DigitalGlobe  
Image NASA

# Pollutant sources

Coastal interface

*Settlement, Commercial (incl. Tourism), Industrial, Recreation*

Shoreline deg.,  
Waste discharge



# Pollutant sources

Offshore  
coastal  
environment  
*Shipping, Fishing,  
Recreation*  
Waste discharge

Image © 2008 DigitalGlobe  
Image NASA



Eye alt 5694 ft

# Watershed management:

Minimize LBS of pollutants into water supply – watershed management interventions in catchments and recharge zones

Catchment area

Aquifer recharge zone



Image © 2008 DigitalGlobe  
Image NASA

# Background on IWRM

- 1992 International Conference on Water and the Environment (ICWE) in Dublin, Ireland
- Dublin Statement: laid the foundation for guiding integrated management of the world's water resources
- The principles are:
  - Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment;
  - Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels;
  - Women play a central part in the provision, management and safeguarding of water;
  - Water has an economic value in all its competing uses and should be recognised as an economic good

# Background

- 2002 the World Summit on Sustainable Development (WSSD) was held in Johannesburg, South Africa
- Johannesburg Plan of Implementation (JPOI) calls for all countries to: “Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries”



# Background

- Millennium Development Goals (MDG's) national commitments:
  - Halve, by the year 2015, the proportion of people without access to safe drinking water (reaffirmation of Millennium Development Goal).
  - Halve, by the year 2015, the proportion of people who do not have access to basic sanitation.
  - Develop integrated water resources management and water efficiency plans by 2005

# Background

- What is IWRM?
  - A systematic process for the sustainable development, allocation and monitoring of water resource use in the context of social, economic and environmental objectives
- Means that all the different uses of water resources are considered together
- Water allocations and management decisions consider the effects of each use on the others

# What is an IWRM plan?

- A strategic statement that details a country's actions toward to sustainable management of its water resources
  - Scope - Fresh and coastal waters
  - Defines the issues and the strategic responses by all actors
  - Lays out the indicative cost outlay required for action over short to medium-term; basis for sourcing funding internally or externally

# Context for IWRM Plan

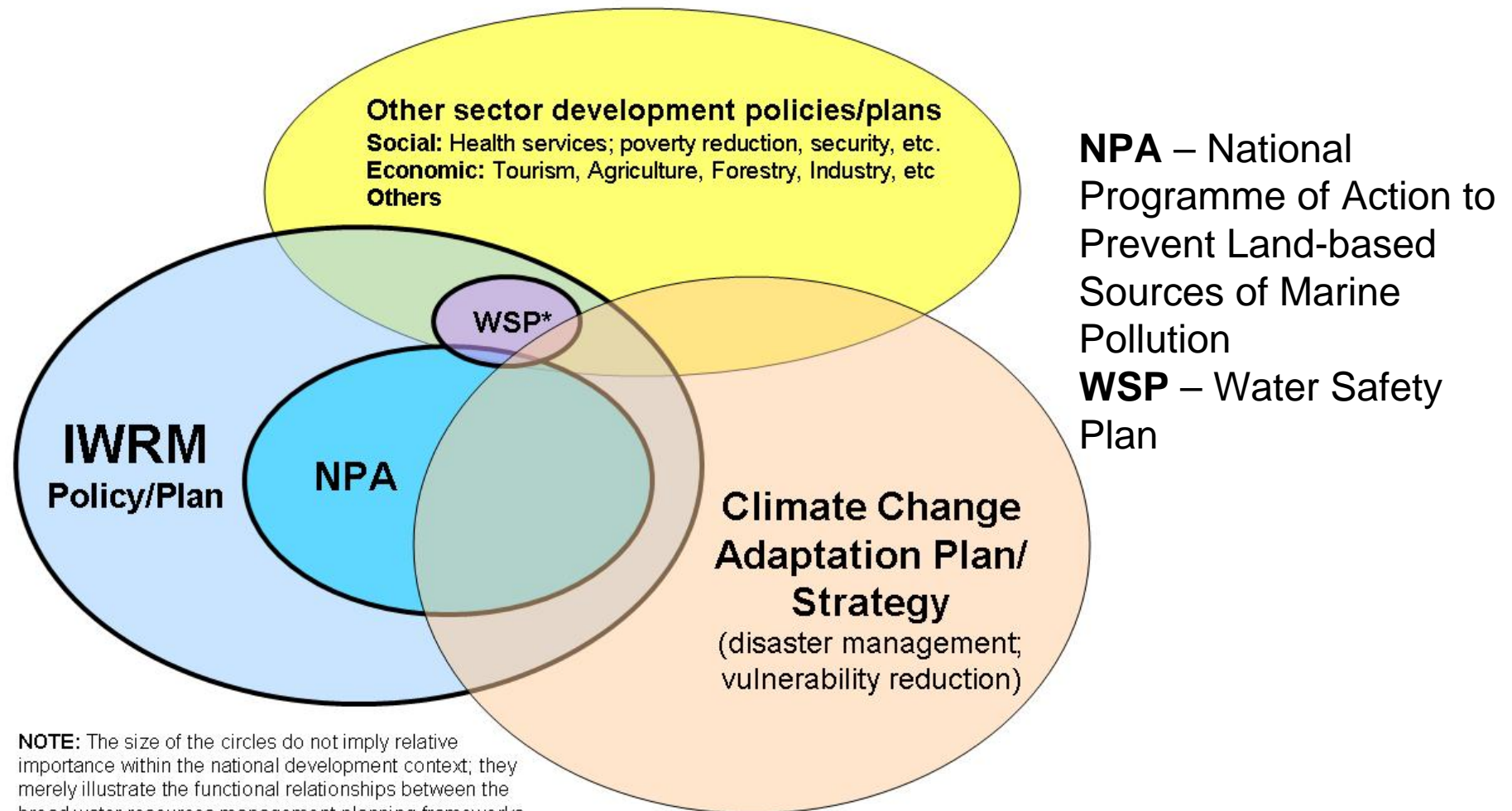
- **Link to other strategies and plans**
  - NEMS and other existing national plans/strategies
  - National MDG strategies
  - National poverty reduction strategy papers (PRSPs)
  - National 5-year plans
  - National sustainable development strategies
  - National Biodiversity Strategy and Action Plans

# IWRM Key Tools

- Other water planning frameworks
  - Water Use Efficiency Plans
  - Water Safety Plans
  - Water Demand Management Plans
  - National Plans of Action (pollution control)
  - Waste Water Management Plans

# Where might an IWRM Plan fit?

To be regarded as part of existing frameworks



**NPA** – National Programme of Action to Prevent Land-based Sources of Marine Pollution  
**WSP** – Water Safety Plan

**NOTE:** The size of the circles do not imply relative importance within the national development context; they merely illustrate the functional relationships between the broad water resources management planning frameworks relative to planning for climate change adaptation, and other socio-economic development sectors in the country.

\* There could be multiple WSPs depending on the number of water supply/treatment systems in the country.

# What does an IWRM Plan look like?

- Description of the existing water management approach. Where it came from, how long has it been in place, what legal instruments (policies, laws and institutions) support it, and the constraints of the current approach to water management.
- A description of the current water resources situation in the country (a water resource assessment)

# What does an IWRM Plan look like?

- A description of the scope of the plan. (Goals, aims and objectives we wish to attain)
- A description of how we plan to achieve the vision, goals, aims and objectives.
- Links the IWRM plan to other national processes and/or plans (e.g. How relevant is the IWRM Plan for a Poverty Reduction Plan or an Integrated Development Plan).
- Resource requirements to implement the plan
  - Integration within the Public Sector Investment Programme



# An IWRM Plan should:

- Heighten awareness and understanding of the value and benefits of integrated water resources management and vulnerability of human health and the environment from poor Water resources management;
- Identify and implement actions to address specific causes of negative impacts and threats on human health and the environment from poor water resources management practices;
- Assist mobilize resources and partners, including the private sector, for implementation of specific projects to address the negative impacts and threats on human health and the environment from poor water resources management practices.