

## Focus of presentation

- **Introduction** – CEA
  - share lessons & experiences
- Cost Effective Analysis – **What is it?**
- **Opportunities** of CEA under PACC

## CEA – Status in the Pacific

- A new area for us – have not heard of a PIC undertaking this assessment as part of its adaptation planning. **Most** are using CBA or MCA.
- Described in the annotated guidelines of **NAPA**.
- We are familiar and already working on **CBA** and **MCA**.
- In one of the **PACC sites Kosrae in the FSM**, they are already using CBA as part of their climate proofing tool of a roading project to be undertaken.
- **CEA** opportunity - explore in the context of the PACC project.

## What is CEA?

- Is a form of economic analysis that compares the **relative costs and outcomes** (effects) of two or more courses of action.
- It is distinct from **CBA**, which assigns a **monetary value** to the measure of effect.
- CEA is often **used** in the field of **health services**, where it may be **inappropriate** to monetize health effect.
- Typically the CEA is expressed in terms of a **ratio** where the denominator is a **gain in health** from a measure (**years of life, premature births averted, sight-years gained**) and the numerator is the **cost associated** with the health gain.
- The most commonly used outcome measure is quality-adjusted life years (QALY).

## - Some formulas -

Formula below:

$$\text{CE ratio} = \frac{\text{cost}_{\text{new strategy}} - \text{cost}_{\text{current practice}}}{\text{effect}_{\text{new strategy}} - \text{effect}_{\text{current practice}}}$$

It is very **sensitive** to the **choice of strategies** being **compared**. One needs to carefully consider whether the choice being presented is really the choice that interests him/her!

## CEA and PACC

- **Interested** in CEA from the perspective that in most PICs, general populace is still very much **subsistence** based, depend on the **land** and the **sea** for **sustenance** and some **semi-economic** activities.
- In undertaking adaptation **planning and implementation** in these communities, it is usually not easy to use a straight out CBA in non-infrastructure type projects e.g. addressing food security type projects etc.
- **CEA have a role to play** as its benefit can be measured in non- monetary units.

## The PACC Project

The PACC is an initiative / opportunity to materialize the GEF support to adaptation into **actual adaptation implementation** in the Pacific Region.

The PACC is a **direct response** of UNDP and SPREP to PICs' expressed wish to implement adaptation.

PACC is the first project in the Pacific to access the **Special Climate Change Fund**, managed by the GEF.

## The PACC Project

The PACC is a **regional adaptation project** that targets **national implementation** in 13 PICs.

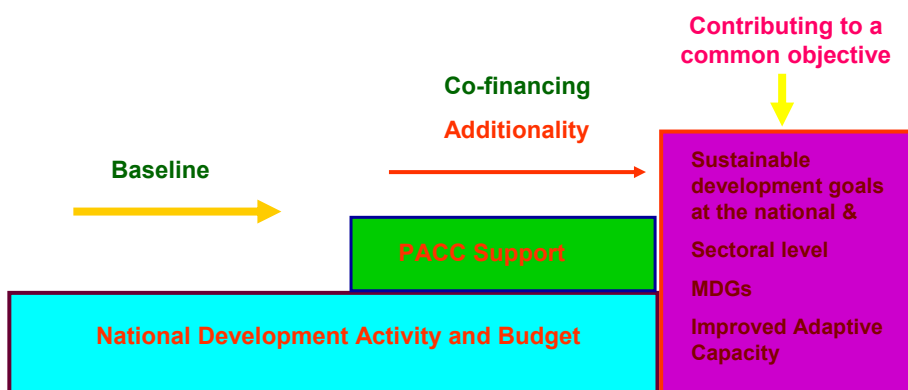
Countries and key sectors:

- I. **Coastal Zone Management - Cook Islands, FSM, Samoa, and Vanuatu**
- II. **Food Production and Food Security – Fiji, Palau, Papua New Guinea and Solomon Islands**
- III. **Water – Marshall Islands, Nauru, Niue, Tuvalu and Tonga**

## Main Objective

Enhance the **adaptive capacity** and **resilience** of key development sectors in Pacific Island Countries to the impacts of climate change.

## PACC design



## CEA and PACC

Palau [Ngatpang State] – dealing with Food Security

- One of the **problem** faced is salt water inundation of taro pitches causing decline in production.

Solutions being considered:

- Use of **protection measures** to stop salt water intrusion into taro lands;
- Use of **taro varieties** that are salt water tolerant;
- Upper catchment **water management** (traditional/contemporary) to regulate water flow into affected area; etc.

## CEA and PACC

**Key objective:** is to **continue** to use the land for production purposes [upland soils are quite degraded so not an option].

**CEA** as an evaluation tool can be used in this regard to examine the **different options** and **choices** that can be compared and how cost effective they may be to ensure that the low lands continues to be productive now and into the future.

- What are the **choices** that would be **compared**?
- What are the costs of the **new options** compared to current practices?
- What is the **effect** of the new option compared to current practice?

## CEA and PACC

Another way to look at CEA for PACC: **Water** [Five countries-Nauru, Niue, Tonga, Marshall's and Tuvalu]

- Water is a **scarce** resource in these countries but a necessity to the daily lives of the people;
- Depend **largely** on **precipitation**;
- The CEA basis in these countries: not so much to look for **adaptation options** that would be cost effective but;
- To look at what adaptation option that **would ensure there is a sustainable supply** of quality water even though the cost may be high.

**Key objective** – sustainable supply of quality water.

## Main Message

CEA has been there for quite some time but its use is **quite limited** particularly in the Pacific.

- CEA has a role to play in adaptation planning (evaluation) perhaps **more effort** needs to be made in promoting the tool.

*Thank UNFCCC for the opportunity and recognize GEF and UNDP of their funding support for the PACC project.*

[http://www.sprep.org/climate\\_change/pacc](http://www.sprep.org/climate_change/pacc)

PACC Implementing Partner:  
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*Building resilience to climate change in Pacific communities*