

## Vulnerability and Resilience at a glance

**Vulnerability management** is emerging as a critical part of any sustainable development strategy. It focuses not only on conditions now, but also on likely conditions in the future. It examines risks of hazards, natural and acquired abilities to resist damage (natural resilience and acquired vulnerability), giving us the opportunity to balance strengths and weaknesses.

**Vulnerability** is the tendency for an entity to be damaged.

**Resilience** is the opposite of vulnerability and refers to the ability of an entity to resist or recover from damage.

**Entities** can be physical (people, ecosystems, coastlines etc) or abstract concepts (societies, communities, economies, countries etc) that can be damaged (responders).

**Vulnerability** and **resilience** are two sides of the same coin. Something is vulnerable to the extent that it is not resilient.

**Overall vulnerability (OV)** is the result of many vulnerability factors working together. For example, we might be concerned with the OV of a country. It includes information on the risk of hazards, natural resilience and acquired vulnerability.

**Hazards** are things or processes that can cause damage, but can only be defined in terms of the entity (responder) being damaged. For example, a cyclone is a hazard to an island. Each hazard is associated with a level of risk.

**Natural resilience** (also known as intrinsic resilience) is the natural ability of an entity (responder) to resist damage. We would say that a person with a strong immune system is naturally more able to resist a cold than someone with a poor one.

**Acquired vulnerability** (also known as extrinsic resilience) is vulnerability gained from damage in the past. We might say a person who drinks and smokes would damage their immune system and be less resilient to a cold than someone who lived a healthier lifestyle.



Corals collected whilst alive, and are being sold for septic tank fill in Fiji



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## Reducing Vulnerability & Increasing Resilience in PICs



INFORMATION PAMPHLET

<http://www.sopac.org/Projects/Evi/index.html>

# What is Vulnerability?

## What is Resilience?

Healthy, productive and protective environments, social systems and economies are the basis of *sustainable development* and *human welfare*.

In our Pacific Island Countries (PICs), the environment is the source of all our raw materials and absorbs the pollution from our daily activities. In turn, while we go about our daily business (social and economic) we use the environment and convert its resources and natural services into those that directly support us (food, clothing, housing etc). The problem is that the environment, our societies and economies can be damaged, overloaded, or prevented from meeting our needs. By our own choices we can to a large extent determine our own quality of life, the condition of our lands and opportunities for future generations.



Funafuti, Tuvalu

*Vulnerability is a new way of looking at an age-old problem. Instead of focusing just on what has been going wrong in the past and the effects of hazards, vulnerability gives us the opportunity to focus on getting things right for the future. As a future-focused approach, vulnerability is a way of using strengths and strategically improving weaknesses.*

### What do we mean by Vulnerability and Resilience in PICs?

*Vulnerability* refers to the tendency of something to be damaged. The opposite of this is *resilience*, or the ability to resist and/or recover from damage. When we talk about vulnerability, we are automatically also talking about resilience because the two are opposite sides of a single coin. That is, something is vulnerable to the extent that it is not resilient, and *visa versa*.



Vulnerability

Resilience

The idea of vulnerability/resilience applies equally well to physical entities (people, ecosystems, coastlines) and to abstract concepts (social systems, economic systems, countries). The factors that cause the damage are known as *hazards*, each of which will be associated with some level of *risk*, or likelihood of occurring.

### Why examine Vulnerability and Resilience?

Most management of environmental, social and economic issues focuses on the present state of the system, good practices and understanding things that may have gone wrong in the past. These are all important steps and are part of good management. But they are not enough. There is also a need to ensure the future by focusing on the risk that the systems we are managing might be damaged and by being able to see how well our actions might work to make sure a future we want actually arrives.

*The interesting thing about vulnerability is that it can be examined at different levels for different issues and focuses on the future quality of our environmental, social and economic systems. It can be used to look at a single issue, or to assess a complex entity such as a country.*

### Vulnerability of a country

The vulnerability of the environmental, social or economic systems in a Pacific Island Country is the result of many factors working together. For any one of these issues, the vulnerability will need to consider three aspects: (1) the risk of hazards, (2) the natural resilience and resistance to damage (also known as intrinsic vulnerability), and (3) the acquired resilience / vulnerability to damage.

### Environmental Vulnerability of PICs

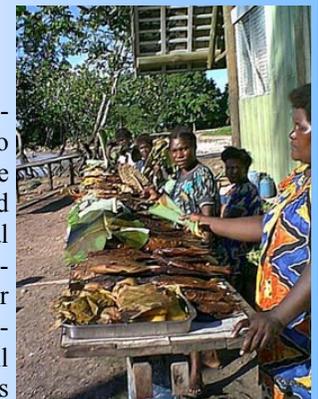
PICs are often quoted as being highly vulnerable because of their isolation, small size, highly fragmented nature, low relief, ecological uniqueness, limited resources, and high exposure to natural hazards. When we examine the issues more closely for PICs we find that 5 distinct issues emerge: (1) Large risk of and low resilience to natural hazards (cyclones, droughts); (2) Internally generated loss of resilience due to relatively low intensity damage over large percentage of the land (deforestation); (3) High intensity anthropogenic damage driven by external forces (transboundary, multinationals); (4) Global Climate Change; and (5) Acquired vulnerability that worsens all of the above as damage sustained in the past leads to reduced resilience in the future.

### Social and Economic Vulnerability

The most urgent task for beginning the process of fully understanding the overall vulnerability of PICs will be to re-examine issues of social and economic vulnerability. It is now clear that there are hazards driven by outside forces we may have limited control over, and others that are being generated internally by the choices we make day-to-day. The vulnerability model also predicts that there will be innate strengths and weaknesses in the social and economic systems of PICs that could be used to advantage or offset to improve the overall situation. The challenge is now to identify these elements.

### Conclusion

For development to be sustainable, we clearly need to learn to manage our vulnerabilities. We need to be able to understand and/or manage hazards, natural resilience and acquired resilience. This understanding for the first time opens up opportunities for improving our overall vulnerability because it forces us to examine the problem from all angles, instead of just focusing on the risk of disasters. Vulnerability management is emerging as a critical part of any sustainable development strategy.



Markets at Buka, PNG