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.

Fish farms in the Mediterranean

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.

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SOPAC Environmental Vulnerability Project

Reducing Vulnerability & Increasing Resilience in SIDS

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

St Lucia

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 SIDS?

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 SIDS 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 SIDS

SIDS 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 SIDS we find that several distinct vulnerability issues emerge: (1) Natural hazards (cyclones, droughts); (2) Urbanisation and deforestation; (3) Transboundary issues; (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 SIDS 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 SIDS that could be used to advantage or offset to improve the overall situation. The challenge is now to identify these elements.

Urbanisation in Malta

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.