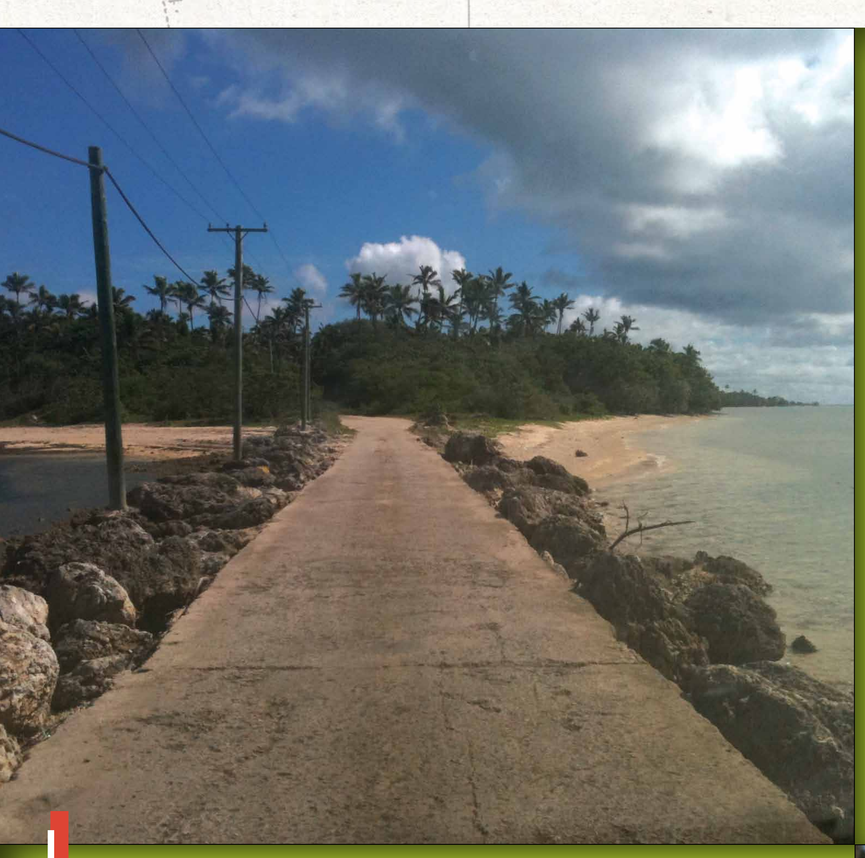
Community-based Adaptation tools in SIDS: Field work experience from Tonga

Authors

Stavros Mavrogenis, PhD Candidate, European Center for Environmental Research and Training (www.ekepek.gr), Panteion University of Athens Heraclitus II Scholarship

Dr. Ilan Kelman, Senior Researcher, CICERO (Center for International Climate and Environmental Research - Oslo) and Many Strong Voices (http://manystrongvoices.org)



Summary

Many small island communities face growing disaster-related challenges, including climate change. Using the case study of Tonga, work with national and local NGOs was completed to try to better understand what locals seek to effect local change through local initiatives. The main focus was community-based and ecosystem-based approaches.

The Tongans' responses emphasized simple, day-to-day measures and management decisions that make a big difference in operations. Examples are teaching people not to throw trash into mangroves and streamlining funding, even if that reduces financial accountability, so that community partners do not get fed up waiting for support. Access to scientific information and professional training were also highlighted, while recognizing that people in communities can sometimes be as much a hindrance to ecosystem-based management as external factors such as climate change.

Additionally, subtle distinctions between disaster risk reduction and climate change adaptation, as well as between ecosystem-based and community-based initiatives, made little difference on the ground. The communities' interest is primarily secure livelihoods that would give them appropriate income, within the context of the various challenges that they face.

Some of Tonga's hazards and vulnerabilities: Large earthquakes and tsunamis, low elevation, cyclones, the El Niño Southern Oscillation (ENSO), droughts, and floods — influencing crops, livestock, freshwater supplies, and fish. Tonga also suffers from environmental degradation due to internal and external human pressures. Internally, rapid population growth and unsustainable harvesting and fishing are significant concerns. Externally, climate change is highlighted as potentially causing major problems for Tonga.

In most instances, ecosystems are interlinked with local livelihoods, making it hard to differentiate between CBA and EBA. Similarly, separating DRR and CCA made little difference on the ground, especially when DRR covers all CCA activities already, so there is no need to separate such work. The interest is primarily secure livelihoods, bringing communities sufficient income over the long-term. The photo is from Popua, a former mangrove swamp, now bulldozed for plot allotments.

Combining EBA and CBA links climate change adaptation, sound ecosystem management and livelihood development. The photo is from Hihifo beach on Lifuka Island where insufficient funds and low support for capacity building led to an ineffective attempt to use sandbags to deal with sea flooding, hurting the ecosystem and livelihoods while failing to adapt to climate change.

Mangroves are particularly popular in Tongan coastal communities for trying to address CCA and DRR, particularly regarding coastal erosion. Mangroves are viewed as being appropriate because they slow incoming waves, preventing damage behind the mangroves, while maintaining the shoreline as sediment is dropped. Mangroves also provide an ecosystem to support fishing livelihoods and traditional, medicinal plants.

References

Perez, A., H. Fernadez and C. Gatti (eds.) (2010) Building Resilience to Climate Change: Ecosystem-based Adaptation and Lessons from the Field, Gland: IUCN.

Kelman, I., J. Mercer and J. West (2009) "Combining Different Knowledges: Community – based Climate Change Adaptation in Small Islands Developing States", Participatory Learning and Action 60: 41-53.

Kelman, I. and J. West (2009) "Climate change and Small Island Developing States: a critical review", Ecological and Environmental Anthropology 5(1): 1-16.

Key messages

Successful community-based EBA means linking to secure local livelihoods so that the community receives livelihood benefits.

Showing community benefits from EBA creates local buy-in leading to behavior change towards sustainability.

EBA requires tackling recent, negative perceptions and attitudes regarding ecosystems such as mangroves.

Learning by doing can enhance local EBA initiatives.

Traditional knowledge remains an important community asset contributing to EBA.

Streamlined funding and building capacity are challenges for local NGOs, so further support in those areas is needed.

Gender empowerment and equality is both a means and a consequence of successful EBA.

Lack of baseline data inhibits EBA decision-making with confidence.