

Name:	30. ECOSYSTEM-BASED ADAPTATION BY SMALL-HOLDER FARMERS IN ROSLAGEN, SWEDEN		
Region	Europe	Country	Sweden
Ecosystem	Agriculture		
Nature of approach	Improvement in capacity, design and policy measures (capacity building); Implementation of EBA measures (changing management practices)		
Description of approach	<p>Objective/Expected outcomes</p> <p>The east-central area of Sweden presents difficult climatic conditions for small scale farmers, who experience long winters, and frequent periods of drought. The climatic uncertainty, combined with threats from pests and disease presents challenges for sustaining livelihoods, with climate change predicted to increase the vulnerability further.</p> <p>Following a series of mild winters which lead to pest outbreaks, farmers in the Roslagen region undertook to incorporate a range of ecosystem-based practices to diversify, and increase resilience to uncertain conditions and disturbances. This included reintroducing the multiple-species leys common in the past which had fallen out of practice, with the aim of producing a more reliable harvest during varying climatic conditions.</p> <p>Actions</p> <p>A range of ecosystem-based measures were incorporated to buffer the impacts of climate variability and increase overall resilience including diversification of crops in time and space to reduce the risk of crop failure, and using multiple crop varieties to increase genetic diversity to test their pest resistance. Incorporating crop rotation helped to revitalize soils and prevent pest infestations, without reliance on chemical fertilizers and pesticides. Measures to cope with drought included planting trees to provide shade, use of cover crops that enhance seedling survival, and 'harrowing' of fields in early spring (which prevents evaporation). To aid flood/water regulation control, groups of trees in nearby wetlands were protected.</p> <p>In addition, by establishing an informal local network, the farmers were able to share best practice and local ecological knowledge.</p> <p>Results achieved</p> <p>The ecosystem-based measures taken led to the farmers producing high-quality and organic products, whilst increasing their resilience to climate variability and change. Co-benefits included enhanced biodiversity as well increased economic security.</p> <p>Lessons learned (particularly highlighting the benefits and challenges related with ecosystem-based approach)</p> <p>Adjusting management practices, including (re)adopting traditional farming techniques, can help to increase the resilience and reduce the vulnerability to the effects of climate change.</p>		
Type of organisation	Informal network of smallholder farmers	Name of organisation:	n/a
Further information and contact details	http://www.ecologyandsociety.org/vol9/iss3/art4/ Colls, A., Ash, N. and Ikkala, N (2009). Ecosystem-based Adaptation: a natural response to climate change. Gland, Switzerland: IUCN		