

IPSI Case Study Summary Sheet

Basic Information

Title of case study			
Landrace maize diversity in <i>milpa</i> : a socio-ecological production landscape in Soteapan, Santa Marta Mountains, Veracruz, Mexico			
Submitting IPSI member organization(s)			
Fundación Semillas de Vida, A.C.			
Other contributing organization(s) (<i>IPSI members and/or non-members</i>)			
Author(s) and affiliation(s)			
Adelita San Vicente Tello and Malin Jönsson, Fundación Semillas de Vida, A.C.			
Format of case study (<i>manuscript or audiovisual</i>)	Manuscript	Language	English
Keywords			
Landrace maize, small-scale farmers, biocultural diversity, <i>milpa</i> , knowledge, indigenous people			
Date of submission (<i>or update, if this is an update of an existing case study</i>)		13 December 2019	
Web link (<i>of the case study or lead organization if available for more information</i>)	https://collections.unu.edu/eserv/UNU:7506/SITR_vol5_fullset_web.pdf#page=83		

Geographical Information

Country (<i>where site(s) or activities described in the case study are located – can be multiple, or even “global”</i>)									
Mexico									
Location(s) (<i>within the country or countries – leave blank if specific location(s) cannot be identified</i>)									
Santa Marta Mountains, Veracruz									
Longitude/latitude or Google Maps link (<i>if location is identified</i>)									
https://www.google.com/maps/place/18%C2%B013'50.4%22N+94%C2%B052'23.7%22W/@18.2306718,-95.013331,11z/									
Ecosystem(s)									
Forest		Grassland		Agricultural	x	In-land water		Coastal	
Dryland		Mountain		Urban/peri-urban		Other (Please specify)			
Socioeconomic and environmental characteristics of the area									
The Santa Marta Mountains interrupt the plains of the Veracruz coast, generating mountainous environmental conditions in a tropical zone with high humidity, from which life flourishes in its multiple diversity expressions. The indigenous people have developed and conserved great landrace maize diversity and species associated with the <i>milpa</i> in line with the mountains' environmental variation. The area's geological history and orographic conditions, with forests and jungles, generate moisture and rain catchment.									
Description of human-nature interactions in the area									
Thanks to the hard work of generations of small-scale farmers and also the special environmental conditions, the mountains are not only a reserve of vital resources and biological richness, but also a haven for a particularly vast agrobiodiversity of landrace maize. The maize grown here is distinguished in the impressive variation of pigments, uses and adaptations.									

Contents

Status (<i>"ongoing" or "completed"</i>)	Completed	Period (<i>MM/YY to MM/YY</i>)	2017
Rationale (<i>why activities or policies described, or information shared in the case study are needed</i>)			
<p>Maize is not only the most important grain in our country, but also worldwide. Its rapid expansion across the world is likely due to its considerable capacity to adapt to different production conditions and also thanks to its versatility of use, making it an ingredient in various industrial products. The global market is dominated by a yellow maize, modified to generate an increased amount of starch; a large part is also genetically modified (GMO) and produced with seeds owned by a few transnational corporations. Precisely because of this global homogenization of maize, it becomes more relevant to emphasize the importance of the vast biodiversity that still exists; landrace maize is conserved and developed by farmers themselves.</p>			
Objectives (<i>goals of activities or policies described, or of producing the case study</i>)			
<p>The objective of the project was to increase understanding of the multiple values associated with sustainable use of resources in the socio-ecological production landscape (SEPL) known as <i>milpa</i>, particularly in terms of native maize.</p>			
Activities and/or practices employed			
<p>During the year 2017, <i>Semillas de Vida</i>, in collaboration with communities and authorities in the municipality Soteapan, and graduates and researchers of the Intercultural University of Veracruz, guided experiences in the study, collection and characterization of the diversity, management and use of landrace maize seeds in communities in the Santa Marta Mountains. We collected and characterized samples of this diversity, as well as carried out pigment analyses with help from researchers at the university.</p>			
Results			
<p>The results highlight the importance of the agrobiodiversity cultivated by the indigenous and small-scale farm communities, and illustrate the wide knowledge they have and the multiple values of nature (MVN). This exceptional diversity is related to the special type of slope agriculture applied in the Santa Marta Mountains. The 15 variations of native maize found demonstrated important adaptation to the specific climatic conditions and the multiple values of nature given by the farmers to the <i>milpa</i> production.</p>			
Lessons learned (<i>factors in success or failure, challenges and opportunities</i>)			
<p>The knowledge and diversity is exceptional, and probably greater than in other tropical regions in the country. The diversity is associated with multiple values of the SEPL, such as different food uses, especially for black and dark blue maize, preferred in the traditional drink <i>pozol</i> and cultivated by practically all the families in the mountains. Together with maize cultivation, accompanied by ample plant diversity within <i>milpa</i>, the <i>Popoluca (Nuntajiyi)</i> people have traditional diverse small-scale coffee plantations and in recent years they have also added production, management and commercialization of understory palm, selling their foliage.</p>			
Key messages			
<p>To maintain and develop maize agrobiodiversity, it is necessary to support farmers, for example through subsidies that remunerate them for their meaningful work of selection and adaptation. In fact, in Mexico the possibility of paying the farmers for preserving biodiversity has been discussed, and another suggestion has been paying a higher price in the market, particularly for their maize. This could be accomplished by a governmental institution buying the maize for a dignified price. Nevertheless, it is also possible to increase the income of the farmers though opening up new markets, since today a direct connection between market and production is lacking.</p>			
Relationship to other IPSI activities (<i>if the case study is related to any other IPSI collaborative activities, case studies, etc.</i>)			
<p>This case study originally appeared in the Satoyama Initiative Thematic Review v. 5.</p>			
Funding (<i>any relevant information about funding of activities or projects described in the case study</i>)			
<p></p>			

Contributions to Global Agendas

CBD Aichi Biodiversity Targets (<https://www.cbd.int/sp/targets/>)

The table below shows based on the self-evaluation by author(s). ● and ■ indicates the “direct” or “indirect” contributions to the CBD’s Aichi Biodiversity Targets respectively to which the work described in this case study contributes to.

Strategic Goal A					Strategic Goal B				
■					■				
Strategic Goal C			Strategic Goal D			Strategic Goal E			
		●					●	●	

UN Sustainable Development Goals (SDGs) (<https://sustainabledevelopment.un.org/sdgs>)

The table below shows based on the self-evaluation by author(s). ● and ■ indicates the “direct” or “indirect” contributions to the SDGs respectively to which the work described in this case study contributes to.

	■							
	■	■			■			