

ECOLOGICAL RESTORATION EXPERIENCES IN THE TERMINOS LAGOON FLORA AND FAUNA PROTECTION AREA, CAMPECHE, MEXICO.

Esthela Endañú Huerta¹, José Enrique López Contreras², Luis Enrique Amador del Ángel², Arturo Zaldívar Jiménez³, Rosela Pérez Ceballos⁴, Emma Guevara Carrió², Paloma Ladrón de Guevara³.

¹Jardín Botánico Regional Carmen, Facultad de Ciencias Naturales, Universidad Autónoma del Carmen, Av. Laguna de Términos s/n Col. Renovación 2da Sección, 24155 Ciudad del Carmen, Campeche, México. eeendanu@pampano.unacar.mx

²Centro de Investigación de Ciencias Ambientales (CICA), Facultad de Ciencias Naturales, Universidad Autónoma del Carmen.

³Proyecto del Gran Ecosistema Marino del Golfo de México (GoM LME).

⁴Catedrática CONACyT, Estación El Carmen, Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México.

ABSTRACT

Since 2008, the Regional Botanical Garden Carmen of the Autonomous University of Carmen (UNACAR), has participated in ecological restoration actions, mainly, in three ecosystems: mangroves, coastal dunes and freshwater wetlands in the Terminos Lagoon Flora and Fauna Protection Area. In 2010, we began mangrove restoration actions with the purpose of the hydrological rehabilitation to recover soil and water quality promoting the natural regeneration and resilience of mangroves. These actions were carried out in coordination with the Environmental Sciences Research Center (CICA, UNACAR), the Ministry of Environment and Natural Resources (SEMARNAT), the National Commission of Natural Protected Areas (CONANP) and the Gulf of Mexico Large Marine Ecosystem Project (GoM LME). Five lines of action were implemented: 1) Forensic ecology and mangrove diagnosis condition, 2) Restoration plan, 3) Monitoring of success indicators, 4) Training, transfer of technical information and environmental education and 5) Socialization and public involvement to ensure sustainability. Since 2012, 1,300 hectares are being restored and conserved with the support of Environmental Compensation Program for Land Use Change in Forest Lands of CONAFOR and Temporary Employment Program (PET) of SEMARNAT. From 2010 up to date, the institutional coordination among the academics, government and technical group has been the key mechanism for the conservation and restoration of mangroves through the sum of counterparts in the different federal subsidy programs with the share of a total of 767,604.00 US and the direct participation of more than 560 men and women of Isla Aguada community. The stakeholders are also trained as “restoration technicians” to maintain and replicate the strategy for themselves. Environmental education has come to empower the community to be defined as "mangrove restorers". Currently college students majoring in Marine Biology and students of the Master of Science in Ecological Restoration of CICA evaluate other indicators of success of the restoration of mangrove in addition to the recovery of the vegetation cover by natural regeneration, such as ecological succession of infauna, fish and birds as well as production and decomposition of roots and carbon sequestration. In Coastal dunes and freshwater wetlands, efforts have been conducted to diagnose condition and characterization of vegetation and have identified the potential sites for restoration actions.

Key words: Mangroves, CICA, UNACAR, Terminos Lagoon, freshwater wetlands, Isla Aguada community, Campeche.