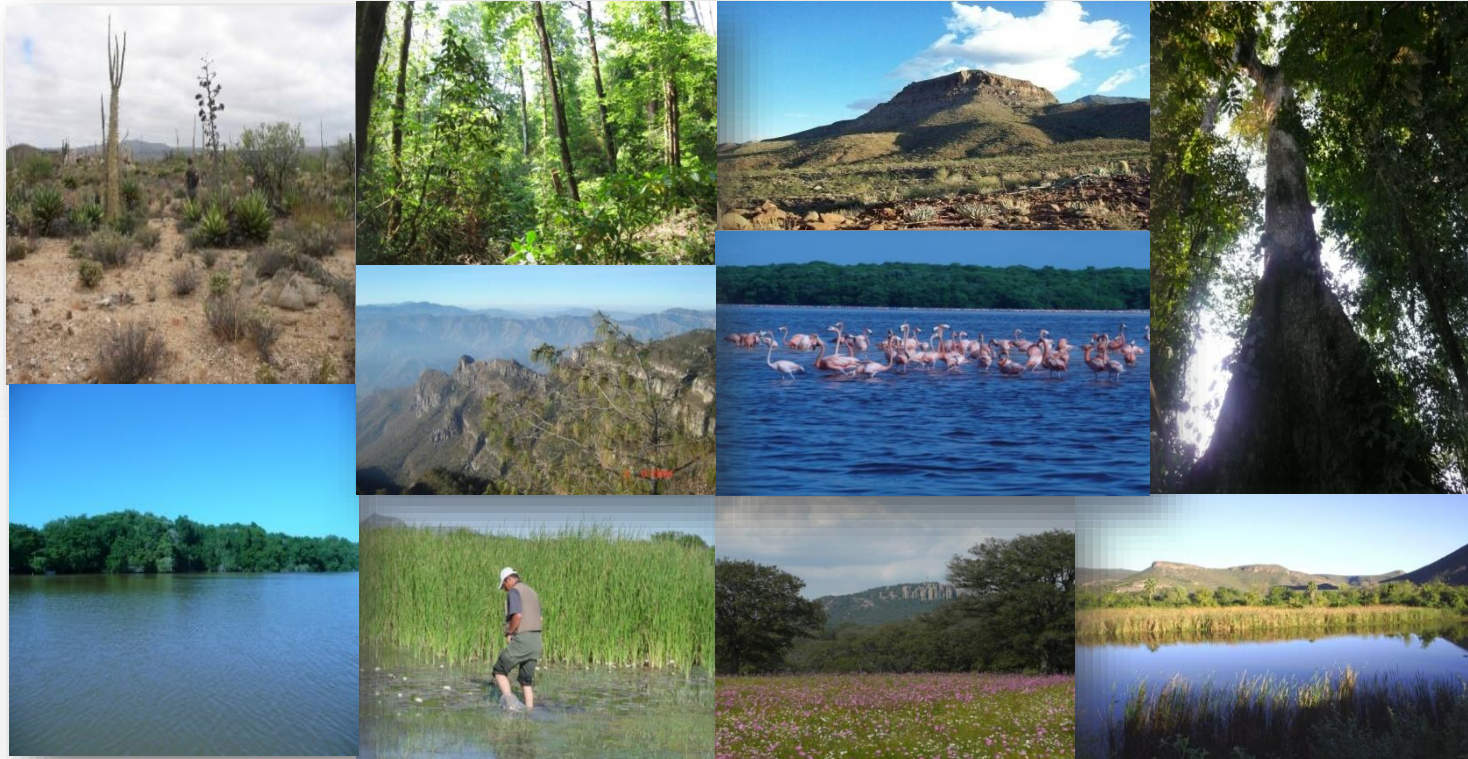


# Geospatial information for SDG indicators



Francisco Javier Jiménez Nava  
Deputy General Director of Natural Resources and Environment  
INEGI



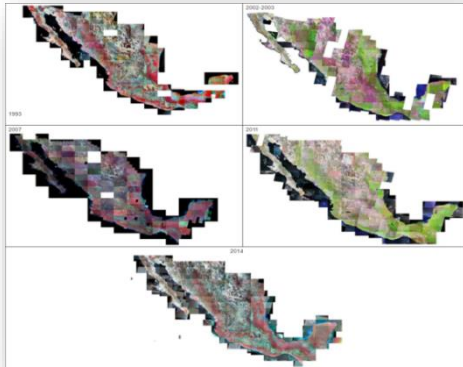
## Objective

Identifying and selecting the best practices in terms of monitoring water related issues.



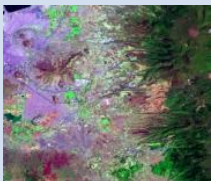

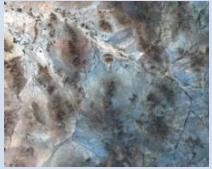



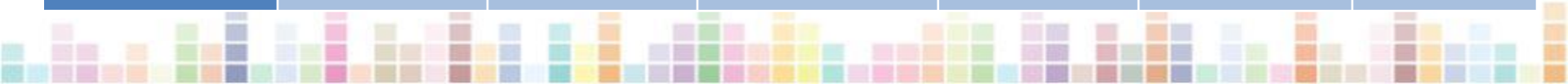
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# Land Use and Vegetation Information



# Land Use and Vegetation Series - Scale 1: 250,000.

	SERIES I	SERIES II	SERIES III	SERIES IV	SERIES V	SERIES VI
<b>Processing Period</b>	1978-1991	1995-2000	2002-2005	2007-2010	2011-2014	2015-2017
<b>Date of field data</b>	1978-1990	1996 - 1999	2002-2003	2007-2008	2012-2013	2015
<b>Reference date</b>	1985	1993	2002	2007	2011	2014
<b>Imagery</b>						
	Aerial Photographs	Paper Imagemaps	LANDSAT TM (30m)	SPOT 5 (10m)	LANDSAT 5 TM (30m)	LANDSAT 8 (30m)
<b>Product type</b>	Analogic Map	Digital data	Digital data	Digital data	Digital data	Digital data
<b>Information</b>	Printed map	5 layers	14 layers	13 layers	13 layers	15 layers



## Mapa Animado de Uso del Suelo y Vegetación

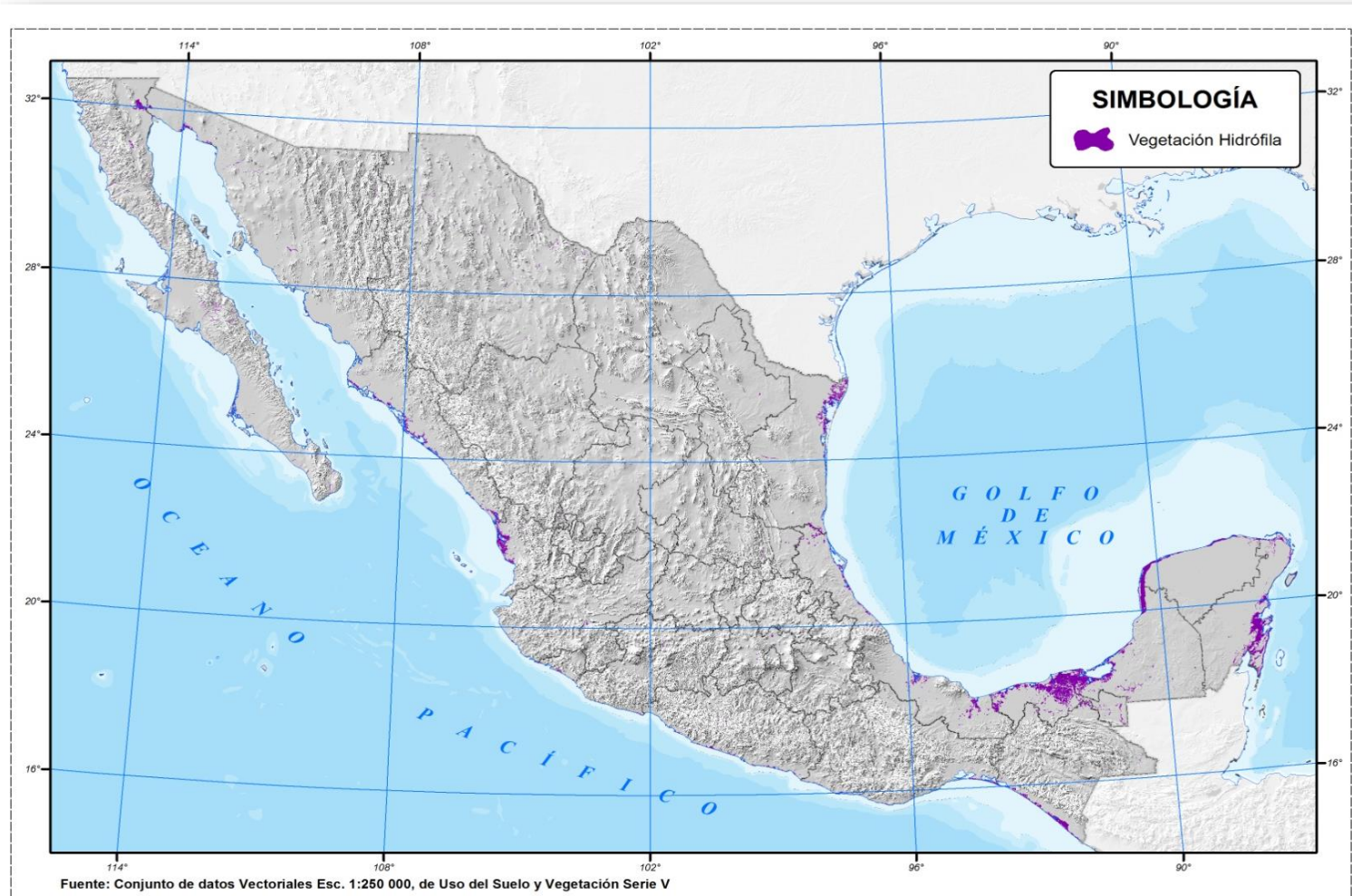
### SIMBOLOGÍA

- Bosque de Coníferas
- Bosque de Encino
- Bosque Mesófilo de Montaña
- Matorral Xerófilo
- Salva Caducifolia
- Selva Espinosa
- Selva Perennifolia
- Selva Subcaducifolia
- Pastizal
- Vegetación Hidrófila
- Vegetación Inducida
- Otros Tipos de Vegetación
- Áreas sin Vegetación Apparente
- Zonas Urbanas, Asentamientos y Agricultura

**Vegetación Primaria**

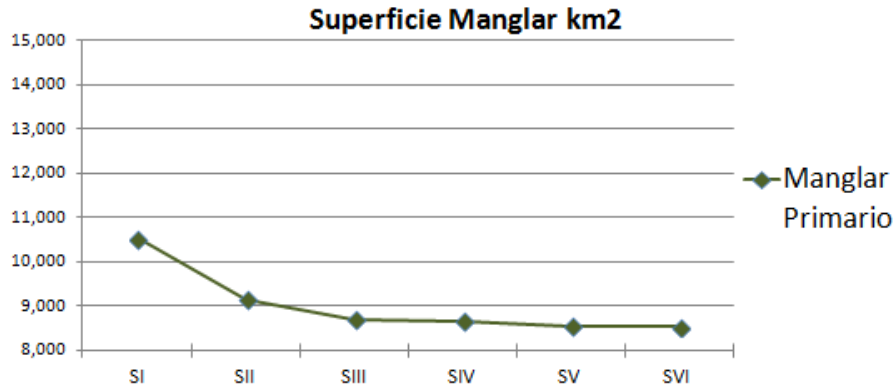
1:2,400,000

# Hydrophilic vegetation



# MANGROVE (Km<sup>2</sup>)

	SI	SII	SIII	SIV	SV	SVI
Manglar Primario	10,530.81	9,152.95	8,692.81	8,649.86	8,554.93	8,528.07
Manglar Secundario Arbóreo	46.67	9.56	147.07	150.00	161.66	157.05
Manglar Primario y Secundaria Arbóreo	10,577.48	9,162.51	8,839.88	8,799.85	8,716.59	8,685.12
Manglar Secundario Arbustivo	-	88.17	508.71	768.86	810.83	820.69

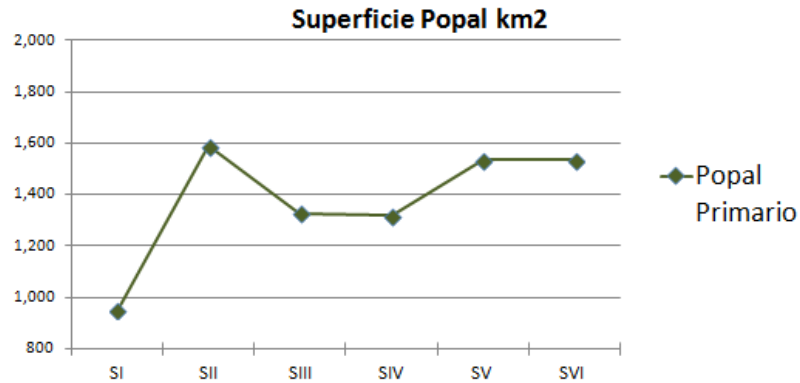


Celestún, Yucatán.

# POPAL (Km<sup>2</sup>)

## Wetland vegetation with *Thalia geniculata*

	SI	SII	SIII	SIV	SV	SVI
Popal Primario	948.02	1,587.49	1,326.79	1,316.07	1,533.33	1,532.84



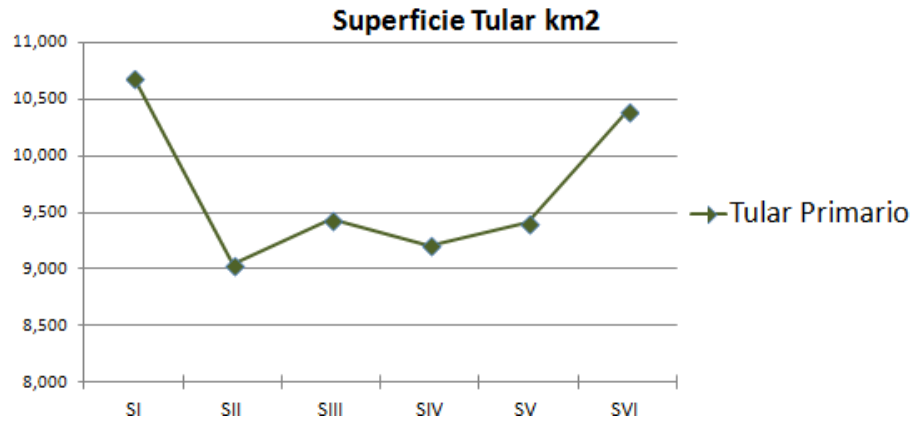
José Asmitia, Tabasco.



# TULAR (Km<sup>2</sup>)

## Wetland vegetation with *Typha* spp

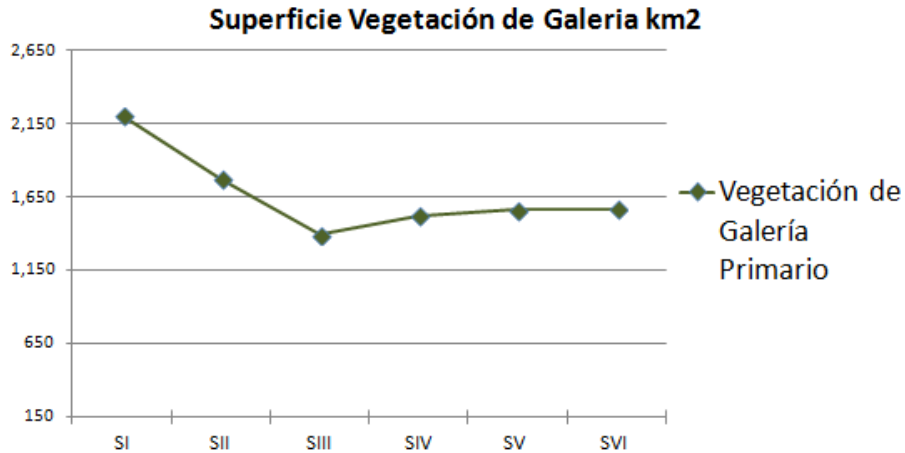
	SI	SII	SIII	SIV	SV	SVI
Tular Primario	10,687.51	9,042.22	9,443.97	9,212.66	9,415.37	10,402.89



Tizimín, Yucatán.

# GALLERY VEGETATION (Km<sup>2</sup>)

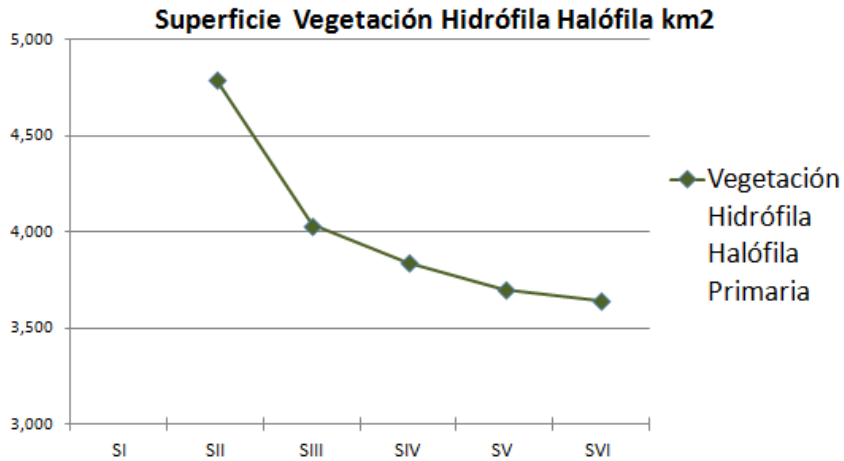
	SI	SII	SIII	SIV	SV	SVI
Vegetación de Galería Primario	2,200.63	1,770.56	1,390.83	1,519.14	1,561.17	1,563.44
Vegetación de Galería Primario y Secundaria Arbóreo	2,200.63	1,770.56	1,390.83	1,519.14	1,561.17	1,563.44
Vegetación de Galería Secundario Arbustivo	-	-	-	2.94	15.75	17.10



Temosachic, Chihuahua.

# HALOPHILE VEGETATION (Km<sup>2</sup>)

	SI	SII	SIII	SIV	SV	SVI
Vegetación Hidrófila Halófila Primaria		4,798.22	4,035.99	3,841.24	3,701.24	3,643.55
Vegetación Hidrófila Halófila Secundario Arbustivo		3.24	3.24	3.47	54.39	55.21

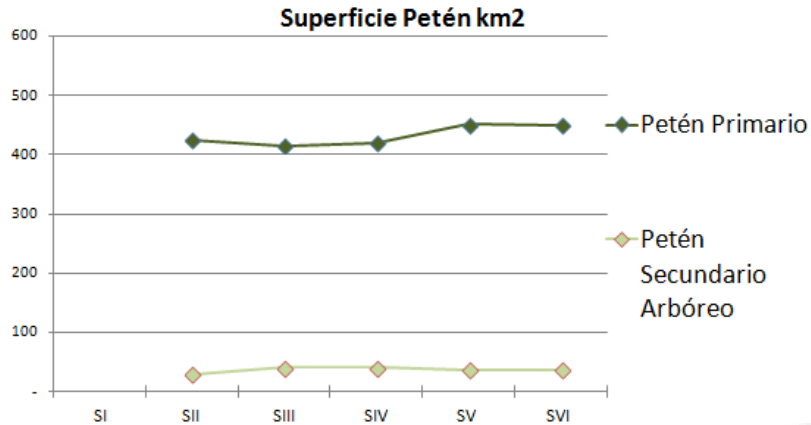


Atoyac,  
Jalisco.

# PETÉN (Km<sup>2</sup>)

## Wetland tropical forest

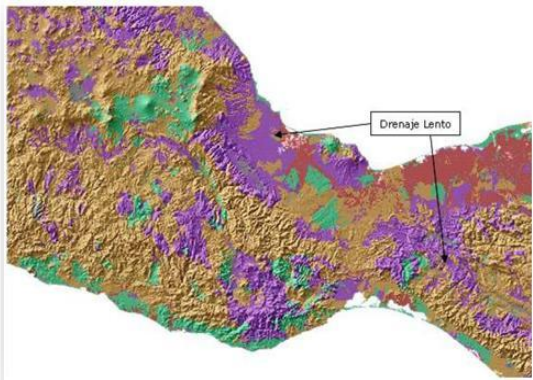
	SI	SII	SIII	SIV	SV	SVI
Petén Primario		424.39	415.57	419.61	451.00	449.33
Petén Secundario Arbóreo		29.10	40.91	40.92	37.91	37.80
Petén Primario y Secundario Arbóreo		453.49	456.48	460.53	488.91	487.13



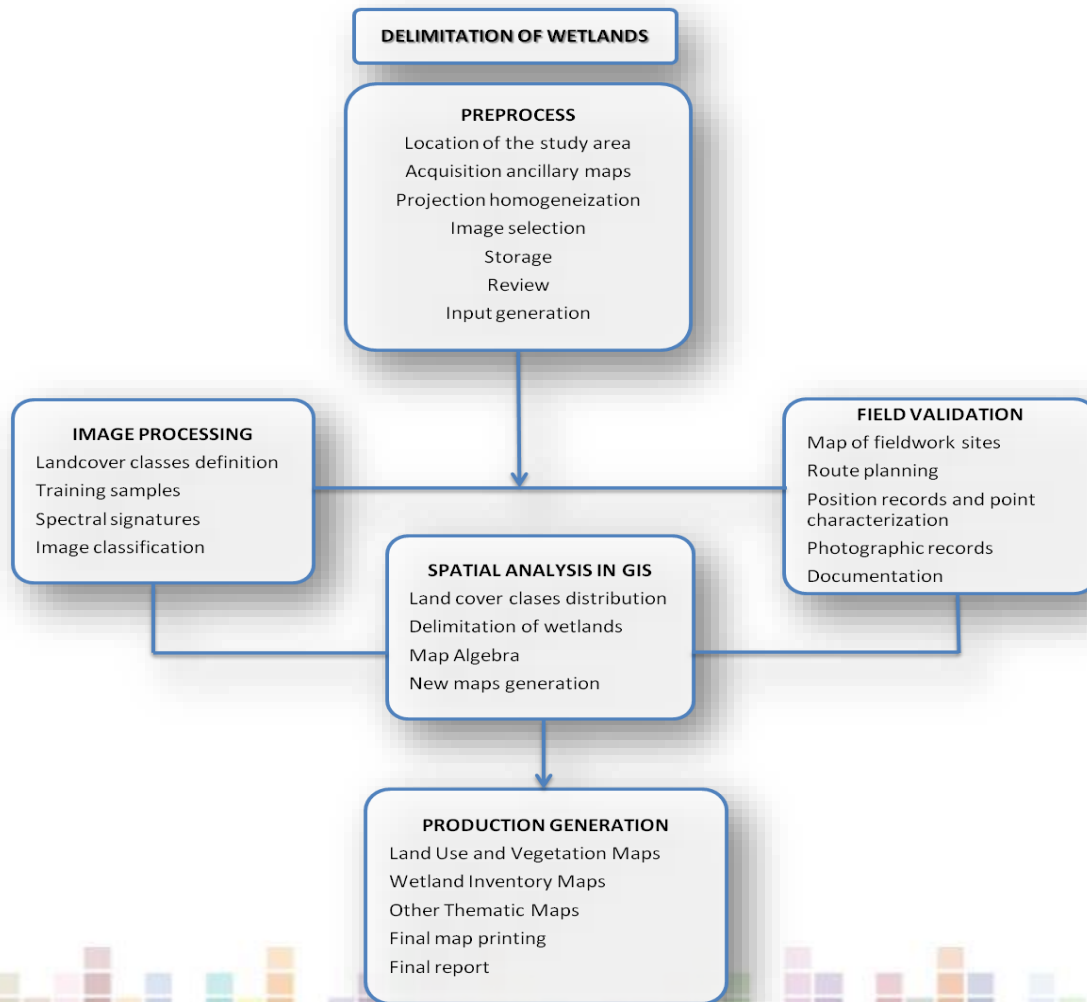
Felipe Carrillo Puerto, Quintana Roo

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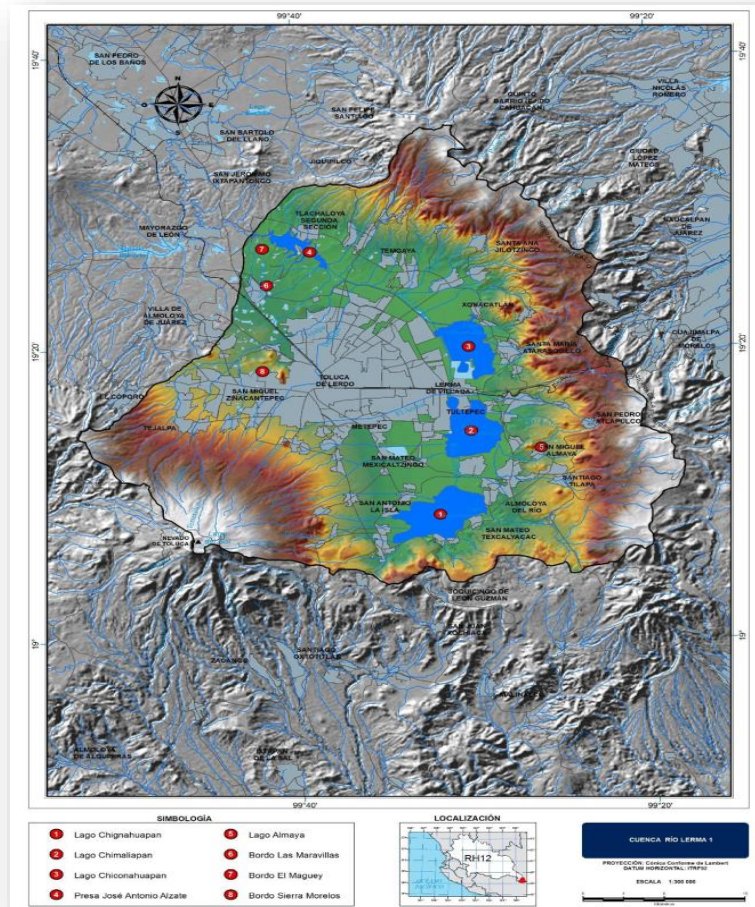
# Wetlands



# National Inventory of Wetlands 1:50,000 Process diagram.



# Wetlands National Inventory.



Includes:

- Study, characterization,
- Cataloging,
- Quantification
- Mapping of entities such as populated places, vegetation, soils, habitat, ecosystems and landscapes



# Spatial distribution of wetlands in Mexico.





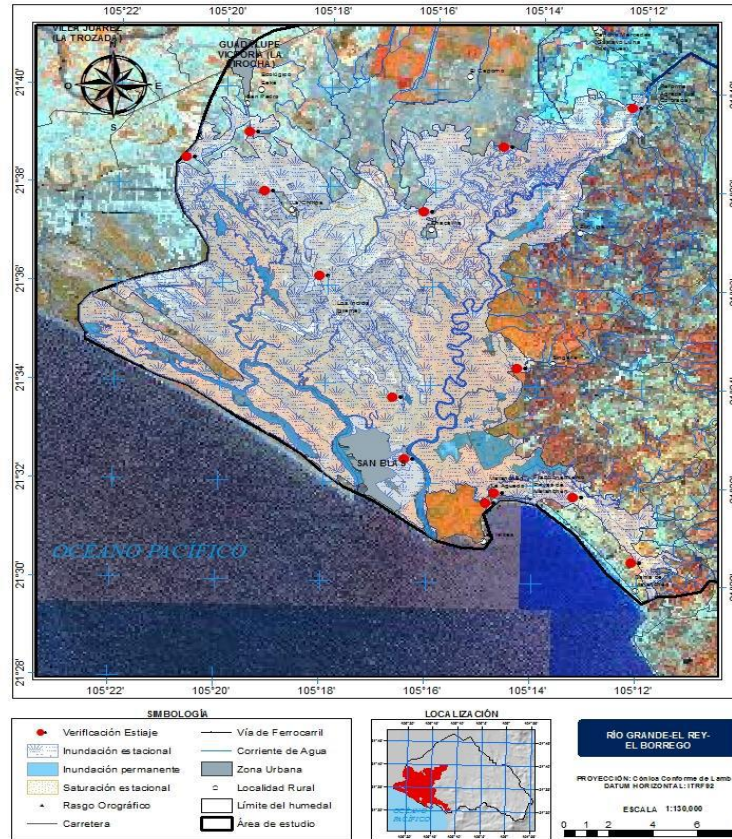
# Example of Coastal Wetland.

Río Grande Wetland Complex - El Rey-  
El Borrego.  
San Blas watershed, Nayarit.

Zoning: (permanent flood, seasonal  
flood or seasonal saturation) on 2012  
RapidEye imagery.

Band combination 5, 4, 3.

Spatial resolution 6 m.



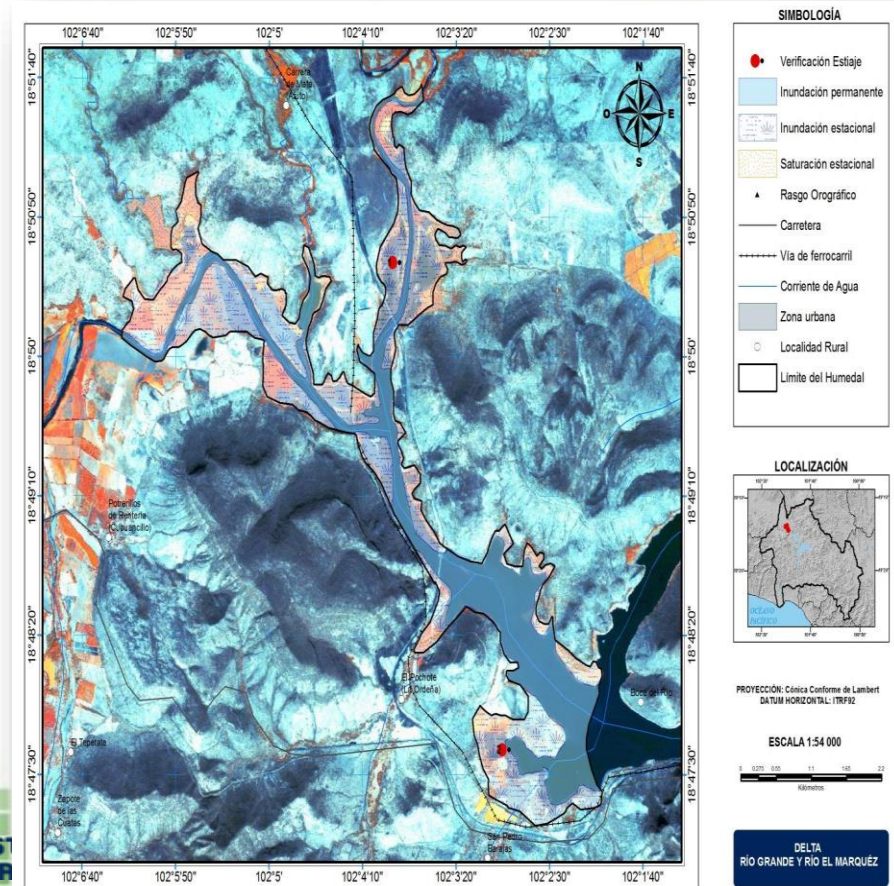
# Example of Continental Wetland.

Wetland classified as fluvial in Michoacán.

Delimited zoning (permanent flood, seasonal or seasonal saturation) on 2012 RapidEye imagery

Band combination 5, 4, 3.

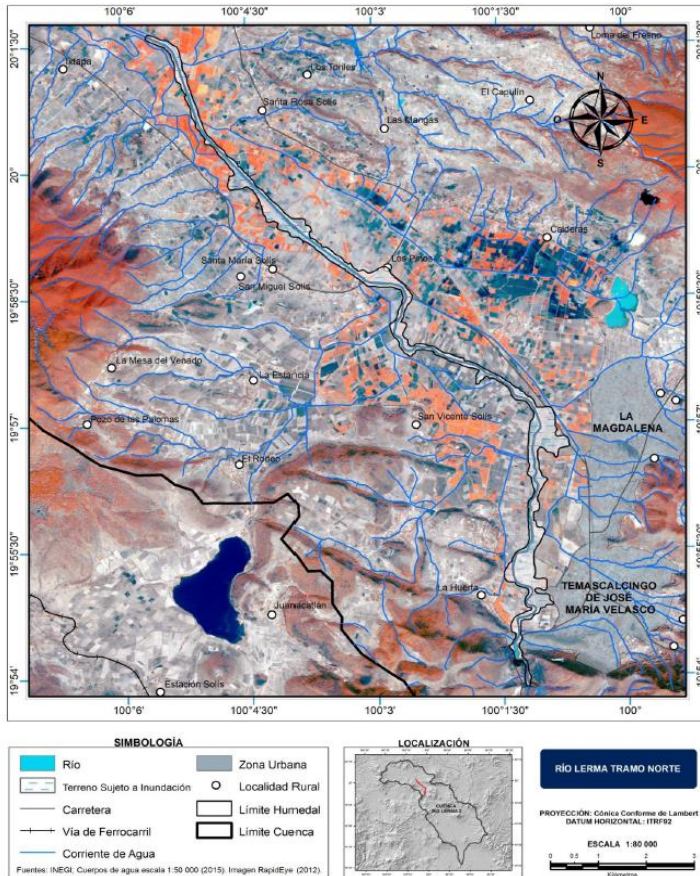
Spatial resolution 6 m.



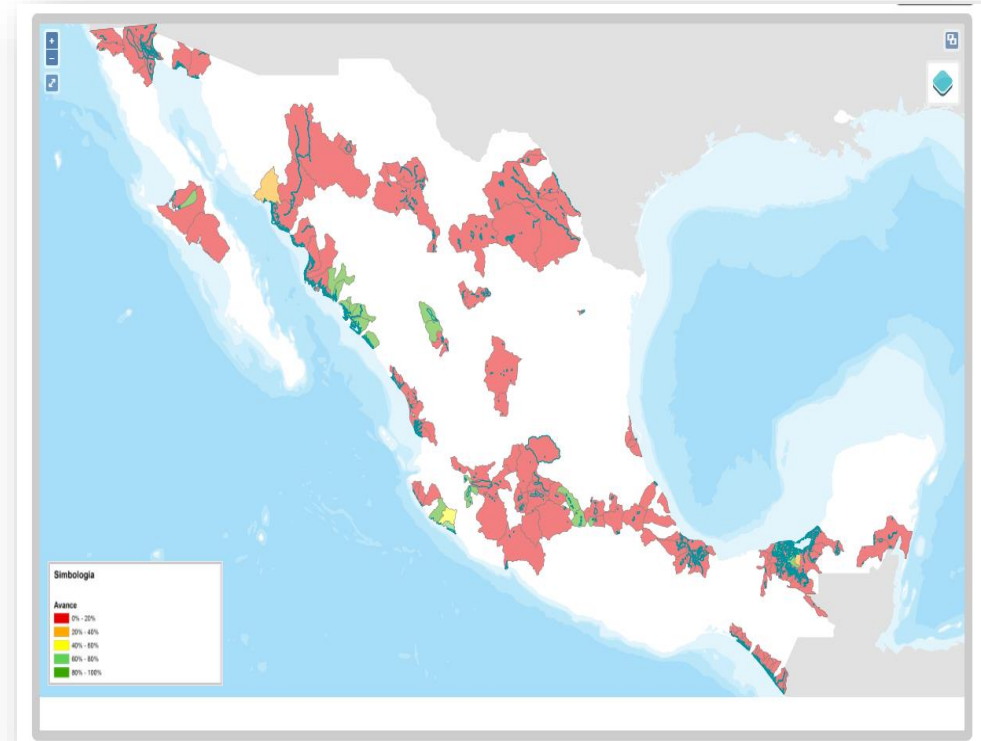
# Final product.

Based on the analysis of ancillary maps and data and satellite imagery, the final product includes:

- Wetland Map (pdf).
- GIS data layers.
- Technical report with:
  - Summarized description of the wetland area; climate, soils, vegetation, relief, human population.
  - Data tables with several statistics.



Considering the hydrographic watershed as a unit for mapping, 140 watersheds are programmed to work on at the beginning of February 2018 from a universe of 754 watersheds.





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DE ESTADÍSTICA Y GEOGRAFÍA**

