

Theme	2011	2014	2016	2020	2011	###	2016	2020	2016-2020 Trend
MPA	3	4.3	4	3.3	60	86	80	66	
1a	5	5	5	5	100	100	100	100	stable
1b	1	2	4	1	20	40	80	20	decrease*
1c	3	5	5	4	60	100	100	80	decrease*
1d			2	2			40	40	stable
1e			3	3			60	60	stable
1f		5	5	5		100	100	100	stable
Sustainable Fisheries	2.3	2.3	2.5	3.5	46	46	50	70	
2a	3	3	3	3	60	60	60	60	stable
2b	3	3	3	4	60	60	60	80	increase
2c	1	1	2	4	20	20	40	80	increase
2d		2	2	3		40	40	60	increase
Coastal Management	2	3	3.3	3.7	40	60	66	74	
3a	2	5	5	5	40	100	100	100	stable
3b		2	3	4		40	60	80	increase
3c		2	2	2		40	40	40	stable
Sewage	2	2.3	2.3	2.3	40	46	46	46	
4a	2	2	2	2	40	40	40	40	stable
4b	2	2	2	2	40	40	40	40	stable
4c		3	3	3		60	60	60	stable
Research	3.8	4	4.5	4	75	80	90	80	
5a	4	4	5	5	80	80	100	100	stable
5b	3	4	4	3	60	80	80	60	decrease
5c	5	5	5	5	100	100	100	100	stable
5d	3	3	4	3	60	60	80	60	decrease
Private Sector	3	3.5	3	2.8	60	70	60	56	
6a	2	2	2	2	40	40	40	40	stable
6b	2	2	2	2	40	40	40	40	stable
6c	4	5	5	4	80	100	100	80	decrease
6d	4	5	5	4	80	100	100	80	decrease
6e			1	2			20	40	increase
Global Themes	2.5	2.5	2.7	2.7	50	50	54	54	
7a	2	2	2	2	40	40	40	40	stable
7b	3	3	3	3	60	60	60	60	stable
7c			3	3			60	60	stable

**Healthy Reef Initiative
Collection Sheet Eco-Audit 2011 - Mexico**
Indicator:

	Status: Final
Name:	Percent of a country's territorial sea included in gazetted MPAs
Description:	Justification-In order to be effective, networks of MPAs must cover an adequate percentage of the sea.
Theme:	Theme 1 – Marine Protected Areas

Ranking Criteria:

5 – At least 20% of territorial sea is inside MPAs
 4 – At least 15% of territorial sea is inside MPAs
 3 – At least 10% of territorial sea is inside MPAs
 2 – At least 5% of territorial sea is inside MPAs
 1 – 0-4% of territorial sea is inside MPAs

Grade:

Grade:	2020: 5
Result:	2016: 5 - Very good 2014: 5 - Very good 2011: 5 - Very Good
	Based on the calculations obtained thanks to the different .shp using a GIS program, 98% of the territorial sea is within the MPA polygons in Quintana Roo.

Observations:

Observations:	The Mexican Caribbean Biosphere Reserve was decreed at the end of 2016, covering a total of 5,725,465 ha, with polygons of uses and core areas. The Mexican territorial sea off Quintana Roo now has some kind of protection.	2020
	New fishing refuges were decreed in 2015 in Akumal. CONANP made a reevaluation of their areas, and a calculation error was corrected in Banco Chinchorro where some reefs had been considered a portion of land. The layers of the marine protected areas (MX1a.19) and the 2015 no-fishing areas (MX1a.18) were used to make the respective calculations shown in the table (MX1a.17). There was an increase from 42.1% from 2013 to 43% in 2015.	2016
	Management plans and spatial information were compiled by HRI using national data from the government of MPAs (MX1a.2). Using the layers of the Geographic Information System (GIS) (MX1a.3); these files contain all the spatial information. Please note that they can only be viewed using a GIS program) it was determined that 42.1% of the territorial sea of Mexico (Quintana Roo) is within AMPs (MX1a.1, MX1a.2, and MX1a.14). Specifically, Mexico (Quintana Roo) has 18,639.8 hectares of territorial sea (spatial information in MX1a.3 and summary in MX1a.2), and 7,854.4 hectares are within MPAs (spatial information in MX1a.3, summary in MX1a.2 and MX1a.14). The legal orientation and detailed information (maps and / or statistical summary) for each of the AMPs is in MX1a.4, pages 2 and 12; MX1a.5, p. 2, 17 and 18; MX1a.6, pages 2 and 11; MX1a.7, p. 2 and 17; MX1a.8, p. 2, 20 and 21; MX1a.9, page 4; MX1a.10, pages 2, 3, 11 and 12; MX1a.11, pages 2 and 3; MX1a.12, page 3; MX1a.13, page 4. Please note that some numbers differ slightly from those reported in individual management plans because we only calculate the marine portion of each reserve. Various management plans and national reports include the total area of a Protected Area, which can include the area of marine waters, inland waters and land in their summary tables. Small differences can also be the result of using different GIS layers (maps, MX1a.3). There is also a management plan for non-extractive use through the operation of eco-tourism snorkeling tours for the sighting of protected species such as sea turtles in Akumal Bay, which is under review and cannot yet be published (MX1a.15, fifteen).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX1a.1b,1c Programas de manejo CONANP	varios	CONANP	CONANP
	MX1a.1_Estudio-Previo-Justificativo	2016	CONANP	CONANP
	MX1a.1b,1c Calculations MX	2020	HRI	HRI
	MX1a.1b,1c Shapes_NTZ	2019		CONANP
2011-2014	MX1a.1- JPEG Map of MAR Protected Area & Reef	Dic-11	COBI/HRI	HRI
	MX1a.2- Eco Audit Summary Statistics	Dic-11	COBI/HRI	HRI
	MX1a.3- MX Eco-Audit-GIS Shapefiles	Dic-11	COBI/HRI	HRI
	MX1a.4- Plan de Manejo Banco Chinchorro	May-11	HRI	CONANP
	MX1a.5- Plan de Manejo Cancún Nizuc	May-98	HRI	CONANP
	MX1a.6- Plan de Manejo Cozumel	May-98	HRI	CONANP
	MX1a.7- Plan de Manejo Isla Contoy	May-97	HRI	CONANP
	MX1a.8- Plan de Manejo Puerto Morelos	Sep-00	HRI	CONANP
	MX1a.9- Plan de Manejo Sian Kaan	1987 y 1992	HRI	CONANP
	MX1a.10- Plan de Manejo Xcalak	Sep-04	HRI	CONANP
	MX1a.11- Decreto Tiburón Ballena	05-Jun-09	HRI	CONANP
	MX1a.12- Decreto Yum Balam	06-Jun-94	HRI	CONANP
	MX1a.13- Santuario del Manatí	2008	HRI	Google
	MX1a-14- Lista de áreas	Dic-11	HRI	HRI
	MX1a-15 - Carta HRI Plan Manejo Akumal	2013	CEA	CEA
	MX1a.16 - Resumen estadísticas Informe de Avances	2013	COBI/HRI	COBI/HRI
2016	MX1a.17 - Tabla EA 2015	2015	COBI/HRI	COBI/HRI
	MX1a.18 - MAR MPAs NTZs 2015	2015	COBI/HRI	COBI/HRI
	MX1a.19 - GIS MAR MPAs	2015	COBI/HRI	COBI/HRI

Seguimiento:

Organización:	CONANP
Contacto:	Abelardo Brito Bermudez
Correo electrónico:	abelardo.brito@conanp.gob.mx
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

	Status: Final
Name:	Percent of a country's territorial sea included in fully protected zones
Description:	While MPAs in general offer a variety of conservation measures, the fully-protected (non-
Theme:	Theme 1 – Marine Protected Areas

Ranking Criteria:

5 – At least 20% of territorial sea is fully protected (fisheries replenishment zones)
4 – At least 15% of territorial sea is fully protected (fisheries replenishment zones)
3 – At least 10% of territorial sea is fully protected (fisheries replenishment zones)
2 – At least 5% of territorial sea is fully protected (fisheries replenishment zones)
1 – Less than 5% of territorial sea is fully protected (fisheries replenishment zones)

Grade:

Grade:	2020: 1
	2016: 4 - Good 2014: 2-Poor 2011: 1 - Critical
Result:	NOTE: the classification criteria for this indicator evolved to be more ambitious, seeking 20% of the sea completely protected. Unfortunately, with 4% of the territorial sea under the no-fishing or fishing refuge scheme, and with no evolution since the last Report, this indicator stops classifying as good.

Observations:

Observations:	It is necessary to recalculate taking into account how many new fishing refuges: Nizuc, 2018. The deep core areas of the Mexican Caribbean BR are not considered as not fishing since the first 100 m can be fished. The Punta Allen Fishing Refuge Zones is included. The Punta Herrero Fishing Refuge Zones is modified.	2020
	New fishing refuges were decreed in 2015 in Akumal, CONANP made a reevaluation of their areas, and a calculation error was corrected in Banco Chinchorro where some reefs had been considered a portion of land. The layers of the marine protected areas (MX1a.19) and the 2015 no-fishing areas (MX1a.18) were used to make the respective calculations shown in the table (MX1a.17). There was an increase from 2013 to 2015, going from 2.9% of the completely protected territorial sea to 4.1%.	2016
	Management plans and spatial information were compiled by HRI using national data from the government of MPAs (MX1b.2). Using the layers of the Geographic Information System (GIS) (MX1b.3; these files contain all the spatial information. Please note that they can only be viewed using a GIS program) it was determined that 2.9% of the territorial sea of Mexico (Quintana Roo) is within fully protected areas within the MPAs (MX1b.1, MX1b.2, and MX1b.14). Specifically, Mexico (Quintana Roo) has 18,639.8 hectares of territorial sea (spatial information in MX1b.3 and summary in MX1b.2), and 548.9 hectares are within fully protected areas (spatial information in MX1b.3, summary in MX1b.2 and MX1b.14). The legal orientation and detailed information (maps and / or statistical summary) for each of the MPAs is in MX1b.4, pages 2 and 12; MX1b.5, p. 2, 17 and 18; MX1b.6, pages 2 and 11; MX1b.7, p. 2 and 17; MX1b.8, p. 2, 20 and 21; MX1b.9, page 4; MX1b.10, pages 2, 3, 11 and 12; MX1b.11, pages 2 and 3; MX1b.12, page 3; MX1b.13, page 4, highlighting that the areas that contain fully protected areas are Banco Chinchorro; Western Coast of Isla Mujeres, Punta Cancun and Punta Niuc; Isla Cozumel and Arrecifes de Xcalak. Please note that some numbers differ slightly from those reported in individual management plans because we only calculate the marine portion of each reserve (MX1b.3). Various management plans and national reports include the total area of a Protected Area, which can include the area of marine waters, inland waters and land in their summary tables. Small differences can also be the result of having used different GIS layers (maps).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 1a,1b,1c Shapes_NTZ Capas SIG de los poligonos de ANP y de zonas de refugio	2020	COBI / CONANP	HRI
	MX1b-ZRP-Vigentes-191211	2020	COBI	HRI
	MX 1a, 1b, 1c Calculations MX	2020	HRI	HRI
	MX1b.1- JPEG Map of MAR Protected Area & Reef	Dic-11	COBI/HRI	HRI
	MX1b.2- Eco Audit Summary Statistics	Dic-11	COBI/HRI	HRI
	MX1b.3- MX Eco-Audit-GIS Shapefiles	Dic-11	COBI/HRI	HRI
	MX1b.4- Plan de Manejo Banco Chinchorro	May-11	HRI	CONANP
	MX1b.5- Plan de Manejo Cancún_Nizuc	May-98	HRI	CONANP
	MX1b.6- Plan de Manejo Cozumel	May-98	HRI	CONANP
	MX1b.7- Plan de Manejo Isla Contoy	May-97	HRI	CONANP
2011-2014	MX1b.8- Plan de Manejo Puerto_Morelos	Sep-00	HRI	CONANP
	MX1b.9- Plan de Manejo Sian_Kaan	1987 y 1992	HRI	CONANP
	MX1b.10- Plan de Manejo Xcalak	Sep-04	HRI	CONANP
	MX1b.11- Decreto Tiburón Ballena	05-Jun-09	HRI	CONANP
	MX1b.12- Decreto Yum Balam	06-Jun-94	HRI	CONANP
	MX1b.13- Santuario del Manatí	2008	HRI	Google
	MX1b.14- Lista de áreas	Dic-11	HRI	HRI
	MX1b.15- Resumen estadísticas Informe de Avances 2013	2013	COBI/HRI	COBI/HRI
	MX1b.16 - Tabla EA 2015	2015	COBI/HRI	COBI/HRI
2016	MX1b.17 - MAR MPAs NTZs 2015	2015	COBI/HRI	COBI/HRI
	MX1b.18 - GIS MAR MPAs	2015	COBI/HRI	COBI/HRI

Seguimiento:

Organización:	COBI
Contacto:	Stuart Fulton
Correo electrónico:	fulton@cobi.org.mx
Organización:	CONANP
Contacto:	
Correo electrónico:	

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México
Indicator:

	Status:	Final
Name:	Percent of mapped coral reef area included in fully protected zones	
Description:	Ideally, the amount of sea under full protection will be representative of each habitat or ecosystem type, including seagrass beds, mangroves, sand flats, etc. Given the historical conservation focus	
Theme:	Theme 1 – Marine Protected Areas	

Ranking Criteria:

5 – At least 20% of coral reefs are inside full protection/fisheries replenishment zones
4 – At least 15% of coral reefs are inside full protection/fisheries replenishment zones
3 – At least 10% of coral reefs are inside full protection/fisheries replenishment zones
2 – At least 5% of coral reefs are inside full protection/fisheries replenishment zones
1 – Less than 5% of coral reefs are inside full protection/fisheries replenishment zones

Grade:

Grade:	2020: 4	2014: 5 - Very good	2011: 3 - Fair
Result:	Based on the calculations obtained from the CONABIO reef layers and the NTZ layers (including the core zones of AMP and ZRP), 18% of the reefs are under total protection. 55.8km2 of the total 316.8 km2 of coral reefs are under replenishment zones. Although this percentage has actually improved since last EA, the ranking criterias have increased, impacting the score.		

Observations:

Observations:

It is necessary to recalculate taking into account new shelters: R.P. Nizuc, Xcabel-RBCM core zone. Xcabel- Xacacelto marine core area 326.58 ha. The benthic cover layer of CONABIO was taken as the reef layer, taking into account the layers of: coral structure, octocorals, octocorals and corals, stumps and pieces.	2020
New fishing refuges were decreed in 2015 in Akumal, CONANP made a reevaluation of their areas, and a calculation error was corrected in Banco Chinchorro where some reefs had been considered a portion of land. The layers of the marine protected areas (MX1a.19) and the 2015 no-fishing areas (MX1a.18) were used to make the respective calculations shown in the table (MX1a.17). There was an increase where 13.5% of coral reefs were within APMs in 2013, rising to 15% by 2015.	2016
Management plans and spatial information were compiled by HRI using national data from the government of MPAs (MX1c.2). Using the layers of Geographic Information System (GIS) (MX1c.3; these files contain all the spatial information. Please note that they can only be viewed using a GIS program) it was determined that 15% of the coral reefs of Mexico (Quintana Roo) is within fully protected areas (MX1c.1, MX1c.2, MX1c.14, MX1c.16). Specifically, Mexico (Quintana Roo) has 491.2km2 of coral reef area (spatial information in MX1c.3 and summary in MX1c.2), and 66.3km2 are within areas restricted to fishing (spatial information in MX1c.3, summary in MX1c.2 and MX1c.14). The legal guidance and detailed information (maps and / or statistical summary) for each of the MPAs is in MX1c.4, pages 2, 12 and 27; MX1c.5, p. 2, 17, 18, and 28-33; MX1c.6, pages 2 and 11; MX1c.7, p. 2 and 17; MX1c.8, p. 2, 20 and 21; MX1c.9, page 4; MX1c.10, pages 2, 3, 11 and 12; MX1c.11, pages 2 and 3; MX1c.12, page 3; MX1c.13, page 4. Please note that some numbers differ slightly from those reported in individual management plans because we only calculate the marine portion of each reserve. Various management plans and national reports include the total area of a Protected Area, which can include the area of marine waters, inland waters and land in their summary tables. Small differences can also be the result of having used different GIS layers (maps).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 1a, 1b, 1c Carpeta Programas de Manejo	2018	CONANP	CONANP
	MX1b_ZRP_VIGENTES_191211 /MX 1a,1b,1c Shapes_NTZCapas SIG de los poligonos de ANP	2020	COBI / CONANP	HRI
	MX 1a, 1b, 1c Calculations MX	2020	HRI	HRI
2011-2014	MX1c.1- JPEG Map of MAR Protected Area & Reef	Dic-11	COBI/HRI	HRI
	MX1c.2- Eco Audit Summary Statistics	Dic-11	COBI/HRI	HRI
	MX1c.3- MX Eco-Audit-GIS Shapefiles	Dic-11	COBI/HRI	HRI
	MX1c.4- Plan de Manejo Banco Chinchorro	May-11	HRI	CONANP
	MX1c.5- Plan de Manejo Cancún_Nizuc	May-98	HRI	CONANP
	MX1c.6- Plan de Manejo Cozumel	May-98	HRI	CONANP
	MX1c.7- Plan de Manejo Isla Contoy	May-97	HRI	CONANP
	MX1c.8- Plan de Manejo Puerto_Morelos	Sep-00	HRI	CONANP
	MX1c.9- Plan de Manejo Sian_Kaan	1987 y 1992	HRI	CONANP
	MX1c.10- Plan de Manejo Xcalak	Sep-04	HRI	CONANP
	MX1c.11- Decreto Tiburón Ballena	05-Jun-09	HRI	CONANP
	MX1c.12- Decreto Yum Balam	06-Jun-94	HRI	CONANP
	MX1c.13- Santuario del Manatí	2008	HRI	Google
	MX1c.14- Lista de áreas	Dic-11	HRI	HRI
	MX1c.15 - Resumen estadísticas Informe de	2013	COBI/HRI	COBI/HRI
2016	MX1c.16 - Tabla EA 2015	2015	COBI/HRI	COBI/HRI
	MX1c.17 - MAR MPAs NTZs 2015	2015	COBI/HRI	COBI/HRI
	MX1c.18 - GIS MAR MPAs	2015	COBI/HRI	COBI/HRI

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México

Indicador:

	Status: Final
Name:	Percent of MPAs with good management
Description:	The legal establishment of MPAs is an important milestone, but the attainment of conservation and management goals is only achieved through sound management. This indicator measures management capacity, which serves as a proxy for the overall quality of management. Management capacity is evaluated based on the existence of management plans, staff and equipment.
Theme:	Theme 1 – Marine Protected Areas

Ranking criteria:

5 – At least 75% of MPAs must have a current management plan and adequate staff and equipment; and the remaining 25% should not be classified as having 'no current management plan' and 'no staff and equipment' or 'inadequate staff and equipment'
4 – At least 60% of MPAs have a current management plan and adequate staff and equipment; and from the remaining MPAs no more than 10% should be classified as having 'no current management plan' and 'no staff and equipment' or 'inadequate staff and equipment'
3 – At least 50% of MPAs have a current management plan and at least 50% have nearly adequate staff and equipment
2 – At least 25% of MPAs have a current management plan and at least 25% have nearly adequate staff and equipment
1 – Fewer than 25% of MPAs have a current management plan and fewer than 25% have nearly

Grade:

Grade:	2020: 2
	2016: 2 - Poor
Result:	The ANP RBCM has a new management plan. PN COIMPCAN and mangroves of Nichupté are updated. The rest of the ANP have their management plan without updating. No ANP has adequate personnel, budget or equipment.

Observations:

Observations:	The ANP RBCM has a new management plan. PN COIMPCAN and mangroves of Nichupté are updated. The rest of the ANP have their management plan without updating. No ANP has adequate personnel, budget or equipment.	2020
Observaciones:	To select the criteria, the following federal ANPs were considered: PN Arrecifes de Xcalak, RB Banco Chinchorro, RB Arrecifes de Sian Ka'an, RB Sian Ka'an (Complejo Sian Ka'an), PN Arrecifes de Cozumel, APFF Isla Cozumel, Puerto Morelos Reef NP, Western Coast NP, Isla Mujeres, Punta Cancún, Punta Nizuc, Isla Contoy NP, Tiburon Whale RB and APFF Yum Balam; of which: 4 have recently published management programs (2015), 2 have currently applicable Programs, 2 are in the process of updating, 1 is in preparation. The Sanctuary of the Manatí state area has a management plan since 2008 with inadequate personnel and equipment.	2016

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX1d.1Brecha Financiera PYCM	2019	Conanp	CONANP
	MX1d.2 BF_1	2019	CONANP	CONANP
	MX 1d.3 Guia rapida para construir planes de financian	2019	CONANP	CONANP
	MX 1e_MPA_Original_Data_Collection_MX esp- CON	2020	CONANP	HRI
2016	MX1d.1. Encuesta de planes de manejo, personal y ec	2015	CONANP	CONANP
	MX1d.2. Planes de Manejo de las 11 AMPs	1994-2015	CONANP	CONANP

Seguimiento:

Organización:	CONANP
Contacto:	María del Carmen García Rivas
Correo electrónico:	mcgarcia@conanp.gob.mx
Organización:	
Contacto:	
Correo electrónico:	

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México

Indicador:

	Status:	Final
Name:	Percent of MPAs with good enforcement	
Description:	Sound management of MPAs requires both the capacity and political will to enforce regulations. This	
Theme:	Theme 1 – Marine Protected Areas	

Ranking Criteria:

5 – At least 75% of MPAs have good enforcement and the remaining 25% must have moderate enforcement
4 – At least 60% of MPAs have good enforcement and the remaining 40% must have moderate enforcement
3 – At least 50% of MPAs have at least moderate enforcement
2 – At least 25% of MPAs have at least moderate enforcement
1 – Fewer than 25% of MPAs have at least moderate enforcement

Classification:

Grade:	2020: 3 Fair
	2016: 3- Fair
Result:	According to the results of the survey conducted with directors of ANP in Quintana Roo, 18.20% is considered good application; 54.60% moderate and 36.40% inadequate.

Observations:

Observations	According to the results of the survey conducted with directors of ANP in Quintana Roo, 18.20% is considered good application; 54.60% moderate and 36.40% inadequate.	2020
	Of the 11 ANPs subject to evaluation, 5 are believed to have good application, 5 are considered moderate management, and 1 inadequate. In the last two cases, there is greater pressure on the use of natural resources, combined with limitations in human and material resources for the optimal operation of the ANP.	2016

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX1e-MPA_Original_Data_Collection_MX esp- CONA	2020	HRI	https://drive.google.com/open?id=1JuDza7XA0ngzS64eVhFytQ8EFhTURNFUXht1Lk9xwaw
2016	MX1e.1. Encuesta de planes de manejo, personal y eq	2015	CONANP	CONANP

Seguimiento:

Organización:	Rosalía Andrade Medina
Contacto:	Consultora
Correo electrónico:	r.andrademedina@gmail.com
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

	Status:	Final
Name:	Generation of alternatives for fishers within the network of MPAs	
Description:	Fisheries management strategies should provide alternative livelihoods for fishers and other communities whose income may be affected by the establishment of "Fully Protected (Replenishment) Zones" which prohibit fishing. This Indicator measures the level of implementation of measures to achieve this objective.	
Theme:	Theme 1 – Marine Protected Areas	

Ranking Criteria:

5 – A national-level strategy to provide fishers with long-term economic alternatives generated by the recovery of ecosystems through productive activities and/or payment of ecosystem services exists and is being implemented in between 85-100% of MPAs
 4 – A national-level strategy to provide fishers with long-term economic alternatives generated by the recovery of ecosystems through productive activities and/or payment of ecosystem services exists with implementation in between 50-84% of MPAs
 3 – A national-level strategy to provide fishers with long-term economic alternatives generated by the recovery of ecosystems through productive activities and/or payment of ecosystem services is being developed, with some alternative or sustainable livelihoods programs being implemented in between 20-49% of MPAs
 2 – At least one program exists (in one MPA) that provides fishers in at least one locality with economic alternatives through productive activities and/or payment of ecosystem services
 1 – No documented action that meets the criteria to achieve a higher score is available

Classification:

Grade:	2020: 5	2016: 5 - Very good	2014: 5 - Very good
Result:	The PROCODES are maintained in the ANPs and there are other sources of financing such as Small Donations Programs.		

Observations:

Observations:	Subsidies are maintained (update according to the new administration). Small Grants Program (PPD).
	<p>PROCODES constitutes an instrument of public policy that promotes the conservation of ecosystems and their biodiversity through the direct and effective participation of the population, owners and users, in the processes of land management; in the appropriation of resources; the protection, management and restoration of the same; and the economic valuation of the ecosystem services that they provide to society, in such a way that alternative productive opportunities are generated and contribute to improving the quality of life of the inhabitants in the environment of protected areas and other conservation modalities (MX1f.1 AND 4). There are priority regions for the application of PROCODES, within which in Quintana Roo the following are established for 2013: Bala'an K'aax, Nichupté Mangroves, Otoch Ma'ax Yetel Kooh, Uaymil, Yum Balam, northern portion and the eastern terrestrial and marine coastal strip of the Island of Cozumel, Puerto Morelos Reef, Cozumel Reef, Xcalak Reef, Western Coast of Isla Mujeres, Punta Cancún, Punta Nizuc; Isla Contoy, Tulum, Sian Ka'an Reefs, Sian Ka'an, Chinchorro Bank, Whale Shark, X'cachel-X'cachelito Tortuguera Beach. (MX1f.2). The payment of wages by economic zone of PROCODES is integrated in all the municipalities of Quintana Roo (MX1f.3). Through PROCODES there are investments for training courses, technical studies, conservation and restoration of ecosystems, and productive projects (MX1f.5).</p>

Fuente:

	Documento/Nombre del Archivo	Fecha	Institucion	Localizacion
2020	Convocatorias 2020	2020	CONANP	https://www.conanp.gob.mx/pr
	MX 1f. Información PROCODES	2020	CONANP	HRI
	Lineamientos	2020	CONANP	https://www.gob.mx/conan
2011-2014	MX1f.1. PROCODES	2011	CONANP	Procodes
	MX1f.2. ANEXO 5 Claves Regiones Prioritarias	2013	CONANP	Procodes
	MX1f.3. ANEXO 8 Municipios por Zona	2013	CONANP	Procodes
	MX1f.4. Guía Optiva Contraloría	Jul-05	CONANP	Procodes
2016	MX1f.5. Información PROCODES	2015	CONANP	Procodes

Seguimiento:

Organización:	CONANP
Contacto:	María del Carmen García Rivas
Correo electrónico:	mcgarcia@conanp.gob.mx
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

Name:	Harmonizing fisheries regulations among countries	Status:	Final
Description:	Over the past few years a number of regional initiatives have attempted to harmonize fisheries regulations for economically important fisheries (e.g. lobster and conch). This indicator measures the extent of harmonization of regulations on size limits and closed seasons, because differences in these two regulations across countries has been shown to lead to substantial trans-boundary illegal and unreported fishing.		
Theme:	Theme 2 – Ecosystem-based Fisheries Management		

Ranking Criteria:

5 – Regulations for closed seasons and size limits are fully harmonized among the four countries and two commercial fisheries
4 – Regulations for closed seasons and size limits are fully harmonized among three countries and two commercial fisheries
3 – Regulations for closed seasons and size limits are fully harmonized among three countries and one commercial fishery
2 – There has been some effort at harmonizing regulations (draft regulations, project planning or joint research)
1 – No documented action that meets the criteria to achieve a higher score is available

Classification:

Grade:	2020: 3 - Fair	2014: 3-Fair	2011: 3 - fair
Result:	The lobster fishery at the MAR level certifies catch sizes. Many of the other species are still without closures or size limits, or are not aligned with the other countries.		

Observations:

Observations	The MAR Sustainable Fisheries Network could work on the revision of the regulation for its application and would be the link with the other MAR countries.	2020
	<p>The Regulations for the Fishing of the Caribbean Lobster OSP-02-09 created by OSPESCA (Organization of the Fisheries and Aquaculture Sector of Central America) (GU2a.1; HN2a.1; BZ2a.1; MX2a.1) serve as a point of initiation and a goal for the SICA (Central American Integration System) countries to achieve harmonization of fisheries. This regional regulation then requires that the different countries incorporate regulations at the state or country level, to achieve their applicability. Mexico, Guatemala and Honduras have a closed season for lobster from March 1 to June 30 (Belize maintains its similar closure from February 14 to June 14). These dates are considered to be close enough to each other to be considered in harmony See p. 10 for the signatories (GU2a.1; HN2a.1; BZ2a.1; MX2a.1).</p> <p>OSPESCA established a working group in Central America to develop a work plan to regulate the <i>Strombus gigas</i> (queen conch) fishery. The report "Improvements in the Status and Trends of Queen conch Catch in the Caribbean region" (GU2a.2; MX2a.2; HN2a.2) represents the first step towards harmonizing the regulations of the fishery of snail. Another SICA OSPESCA document proposes harmonizing lobster and conch fishing regulations throughout the Caribbean (GU2a.8; HN2a.6; MX2a.6; BZ2a.2). There is still work needed to regulate the conch fishery as well as the grouper and snapper fishery in the MBR5 region.</p> <p>More recent efforts include recommendations made by the CFMC / OSPESCA / WECAFC / CRFMI Working Group for the development and adoption of sub-regional regulations for "queen conch conservation and management". This initiative has been supported by a CITES decision that establishes that the signatory countries must complete the activities that include the standardization of reporting instruments, management plans for the species and the development of a conversion factor for the processing of the product.</p> <p>The Central America Regional Action Plan for sharks expresses support for the creation of a Regional Center for Research and Training in Marine Resources Management. In January 2012, Regional Regulation OSP 05-11 prohibits shark finning activity in all SICA countries, which takes effect simultaneously in all Central American countries. It establishes the steps for the creation of regional measures for the sustainable management of sharks, which reaffirms the practice of finning (GU2a.3; GU2a.4; HN2a.7; HN2a.8; MX2a.7; MX2a.8; BZ2a.3; Bz2a.4). In Mexico, NOM 029 PESC 2006 (MX2a.5, p. 2, 7 and 10) prohibits the practice of finning sharks of all species and also prohibits</p>	2016

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 2a. Veda Langosta_DOF - Diario Oficial de la F	2020	CONAPESCA	HRI
2011-2016	MX2a.1-Regulation OSP-02-09-Regional Regulation of Caribbean Lobster Fishing	May-09	Organization of Fishing and Aquaculture in Central	Organization of Fishing and Aquaculture in Central
	MX2a.2- Declaración Conjunta II Foro Trinacional de Pesca	Oct-10	TRIGOH	TRIGOH
	MX2a.3-Política Integración Pesca y Acuicultura Istmo Centroamericano	Jul-05	Organization of Fishing and Aquaculture in Central	Organization of Fishing and Aquaculture in Central
	MX2a.4-Fisheries and Aquaculture Integration Policy Central America	Jul-05	Organization of Fishing and Aquaculture in Central	Organization of Fishing and Aquaculture in Central
	MX2a.5. NOM 029	2006	SAGARPA-SEMARNAT-CONAPESCA	SAGARPA-SEMARNAT-CONAPESCA
	MX2a.6. Propuesta de reglamentación caracol y langosta	Nov-08	OSPESA/SICA	OSPESA/SICA
	MX2a.7. Plan de acción regional de tiburones	Jun-10	Universidad Austral de Chile	Universidad Austral de Chile
	MX2a.8. Reglamento OSP 05-11	May-11	OSPESA/SICA	OSPESA/SICA

Seguimiento:

Organización:	FMCN
Contacto:	María Eugenia Arreola / Minerva Rosette
Correo electrónico:	minerva.rosette@fmcn.org
Organización:	COBI
Contacto:	Stuart Fulton
Correo electrónico:	sfulton@cobi.org.mx

Agregar el correo de Maru

Indicador:

Name:	Special regulations for grouper / spawning sites	Status:	Final
Description:	The reef food web is highly complex. The removal of just one group of fish from the food web can have widespread effects throughout the reef ecosystem, ultimately weakening and destabilizing it. Groupers' reproductive behavior makes them particularly vulnerable during spawning, and many spawning aggregation sites (SPAGs) have already been overfished and depleted of grouper. This indicator measures efforts to protect these sites and species.		
Theme:	Theme 2 – Ecosystem-based Fisheries Management		

Ranking Criteria:

- 5 – At least 90% of known grouper SPAGs are fully protected (year-round in MPAs) with legal regulations and at least 50% of these have good enforcement
 4 – At least 75% of known grouper SPAGs are fully protected (inside MPAs) and at least 20% have at least moderate enforcement
 3 – There are closed seasons, size limits or catch limits specific for grouper
 2 – There has been some effort at drafting regulations, research or a public campaign on the topic
 1 – No documentation of actions that meet the criteria to achieve a higher score is available

Classification:

Grade:	2020: 4
Result:	2016: 3 - Fair 2014: 3-Fair 2011: 3 - Fair
	6 of 8 visually confirmed SPAGs (aggregation and reproduction zones) are within no-fishing zones, due to being inside an MPA or in a small refuge zone. Three of them are monitored by the fishing cooperatives.

Observations:

Observations:	6 of 8 visually confirmed SPAGs (aggregation and reproduction zones) are within no-fishing zones, due to being inside an MPA or in a small refuge zone. Three of them are monitored by the fishing cooperatives.	2020
	NOM 065 underwent an update in July 2015 (MX2b.9) and a management plan for grouper was obtained in November 2014 (MX2b.10) since this fishery is overexploited, so measures for its recovery were designed, and proper administration. The purpose of this plan is to promote the recovery of the red grouper (<i>Epinephelus morio</i>) and species associated with its fishery. There is also a map (MX2b.11) provided by COBI showing the reproductive aggregations of fish verified with COBI fieldwork data from 2012-2015 (document not yet published).	2016
	As for the ban, the Department of Inspection and Surveillance, has records of surveillance or sanctions, but they are not specific to mere. Breeding aggregation sites (SPAGs) are not yet protected and the closed season does not coincide with breeding. Lack of allowable sizes and catch limits, the application of the regulation is done with the legal fisherman, the problem is with the illegal fisherman and industrial fishing. The size limit is set only for one species <i>Epinephelus morio</i> (page 8, NOM 065 PESC 2007 MERO / MX2b.6) and in the same document page 5, section 4.14.1 indicates the catch limits. The Grouper Ban document published on February 14, 2007 (MX2b.7, page 2, FIRST and MX2b.8, page 3 row 7) indicates the closed seasons for all species of grouper. The Subdelegate Letter (MX2b.1) is the request to extend the ban to 2 months (January and February) in most of the SPAGs in Mexico; The Technical Report (MX2b.2) is the proposal to expand the ban and there is a response from the commissioner (MX2b.3) where the proposal is under review; There is a list of Aggregation Sites (MX2b.4) where the last page has the SPAGs for groupers; Eloy Sosa, a researcher at ECOSUR (MX2b.5) provided much of this information and in his email explains the use of the information.	2014

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 1a_1b_1c Carpeta Programas de Manejo	2018	CONANP	CONANP
	MX 1a Estudio técnico justificativo	2017-2018	COBI	COBI
	MX 2b-1 ETJ Bahía de Ascension	2014	SAGARPA	HRI
	MX 2b-2_CUADRO_VEDAS_VIGENTES_19032020	2020	CONAPESCA	HRI
	MX 2b-3_2014_11_25_MAT_sagarpa-PLAN-DE-MERO	2021	CONAPESCA	HRI
	MX 2b-4 Management Plan RB Caribe Mexicano	2020	CONANP	CONANP
2011-2014	MX2b.1- Carta Subdelegado QR	Mar-11	ECOSUR	ECOSUR
	MX2b.2- Informe tecnico_veda_mero	Feb-11	ECOSUR	ECOSUR
	MX2b.3- respuesta comisionado	Mar-11	ECOSUR	ECOSUR
	MX2b.4- Sitios de Agregación Eloy Sosa	Nov-02	ECOSUR	ECOSUR
	MX2b.5- mail Eloy Sosa	Oct-11	ECOSUR	Eloy Sosa
	MX2b.6- NOM 065 PESC 2007 MERO	Mar-09	SAGARPA	SAGARPA
	MX2b.7- Veda mero publ 14feb07	Feb-07	SAGARPA	SAGARPA
	MX2b.8- Vedas oficiales	Feb-07	SAGARPA	SAGARPA
2016	MX2b.9- NOM 065 SAG/PESC-2014	3-Jul-15	SAGARPA	SAGARPA
	MX2b.10 - Plan de Manejo del Mero	25-Nov-14	SAGARPA	SAGARPA
	MX2b.11 -ARPs de Q. Roo	2012-2015	COBI	COBI

Seguimiento:

Organización:	COBI
Contacto:	Stuart Fulton
Correo electrónico:	fulton@cobi.org.mx
Organización:	
Contacto:	
Correo electrónico:	

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México
Indicador:

Name:	Protection of key grazers (parrotfish)	Status:	Final
Description:	As the number of large predatory species declines due to overfishing, fishers often target smaller herbivorous fish. The removal of herbivorous fish results in increased algal overgrowth, and ultimately decreased resilience of the reef ecosystem. This indicator measures the degree of protection for parrotfish among the four countries.		
Theme:	Theme 2 – Ecosystem-based Fisheries Management		

Ranking Criteria:

5 – Parrotfish are fully protected through regulations with at least good enforcement
4 – Parrotfish are fully protected through regulations with at least moderate enforcement
3 – There exist draft regulations or a public campaign on the topic
2 – There has been some effort (strategic plans or consultation reports) at drafting regulations and/or educational outreach (development of educational brochures or pamphlets)
1 – No documented action that meets the criteria to achieve a higher score is available

Classification:

Grade:	2020: 4-Good	2016: 2 - Poor	2014: 1-Critical	2011: 1 - Critical
Result:	At the end of 2018, the RBCM Management Program prohibits the fishing of parrotfish and in 2019 10 species of parrotfish are included in the NOM 059 in the special protection category, giving the highest level of protection possible in Mexico. However, there is neither good law enforcement nor effective surveillance.			

Observations:

Observations:	2019 includes 10 species of parrotfish to the NOM 059 in the special protection category and at the end of 2016 the RBCM is decreed and at the end of 2018 the Management Program is published that prohibits the fishing of parrotfish.	2020
	At the end of 2014, an interdisciplinary working group began to be formed to begin to spread the importance of the parrotfish towards the ultimate goal of creating special protection for it. In February 2015 this multidisciplinary group made up of members of COBI, Kanan Kay Alliance, CEMDA, SEMA, SEMARNAT and HRI was consolidated to work on the first dissemination strategies about the importance of parrotfish (MX2c.2). From this meeting, the SEMA, together with information provided by the other members, began with the preparation of an informative poster (MX2c.3) to distribute it in the fishing communities (to be carried out). Likewise, the participants of this group prepared a press bulletin which was distributed in the local Q. Roo media (MX2c.4). To provide technical and scientific support to the ultimate goal of creating a law or regulation that protects parrotfish in the state of Q. Roo, biologist Courtney Cox initiated a study to characterize the fish filets that are being sold in markets, and restaurants (MX2c.5), which is to be published. Likewise, the Healthy Reefs Initiative made a video with key actors participating in the protection of parrotfish as well as publicizing its importance. At the moment we have the teaser for the video (MX2c.6) and the full video will be released in early 2016.	2016
	It is not a commercial fishery so no regulation has been required for parrotfish. CONAPESCA has not worked / prioritized regulations of a non-commercial species, however, it is an opportunity to start doing something to conserve it. During the Progress Report Workshop, based at the Center for the Interpretation of Nature and Maya Culture, in Tulum, on October 25, 2011 (MX2c.1), it was recommended to create regulations for parrotfish, preventing that in a future could become a commercial species due to the overexploitation of another.	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 2c-1 NOM 059 - SEMARNAT -2019	2019	SEMARNAT	HRI
	MX 1a, 1b, 1c Programas de manejo	2018	CONANP	CONANP
	MX 2c- 2 Reporte 2020 Salud SAM-HRI	2020	HRI	HRI
2016	MX2c.2- Minuta Pez Loro	20-Feb-15	HRI	HRI
	MX2c.3- Poster Pez Loro Benito Juárez	Mar-15	HRI	HRI
	MX2c.4-Boletín de prensa	Mar-15	HRI	HRI
	MX2c.5- Estudio Courtney Cox	12-nov.15	HRI	HRI
	MX2c.6 - Teaser video difusión pez loro	Nov-15	HRI	HRI
2011-2014	MX2c.1- Lista de participantes del Taller	25-Oct-11	HRI	HRI

Seguimiento:

Organización:	HRI
Contacto:	Mélina Soto
Correo electrónico:	soto@healthyreefs.org
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

	Status:	Final
Name:	Transform all open-access fisheries to rights-based sustainable fisheries management systems	
Description:	Justification-Throughout the MAR region, fisheries management has not achieved sustainability, in large part due to reliance on open access and traditional management approaches and the inability to control illegal fishing, especially in remote areas. The lack of a clear allocation of fishing rights is a major factor contributing to overfishing, and tends to encourage unsustainable fishing practices such as the race-to-fish and illegal fishing. Open access also fuels conflict for fishing areas. Transforming fisheries management to a rights-based approach in the MAR region will promote better management of the fisheries stocks by fostering stewardship by fishers of designated fishing areas, facilitating the regulation of fishing through sustainable catch limits, and promoting community-based management of fisheries in the region.	
Theme:	Theme 2 – Ecosystem-based Fisheries Management	

Ranking Criteria:

5- More than 90% of total catch* is under a form of regulated rights-based fisheries management (RBM) covering at least three of the most economically valuable species/taxonomic groups
4- 26-50% of total catch is under a form of regulated rights-based fisheries management, covering at least two of the most valuable species/taxonomic groups
3- At least two fisheries and/or 25% of fishing communities is under a form of regulated rights-based fisheries management, covering at least one of the most valuable species/taxonomic groups
2- At least one fishery and/or one community is implementing regulated rights-based fisheries management
1- No documented action that meets the criteria to achieve a higher score is available

Classification:

Grade:	2020: 3-Fair
Result:	2016: 2 - Poor 2014: 2- Poor
	Lobster is managed by concessions, snail by quota only in Banco Chinchorro. In the case of scale, the permits define the right and the fishing area, but there is uncertainty as to whether only users with permits will capture the resource.

Observations:

Observations:	For legal capture we can quantify it through the arrival notices, with CONAPESCA and the SCPP (Cooperative Fishing Societies). There is also an estimate of the total catches, which could be twice the actual catches.	2020
	We have a file of the volume and value of production of various fisheries such as: snail, shrimp, shark, lobster, and scale for each of the cooperatives (MX2d.7), provided by COBI-SAGARPA for 2010.	2016
	Among the traditional management elements are the fishing permits and concessions granted by the federal government through Conapesca Sagarpa; In addition, there are official regulations applicable to certain fishery resources. Among the most important norms are NOM 013-PESC-1994 (MX2d.3.), which establishes the snail quotas; NOM 006-PESC-1993 (MX2d.4.), which sets the minimum legal size of 13.5 cm for lobster tail length, a four-month ban (March-June), and prohibits capturing females with eggs. Likewise, annual reports are made for grouper that are used to establish a one-month closure, generally from February 15 to March 15, applicable to all groupers in the Yucatan Peninsula (MX2d.2.). Despite efforts to regularize free fishermen in order to better control and eliminate poaching, especially conch and lobster, the chronic lack of budget for surveillance and law enforcement forces us to think of other solutions. One proposal is to complement the traditional management elements, with strategies based on the exemplary internal organization of some cooperatives, whose internal regulations are more effective and strict than federal laws. An interesting case is the prohibition of scuba diving fishing, which originally formed part of the internal regulations of the cooperatives of Punta Allen, Bahía del Espíritu Santo and Banco Chinchorro. This measure has been adopted from Tulum to the border between Mexico and Belize. The foregoing opens the doors to new management schemes, such as co-management that implies the commitment and active participation of all interested parties, based on shared responsibility; that is, the user sectors and the government become co-managers to achieve the sustainable use of fishery resources. (MX2d.1, p. 183, 1st column, last paragraph; p. 188 under the topic Resource Management in the State). Almost all lobster fishing in Quintana Roo is managed with the use of exclusive concessions. On the map, with the exception of northern Quintana Roo (which is complicated due to the number of cooperatives), almost all the concessions (in orange) are exclusive to a cooperative. In this case, a high percentage of the lobster catch comes from exclusive use areas. (MX2d.5, document provided by COBI in an internal job). The MX2d.6 list (document provided by COBI in an internal work) corresponds to 19 fishing cooperatives that use lobster.	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institucion	Localizacion
2020	MX2d-1 La pesca irregular y no reportada en	2016	COBI	
	MX2d-1 permisos_pesca_comercial	anual	CONAPESCA- SCPP	
	MX2d-3 DOF - CNP_2017Carta Nacional		CONAPESCA	
	MX2d-4 Produccion_Pesquera_2014.csv		CONAPESCA	HRI
2011-2014	MX2d.1. Pesca Marina Quintana Roo Eloy	2007	ECOSUR	ECOSUR
	MX2d.2. NOM 065 PESC Grouper	24-Mar-09	SAGARPA	SAGARPA
	MX2d.3. 013pesc1994 CARACOL	12-Jan-95	SAGARPA	SAGARPA
	MX2d.4. NOM 006 1993 Langosta	12-Oct-09	SAGARPA	SAGARPA
	MX2d.5. Coops de Quintana Roo	Oct-12	COBI	COBI
	MX2d.6. CONAPESCA Coops	16-Nov-12	COBI / CONAPESCA	COBI / CONAPESCA
	MX2d.7. Prod. por Coop. 2010	2010	COBI / SAGARPA	COBI / SAGARPA

Seguimiento:

Organización:	COBI
Contacto:	Stuart Fulton
Correo electrónico:	sfulton@cobi.org.mx
Organización:	
Contacto:	
Correo electrónico:	

Iniciativa Arrecifes Saludables
Índice de Estado de Datos - Informe de Avance 2020 - México
Indicador:

Name:	Coastal zone planning regulations	Status:	Final
Description:	Effective, integrated coastal planning emphasizing sustainable development, alongside enforcement of coastal development regulations can greatly reduce the pressures of coastal development. Development and implementation of comprehensive coastal zone management plans can guide sustainable development. This indicator measures the extent and implementation of such plans or laws towards developing such plans. Having a well-designed coastal zone plan is only the first step toward achieving successful coastal zone management. Effective enforcement of these plans is also essential. Due to a lack of data and record-keeping on enforcement of zoning and other regulations it was not possible to derive quantifiable targets to assess the level and impact of enforcement efforts.		
Theme:	Theme 3 – Coastal Zone Management		

Ranking Criteria:

5- A spatially comprehensive coastal zone plan or zoning regulations exist for the country (or state within the MAA area) and have been legally adopted
4- There is a coastal zone plan or zoning regulations (not spatially comprehensive) and they have been legally adopted for some areas
3- A spatially comprehensive coastal zone plan or zoning regulations have been completed (drafted) for the country (or MAA area) and submitted for approval
2- There is work (drafts in progress, consultation reports, research or strategic plans) at drafting a spatially comprehensive coastal zone plan or zoning regulations.
1- No documentation of actions that meet the criteria to achieve a higher score is available

Classification:

Grade:	2020: 5 - Very good	2014: 5 - Very good	2011: 2 - Poor
Result:	There are territorial planning programs for the different areas of Quintana Roo, the marine and regional ecological planning program for the Gulf of Mexico and the Caribbean Sea, the national strategy for seas and coasts and the program for sustainable development for oceans and coasts. All the encompasses the state of Quintana Roo, note: however, they are not binding between them and the application of the law is not respected.		

Observations:

The RBGM that includes the coastal zone was decreed and its management program was published. The APPF Yum Balam Management Program was published. Modification of the Urban Development Plan of Solidaridad, increase in the level of construction. ** Note: The State Law on Environmental Protection / Ecological Planning overlaps with the Municipal Program, causing delays in updating and meeting the criteria.	2020
The modification of these instruments must be based on technical information on the status of the ecosystems. There are new management programs in the Shark Whale Biosphere Reserve (MXKa 18), Isla Cozumel (MXKa 19), Nichupán Mangrove Flora and Fauna Protection Area (MXKa 20), Isla Cozumel (MXKa 21) and Arrecifes de San Juan Biosphere Reserve (MXKa 22). As well as the Ecological Planning Program of the Municipality of Othón P. Blanco, which now requires tertiary treatment for wastewater but has not yet been published in the Official Gazette.	2016
The design of the plans is not made to improve the health of the reef. Nor do the relevant regulations for coastal developments apply. The document "Room Court" (MXKa 16) on page 7 mentions the negative impact on the environment by the construction of hotels, which exceeds the 30/90 authorized rooms by SREI. There are programs at different levels: General (Federal) Territorial Ecological Planning Program, which is descriptive; Regional (State), which is descriptive; and local (Municipal), where it can be sanctioned for non-compliance (Communication during the Progress Report Workshop on October 25, 2011, MQCZ 1). The latter presents environmental management units that have an urban development plan, and is managed by the municipality (UGA) (Communication during the Progress Report Workshop on October 25, 2011, MQCZ 4B). Between these different programs there is not the necessary link for the management to be inclusive among them. There are several articles published where overdevelopment is observed and how the law is not applied in the construction of new hotels and urban development (MXKa 17). There is a document (MXKa 1) which establishes the national environmental policy for the sustainable development of the oceans and coasts of Mexico, indicating the strategies for their conservation and sustainable use that include: definition of the coastal zone (page 17), regulatory framework (page 18), instruments of environmental policy (page 25), compliance and monitoring of the law (page 45). Likewise, the National Strategy for the Ecological Ordering of the Territory in Seas and Coasts (MXKa 3) indicates the strategy by instruments: federal scheme, state and municipal scheme (pages 15-18), and the zone strategy for the Gulf of Mexico and the Caribbean Sea (page 23). The Marine and Regional Ecological Planning Program of the Gulf of Mexico and the Caribbean Sea (MXKa 3, page 12-6, 14; MXKa 4, page 2; MXKa 5, page 6-9) is the policy instrument that will regulate and induce land use and productive activities, in order to achieve environmental protection and the preservation and sustainable use of natural resources, based on the analysis of deterioration trends and the potentialities of use of them. Thus, there are Territorial Planning Programs and Coordination Agreements for the coastal zone that include: Bacalar, Benito Juárez, Cancun, Costa Maya - Isla Cozumel, Isla Mujeres, Lázaro Cárdenas, San Juan, Tulum, and Solidaridad (MXKa 6 to MXKa 15, including their respective sections).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
	MX 1a, 1b, 1c Programas de manejo	01/12/2016	CONANP	CONANP
2020	MX 3a - 1 Biblioteca ambiental de la Secretaría de Medio Ambiente en Quintana Roo	NA	SEMA-Qroo	http://sema.qroo.gob.mx/ubicacion/
	MX 3a 2 LEER CROCO	NA	SEMA-Qroo	HDR
	Ordenamiento marino golfo y caribe	NA	SEMARNAT	https://www.semarnat.gob.mx/areas-de-trabajo/ordenamiento-marino/
	MX 3a CEMDA Carpeta Indicador 3a CEMDA			http://www.cemda.gob.mx/indicadores/
2011-2020	MXKa 1. Desarrollo Sostenible Océanos y Costas	08 Jun-06	SEMARNAT	SEMARNAT
	MXKa 2. Estrategia Nacional de Mares y Costas	NA	SEMARNAT	SEMARNAT
	MXKa 3. Programa de Ordenamiento Ecológico Marino y Regional del Golfo de México y Mar Caribe	15 Ago-11	SEMARNAT	SEMARNAT
	MXKa 4. Típico Ordenamiento Territorial	NA	SEMARNAT	SEMARNAT
	MXKa 5. Fomento Ordenamiento Territorial	NA	SEMARNAT	SEMARNAT
	MXKa 6. Bacalar - Ordenamiento Territorial	15 Mar-05	SEMARNAT	SEMARNAT
	MXKa 6.1. Bacalar - Acuerdo de Coordinación	NA	SEMARNAT	SEMARNAT
	MXKa 7. Benito Juárez - Ordenamiento Territorial	20 Jul-05	SEMARNAT	SEMARNAT
	MXKa 7.1. Benito Juárez - Convenio de Coordinación	28 Nov-05	SEMARNAT	SEMARNAT
	MXKa 7.2. Benito Juárez - Programa de Ordenamiento Ecológico	10 Feb-05	SEMARNAT	SEMARNAT
	MXKa 8. Cancun - Ordenamiento Territorial	16 Nov-01	SEMARNAT	SEMARNAT
	MXKa 8.1. Cancun - Reglas para la aplicación del Programa	19 Dic-06	SEMARNAT	SEMARNAT
	MXKa 9. Costa Maya - Ordenamiento Territorial	11 Oct-06	SEMARNAT	SEMARNAT
	MXKa 9.1. Costa Maya - Ordenamiento Territorial - Parte 2	31 Oct-06	SEMARNAT	SEMARNAT
MXKa 9.2. Costa Maya - Ordenamiento Territorial - Parte 3	11 Oct-06	SEMARNAT	SEMARNAT	
MXKa 9.3. Costa Maya - Ordenamiento Territorial - Parte 4	31 Oct-06	SEMARNAT	SEMARNAT	
MXKa 10. Costa Maya - Acuerdo de Coordinación	NA	SEMARNAT	SEMARNAT	
MXKa 10.1. Isla Cozumel - Ordenamiento Territorial	21 Oct-08	SEMARNAT	SEMARNAT	
MXKa 10.1. Isla Cozumel - Acuerdo de Coordinación	28 Nov-05	SEMARNAT	SEMARNAT	
MXKa 10.2. Isla Cozumel - Fe de erratas	03 Nov-08	SEMARNAT	SEMARNAT	
MXKa 10.3. Isla Cozumel - Mapas 1 a 4 POEL	NA	SEMARNAT	SEMARNAT	
MXKa 11. Isla Mujeres - Ordenamiento Territorial	09 Abr-08	SEMARNAT	SEMARNAT	
MXKa 11.1. Isla Mujeres - Acuerdo de Coordinación	28 Nov-05	SEMARNAT	SEMARNAT	
MXKa 12. Lázaro Cárdenas - Ordenamiento Territorial y Acuerdo de Coordinación	28 Nov-05	SEMARNAT	SEMARNAT	
MXKa 13. San Juan - Ordenamiento Territorial	24 May-03	SEMARNAT	SEMARNAT	
MXKa 13.1. San Juan - Acuerdo de Coordinación	NA	SEMARNAT	SEMARNAT	
MXKa 14. Tulum - Ordenamiento Territorial y Acuerdo de Coordinación	NA	SEMARNAT	SEMARNAT	
MXKa 15. Solidaridad - Ordenamiento Territorial	25 May-09	SEMARNAT	SEMARNAT	
MXKa 15.1. Solidaridad - Acuerdo de Coordinación	28 Nov-05	SEMARNAT	SEMARNAT	
MXKa 15.2. Solidaridad - Mapas 1 a 7 POEL	26 Feb-09	SEMARNAT	SEMARNAT	
MXKa 16. Cuanta Cuanto	18 Mar-09	WWF Proactivos Federales de Protección al Ambiente	WWF Proactivos Federales de Protección al Ambiente	
MXKa 17. Links Netas de Sobre deforestación	2010-2011	WWF Yucos	Notes Links Sobre deforestación	
2016	MXKa 18 - Programa de Manejo Tópano Bolón	06 Jul-15	SEMARNAT	SEMARNAT
	MXKa 19 - Programa de Manejo riza de Cozumel	20 Oct-15	SEMARNAT	SEMARNAT
	MXKa 20 - Programa Manglares de Nichupán	22 Jan-15	SEMARNAT	SEMARNAT
	MXKa 21 - Programa de Isla Cozumel	06 Jul-15	SEMARNAT	SEMARNAT
MXKa 22 - Programa de Arrecifes de San Juan	13 Jun-11	SEMARNAT	SEMARNAT	

Seguimiento:

Organización:	CEMDA
Contacto:	Aaron Sábil
Correo electrónico:	aa@cemda.gob.mx
Organización:	
Contacto:	
Correo electrónico:	

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México
Indicador:

Name:	Watershed management plans, related to coastal zone planning	Status:	Final
Description:	Justification: Effective, integrated land-use planning inside the watersheds of the MAA is essential to preventing erosion, sedimentation, and nutrient pollution into coastal and marine waters. In particular, nutrients are a major cause of the overgrowth of algae which can kill corals. Nutrients cause a major damage to reefs and benthic ecosystems. High water quality standards help to maintain coral reefs. Proper watershed management includes appropriate land use practices in erosion prone areas and is essential for preserving water quality and ensuring that the transport of sediment, nutrients, and other pollutants to coral reefs is minimized. If sound watershed management plans are implemented, nutrient and sediment delivery are likely to be reduced, promoting recovery of degraded reefs. Watershed-based management plans foster sustainable development, and complement similar coastal development plans along the coastline. This indicator measures the spatial extent and development of such plans or steps toward		
Theme:	Theme 3 – Coastal Zone Management		

Ranking Criteria:

- 5- A spatially comprehensive and integrated watershed management plan(s) that regulate the coastal and marine resources, exists for the country (or state within the MAA area) and have been legally adopted
 4- A spatially comprehensive and integrated watershed management plan(s) that regulate the coastal and marine resources management, exists for the country (or state within the MAA area) but has (have) not been legally adopted, or have at least 50% of watershed area within plan(s) or zoning regulations that are legally adopted
 3- There is work (monitoring water quality programs, drafts in progress, consultation reports, research or strategic plans) leading to an integrated watershed plan(s) in at least 50% of watershed area
 2- There is work (monitoring water quality programs, drafts in progress, consultation reports, research or strategic plans) leading to an integrated watershed management plan(s) in at least 20% of watershed area
 1- No documentation of actions that meet the criteria to achieve a higher score is available

Classification:

Grade:	2020: 4 - Good	2016: 2 - Poor
Result:	At the Q. Roo level, there is work in at least 50% of the basin area, referring to local geohydrological studies in Tulum and at the Regional level, and water quality, as well as the preparation of the technical document justifying the decree of a geohydrological reserve in the north of Q. Roo. There are basin committees established in most of the state's municipalities. They are not legally adopted or enforced.	

Observations:

Observations:	CC1. Bosque Mangrove Program, CC Rio Hondo, CC Tulum, CC Solidaridad - CC Cozumel, CC Puerto Morelos and CC Lázaro Cárdenas are about to be installed. - Management Program for the Mexican Caribbean Biosphere Reserve (only some of influence of Quintana Roo) - Isolated water quality monitoring program - PRODER (water quality) Marine Coastal APP management of Nichupté, Phocaes Occidentales, Isla Mujeres, Punta Nizuc-Punta Cancún, CONANP-CDA, CCLY - Water hydrology monitoring (SGA-ASG)	2020
	A nivel de Q. Roo existe trabajo en al menos 50% del área de cuenca, referente a estudios geohidrológicos locales en Tulum y a nivel Regional; y de calidad de agua (MX3b. 8 y MX3b. 9). La elaboración del documento justificativo para el decreto de una reserva geohidrológica en la zona norte de Q. Roo (que incluye a los municipios de Lázaro Cárdenas, Benito Juárez, Solidaridad y Tulum) (MX3b. 10 y MX3b. 11) propuestos por el Grupo Técnico del Comité de Playas Limpias Cancún- Riviera Maya (MX3b. 12) (impulsado por CAPA, CONAGUA, la Unidad de Cuencas del Agua (UCA) CICY, Amigos de San Kar'an, Centinelas del Agua A.C. y los Ayuntamientos de Tulum, Solidaridad, Benito Juárez y Lázaro Cárdenas y actores estratégicos) en virtud de que esta zona presenta el mayor depósito de agua subterránea y el mayor riesgo de contaminación, está preparada para ser presentada en los próximos meses correspondientes. Hay un Comité de Cuencas de la Península de Yucatán (MX3b. 13) con un plan rector (MX3b. 14), un Comité de Cuencas de Tulum (MX3b. 15) y un Comité de Cuencas de Rio Hondo (MX3b. 16), el Comité de Playas Limpias Cancún- Riviera Maya (MX3b. 12). Acciones de conservación de agua en Tulum; Programas de Ordenamiento Ecológico; Campaña de Cultura del Agua (MX3b. 17). Todos estos proyectos, planes y monitoreos se muestran con líneas delimitadas en un mapa del estado de Q. Roo donde también se marca la cuenca proporcionado por ASK, y donde podemos observar que al menos estos planes y trabajos al menos abarcan el 50% de la cuenca (MX3b. 21). En la cuenca de Tulum ASK tiene 30 años de investigación con gran avance, resultado de la colaboración con el Servicio Geológico de Austria y la Universidad de Neuchâtel de Suiza, así como el apoyo de HSBG, Fundación Gonzalo Río Almonte, Alianza WWF-Fundación Carlos Slim. Para las cuencas de Solidaridad y Cancún hay algunos estudios de ASK, CICY y otros instituciones, para las áreas de cuenca de Solidaridad y Felipe Carrillo Puerto se tiene poca información. En 2016, ASK con el apoyo de la Alianza WWF-Fundación Carlos Slim comenzó a trabajar en una Reserva de agua prioritaria de CONAGUA ubicada en la zona sur de Q. Roo. ASK desarrolló para la cuenca de Q. Roo un mapa de calidad de agua y otro de recarga (MX3b. 18), en base a datos tomados de CAPA y CONAGUA, que sirven de referencia, en embargo aún hay falta realizar estudios más puntuales. También se tiene un estudio de la	2016
	There is a Master Plan on Water Matters (MX3b. 7) for the protection, conservation and environmental recovery of the Yucatan Peninsula. Part of a diagnosis on the socio-environmental problems of this region. This plan incorporates and analyzes the main sources of public and private information, with emphasis on those of an official nature. After analyzing the information, the priority problems in the basin are identified as well as the causes that produce them and the effects or evidences that characterize them; the latter is expressed and recorded both qualitatively and quantitatively. Subsequently, and in response to its solution, a set of strategies, objectives, goals and general actions is established for each of the priority problems. Based on the general actions, a series of specific actions and projects aimed at achieving the general goals are identified and proposed (MX3b. 7.1). There are also guidelines for determining the quality of sea water for recreational use (MX3b. 1) when the criteria for sampling and their frequency are established. There is a clean water program (MX3b. 2) which systematically carries out preventive and emergent basic sanitation and water disinfection operations. Likewise, the clean beaches program (MX3b. 3, MX3b. 4) protects the health of users with lines of action such as monitoring, irrigation, sanitation and water quality criteria. The results for 2013 in the quality of seawater (MX3b. 5), can be consulted for Cancun, Cozumel, Isla Mujeres, CIBO F. Blanco, Riviera Maya and Tulum. In addition to this, there is a National Water Program (MX3b. 6, pp. 49-67) that promotes the integrated and sustainable management of water in	2014

Fuentes:

Documento/Nombre del Archivo	Fecha	Institución	Localización
MX 3b-1. INFORME COMITÉ CUENCA CADO DEL AÑO 2019/20 de dic. 2019	2019	CONAGUA	HBI
MX 3b-2. ACTA SESIÓN DE PROMOCIÓN Comité Cuenca Puerto Morelos	2020	CONAGUA	
MX3b. 1. Lineamientos A2 2013	2013	Secretaría de Salud y COFEPRIS	Secretaría de Salud y COFEPRIS
MX3b. 2. Programa de Agua Limpia	30-jun-11	CONAGUA	CONAGUA http://www.conagua.gob.mx
MX3b. 3. Programa de Playas Limpas	18-Aug-11	SEMARNAT/CONAGUA	SEMARNAT/CONAGUA
MX3b. 4. Programa Integral de Playas Limpas	NA	COFEPRIS/SEMARNAT/CONAGUA	COFEPRIS/SEMARNAT/CONAGUA
MX3b. 5. Resultados de Calidad de Agua de Mar	23-jul-13	SEMARNAT	SEMARNAT
MX3b. 6. Programa Nacional Mónico	2007-2012	SEMARNAT	SEMARNAT
MX3b. 7. Plan Rector en Materia de Agua	01-11	IMTA/CONAGUA/SEMARNAT	IMTA/CONAGUA/SEMARNAT
MX3b. 7.2. Llave al Plan Rector	01-11	IMTA/CONAGUA/SEMARNAT	IMTA/CONAGUA/SEMARNAT
MX3b. 8. Schiller, mapa de cuencas	2008	ASK	ASK
MX3b. 9. Baar, sistema Lético	26-jan-11	ASK	ASK
MX3b. 10. Nota informativa	23-jul-15	ASK	ASK
MX3b. 11. Mapa de la cuenca	NA	HBI	HBI
MX3b. 12. Manual Comité Playas Limpas	NA	SEMARNAT/CONAGUA	SEMARNAT
MX3b. 13. Convenio de Coordinación CAPP	1an-12	ASK	CCPY
MX3b. 14. Llave Plan Rector	01-11	ASK	CCPY
MX3b. 15. Comité de Cuenca	Aug-11	CONAGUA	CONAGUA
MX3b. 16. Comité de Cuenca de Rio Hondo	1an-11	CONAGUA	CONAGUA
MX3b. 17. Campaña de la Cultura del Agua	2015	SEMARNAT-IMTA	SEMARNAT-IMTA
MX3b. 18. Mapa de calidad del agua y recarga	May-15	ASK	ASK
MX3b. 19. Norma decreto Reserva Hidrológica	May-15	ASK	CCPY
MX3b. 20. Valoración social del agua	feb-14	ASK	CCPY
MX3b. 21. Proyectos SAM MA	2015	ASK	ASK

Seguimiento:

Organización:	CONAGUA
Contacto:	Juan Ramón Obis Colmenero
Correo electrónico:	juan.obis@conagua.gob.mx
Organización:	
Contacto:	
Correo electrónico:	

	Status: Final
Name:	3c. Mangrove extent as an indicator of the effectiveness of the coastal zone management plan implementation.
Description:	Justification-Justification: Mangroves are regionally 'protected' on different levels through regulations requiring permits for their removal. However, even with the strictest regulations, many illegal clearings occur. Ultimately we need to track the remaining extent of mangroves in order to help protect their critical ecosystem functions, which include shoreline protection, provision of fisheries habitat, and biodiversity.
Theme:	Theme 3 – Coastal Zone Management

Ranking Criteria:

5 – A spatially comprehensive and integrated plan or mangrove regulations, that contribute to the objectives of the coastal zone management plans, exist for the country (or state within the MAR area) and has been legally adopted, having mangrove coverage preserved in 90% from baseline status (probably 1990). Or more than 90% of the mangroves in the country or state are legally and effectively protected.
4 – A spatially comprehensive and integrated plan or mangrove regulations that contributes to the objectives of the coastal zone management plans, exist for the country (or state within the MAR area) but have not been legally adopted, having mangrove coverage preserved in 70% from original status. Or more than 70% of the mangroves in the country or state are legally and effectively protected.
3 – There is work (monitoring mangrove extent, drafts in progress, consultation reports, research or strategic plans) leading to a spatially comprehensive and integrated plan or mangrove regulations, or at least 50% of original mangrove cover is maintained or legally protected.
2 – A plan or strong mangrove regulations exist, but doesn't contribute to the objectives of the coastal zone management plan or are poorly enforced, with many public records of illegal activity.
1 – No documentation of actions that meet the criteria to achieve a higher score is available.

Classification:

Grade:	2020: 2 - Poor
Result:	2016: 2 - Poor 2014: 2 - Poor
	Se cuenta con leyes, normas y artículos que protegen el manglar sin embargo existe un alto nivel de actividad ilegal en la tala del mismo para el desarrollo urbano/turístico.

Observations:

Observations:	Blue carbon study from APFFYB, Sian Kaan, Cozumel and Nichupté. - CONABIO mangrove monitoring (2018). - Dr. Jorge Herrera-Silveira Studios, - Moon Palace Private Reserve.	2020
	There are maps of the distribution of mangroves within the ANPs (MX3c.12) and the use of land and vegetation associated with mangroves (MX3c.13) and the complaints filed by CEMDA before PROFEPA for clearing, logging and filling of mangrove swamps. 2014 to date (MX3c.14). Likewise, the state decree for the protection of 20 kilometers of mangrove, located along the Kukulcán boulevard in the Cancun hotel zone (MX3c.15), was released.	2016
	There is article 60 TER in the Mexican Constitution (MX3c.8) and the Official Mexican Standard (MX3c.9) that protect the mangrove where removal, filling, transplantation, pruning, or any work or activity that affects the integrity of the mangrove hydrological flow; of the ecosystem and its area of influence, as well as the species or populations of wild flora and fauna at risk in the Mexican Republic are identified. Despite this, there are reports of mangrove deforestation as well as attempts to modify these articles and regulations (MX3c.2), where it has been seen that coastal development has not complied with these laws. We have the images of how the mangrove has been lost through the years in Solidaridad and Tulum (MX3c.4, MX3c.5, MX3c.6). There are programs such as the reforestation and rehabilitation of mangroves (MX3c.1) due to the problems faced by the State of Quintana Roo in terms of uncontrolled logging of mangroves; as well as the strategy "Mexico protects its mangroves" (MX3c.3) where inspection visits and surveillance tours are established in both Protected Natural Areas and RAMSAR Sites. Mexico participated in the convention of RAMSAR sites (MX3c.10) having listed some of them within Quintana Roo (MX3c.11, pages 24-25) and where the protection of wetlands of international importance is established.	2014

Fuentes:

	Documento/Nombre del Archivo	Fecha	Institucion	Localizacion
2020	MX 3c-1 Artículos Manglares- Artículos científicos 2018-2019	2018-2019	CONANP - CINVESTAV	CEMDA-HRI
	MX 1a, 1b, 1c Programas de manejo	2018	CONANP	CONANP
	MX 3c-2 Manglares, desarrollo turístico y cc-Manglares, desarrollo turístico y cambio climático, 2018 Ruiz Ramirez	2018	UQRoo	CEMDA-HRI
	MX 3c-3_ResumenEjecutivo_Manglares de México-Monitoreo CONABIO	2018	CONABIO	CEMDA-HRI
2011-2014	MX3c.1 Reforestación y Rehabilitación de Manglar	2013	Flora, Fauna y Cultura de México, PROCESO-SIF-SC, Novedades	Flora, Fauna y Cultura de México, PROCESO-SIF-SC, Novedades
	MX3c.2. Denuncias por deforestación de manglar	2013	PROFEPA	PROFEPA
	MX3c.3. México protege sus manglares - PROFEPA	09-Aug-13	PROFEPA	PROFEPA
	MX3c.4. tulum 2010 manglar	2010	Amigos de Sian Ka'an	Amigos de Sian Ka'an
	MX3c.5. solidaridad 76-2011	2011	Amigos de Sian Ka'an	Amigos de Sian Ka'an
	MX3c.6.tulum75	1975	Amigos de Sian Ka'an	Amigos de Sian Ka'an
	MX3c.7. Manglares de México	2008	Amigos de Sian Ka'an	Amigos de Sian Ka'an
	MX3c.8. Artículo 60 TER	01-Feb-07	CONABIO	CONABIO
	MX3c.9. NOM 059 - SEMARNAT 2010	30-Dec-10	SEMARNAT	SEMARNAT
	MX3c.10 Convención RAMSAR	02-Feb-71	SEMARNAT	SEMARNAT
	MX3c.11. Sitios RAMSAR	2003-2004	RAMSAR	RAMSAR
	MX3c.12. Distribución manglares ANP	2010	RAMSAR	RAMSAR
	MX3c.13. Uso de suelo y vegetación	2010	CONANP	CONANP
2016	MX3c.14. Denuncias tala de manglar	2014-2015	CONANP	CONANP
	MX3c.15. Protección 20km de manglar	06-May-15	CEMDA	CEMDA
			CEMDA	Novedades

Seguimiento:

Organización:	FMCN
Contacto:	Minerva Rosette
Correo electrónico:	minerva.rossette@fmcn.org
Organización:	CINVESTAV
Contacto:	Jorge Herrera
Correo electrónico:	jorge.herrera@cinvestav.mx

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México

Indicador:

	Status:	Final
Name:	Standards for wastewater management/sewage treatment	
Description:	International efforts to improve sanitation, particularly near sensitive ecosystems such as coral reefs and seagrass (e.g. Class I waters), have evolved, specifically through the creation of regional standards for sewage treatment. This indicator measures the extent of each country's adoption and implementation of these regional standards within the Cartagena Convention's Protocol Concerning Pollution from Land-Based Sources and Activities (LBSMP Protocol).	
Theme:	Theme 4 – Sanitation and Sewage Treatment	

Ranking Criteria:

5 – LBSMP Protocol for Class I waters are legally adopted and there is good implementation by the country
4 – LBSMP standards for Class I waters are legally adopted but there is inadequate implementation by the country
3 – LBSMP standards for Class II waters have been legally adopted and there is good implementation by the country
2 – LBSMP standards for Class II waters are legally adopted, and there is inadequate implementation by the country
1 – No standards or standards below Class II

Classification:

Grade:	2020: 2 Poor	2016: 2 - Poor	2014: 2 - Poor	2011: 2 - Poor
Result:	Mexico has not ratified the Protocol to the Cartagena Convention regarding Pollution from Territorial Sources and Activities, and it has not passed national effluent regulations to meet Class II standards.			

Observations:

Observations:	Project of NOM 001 SEMARNAT 2017, went to public consultation with state workshop document presented at CONAMER. 1800 comments have been received during this process and still have no responses (October 2020). There is a proposal to modify the National Law for a General Water Law, the drafts of which to date include the karst system, however it has not yet been voted on and the numerous changes seem to indicate strong opposition from the productive sector.	2020
	In the new ecological zoning plan for the municipality of Othón P. Blanco, south of Q. Roo, it has been agreed to implement tertiary-level wastewater treatment plants as established in the Cartagena Protocol. This publication is not yet available in the Official Gazette.	2016
	By National Law, the standards that are requested and applied for the country in general are those of Class II Waters, specified on page 9 and 10 of Standard 001-ECOL (MX4a.1.) Where for Coastal Waters under the column For fishing, navigation and other uses, the monthly allowable average of total suspended solids is 150 and the daily average is 200; Under the Recreation and Estuaries column, the monthly allowable averages are 75 and the daily averages are 125. The permissible limits of biochemical oxygen demand in Coastal Waters, under the column of Fishing exploitation, navigation and other uses are 150 as a monthly average and 200 as a daily average; for Recreation waters and Estuaries are 75 on a monthly average and 150 on a daily average. The Cartagena Protocol, also known as the "Cartagena Agreement" (MX4a. 4 and 5), was adopted in Cartagena de Indias, Colombia on March 24, 1983 and entered into force on October 11, 1986. Mexico signed this Agreement on March 24, 1983. This international instrument is binding for the Caribbean region and for the countries adjacent to the Atlantic Ocean. The Cartagena Convention was created with the objective that the countries of the Greater Caribbean region achieve a balance between development and protection of the marine environment. The Procedures and Services to grant water concessions and control the application of Class II effluents can be carried out electronically (MX4a.3.), Under the heading of Procedures and Services (Procedures that you can carry out or electronic procedures) as well as its verification in Consult your procedure (MX4a.2.). On the COFEMER page (MX4a.2.) You can search for the particular procedures and request a copy of the registration and its particularities, such as download quality. On this page, the search is carried out by selecting the Unit, in this case CONAGUA, under the Administrative Unit of the General Sub-Directorate of Administration of drinking water, drainage and sanitation. From there, the item Approval of certified bodies, test laboratories and verification units is selected for purposes of evaluating the conformity of the official Mexican standards on water, where the	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 4a-1 Comentarios al PROY NOM 001_HRI_0503-signed Documento de taller estatal presentado en CONAMER	2017	CONAMER	HRI
2011-2016	MX4a.1- NOM 001-ECOL	23-Abr-03	Secretaría de Medio Ambiente y Recursos Naturales	NOM 001 ECOL
	MX4a.2- Búsqueda de Trámites	NA	COFEMER	COFEMER-Trámites
	MX4a.3- Trámites y Servicios	NA	CONAGUA	CONAGUA
	MX4a.4- LBS Mapa de Ratificación	6-Oct-99 y 13-Ago-10	HRI-WRI	HRI-WRI
	MX4a.5- LBS Extracto del Protocolo	11-Oct-86	HRI-WRI	HRI-WRI

Seguimiento:

Organización:	HRI
Contacto:	Mélina Soto
Correo electrónico:	soto@healthvreefs.org
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

	Status:	Final
Name:	New infrastructure for sewage treatment (in the last 5 years)	
Description:	In order to meet the LBSMP standards, new and improved sewage treatment facilities are typically required. Given the high cost of this infrastructure, change is likely to be incremental. This indicator measures progress (relative to population size) in installing such facilities. The target of 5% of the coastal population may seem low, but it refers to the additional population serviced by the installation of new infrastructure, and not the total population with sewage service.	
Theme:	Theme 4 – Sanitation and Sewage Treatment (in the last 5 years)	

Ranking Criteria:

5 – New coastal municipal sewage treatment plant(s), which meets the LBSMP standards for Class I waters, exists (serving at least 5% of the coastal population)
4 – New coastal municipal sewage treatment plant (s) for coastal population, which meets the LBSMP standards for Class I waters, is under construction or approved (serving at least 5% of the coastal population)
3 – New coastal municipal sewage treatment plant (s), which meets LBSMP standards for Class I waters exists, is under construction or approved (serving less than 5% of the coastal population)
2 – New coastal municipal sewage treatment plant (s), which meets at least LBSMP standards for Class II waters exists, is under construction or approved
1– No documented action that meets the criteria to achieve a higher score is available

Grade:

Grade:	2020: 2 - Poor		
Result:	2016: 2 - Poor	2014: 2 - Poor	2011: 2 - Poor
	According to the inventory provided (date 2016), there are 30 municipal plants (built between 1975 and 2012, activated sludge), of which 14 are managed by CAPA and 12 by AGUAKAN.		

Observations

Observations	New WWTPs were authorized for Solidaridad, Isla Mujeres and Benito Juárez, information requested from CONAGUA-AGUAKAN.	2020
	In the new ecological zoning plan for the municipality of Othón P. Blanco, south of Q. Roo, it has been agreed to implement tertiary-level wastewater treatment plants as established in the Cartagena Protocol. This publication is not yet available in the Official Gazette. We know that there are water treatment plants and some new ones with a tertiary system, through a list provided by CAPA (MX4b.5), however we did not obtain the required information to know what percentage of the population benefits from them, but we think it is below 5%.	2016
	The list provided by CONAGUA indicates a total of 33 plants, of which 13 were built until 2005 and 20 were built from 2005 to 2011. Of these 20, 15 are in operation, 2 were expanded to 225LPS and 284LPS respectively, 2 start-ups, 1 under construction; which are operated by different organizations (AGUAKAN, Private, CAPA, Playacar) in 6 different municipalities (MX4b.2). All comply with the standards for Class II waters, since they are the ones that must be established by law (MX4b.1) and CONAGUA, by providing this list (MX4b.2), certifies that this is the case. Of all the existing plants under CONAGUA's jurisdiction, 70% of the coastal zone, including Chetumal, are connected to sanitary sewers (MX4b.3). For 2013, we were provided with a new list of water treatment plants created, giving us a total of 34 operating treatment plants (MX4b.4), and all of them meet the standards for Class II waters as stipulated by Mexican law. . Mexico needs to ratify the LBSMP Protocol and modify its national standards to Class I Waters.	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 4b-1.PROGRAMA HIDRICO CAPA -Publicado	2017	CAPA	HRI
	MX 4b-2 Copia de Inventario PTAR	2016	CONAGUA	CONAGUA
2011-2014	MX4b.1- NOM 001-ECOL	23-Abr-03	Secretaría de Medio Ambiente y Recursos Naturales	NOM 001 ECOL
	MX4b.2- Inventario plantas para ONG	2005-2011	CONAGUA	CONAGUA
	MX4b.3- Oficio CONAGUA	05-Dic-11	CONAGUA	CONAGUA
	MX4b.4 - HRI CONAGUA OFICIO 925	17-sep-2013	CONAGUA	CONAGUA
2016	MX4b.5- PTAR de la CAPA	07-may-15	CAPA	CAPA

Seguimiento:

Organización:	Centinelas del Agua
Contacto:	Alejandro López Tamayo
Correo electrónico:	direccion@centinelasdelagua.org
Organización:	CONAGUA
Contacto:	Juan Ramón Díaz Calderón
Correo electrónico:	juan.diazc@conagua.gob.mx

	Status: Final
Name:	Reduce upstream watershed pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) through better management practices, action plans and regulations in each sector
Description:	The high level of nutrients, pesticides and other agro-chemicals used can result in pollution
Theme:	Theme 4 – Sanitation and Sewage Treatment

Ranking Criteria:

5 – "Better management practices", action plans and/or regulations exist and are under implementation, addressing 80% of the pollution sources occurring in the watersheds (agriculture, livestock, urban/tourism, industrial, rural, deforestation - those which occur in an analyzed watershed- not all occur in all watersheds) covering at least 80% of watershed areas, with demonstrated water quality improvements
4 – "Better management practices", action plans and/or regulations exist for at least 4 of the 6 pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) covering 50% of watershed areas, with some demonstrated water quality improvements
3 – "Better management practices", action plans and regulations exist for at least 2 of the 6 pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) covering 30% of watershed areas, with some demonstrated water quality monitoring
2 – "Better management practices", action plans and regulations for 1 of the 6 pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) covering at least 10% of the watershed area
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Grade:

Grade:	2020: 3
Result:	2016: 3 - Fair We have good management practices, regulations and action plans for the tourism and forestry sector.

Observations:

Observations:	1) National update of good practices - ASK, 2) Work began with SECTUR and the cave and cenote diving community, but nothing happened. 3) Proposals for initiatives for the General Water Law.	2020
	In the new ecological zoning plan for the municipality of Othón P. Blanco, south of Q. Roo, it has been agreed to implement tertiary-level wastewater treatment plants as established in the Cartagena Protocol. This publication is not yet available in the Official Gazette. There are also 2 voluntary ANPs of forest land for conservation: Ha Bin and Kitam (MX4c.14 and MX4c.15), the first having an area of 90 hectares and the second of 47 hectares. Both support conservation where the felling of trees, wildlife hunting and planting in general, among others, are prohibited, thus supporting the reduction of sources of pollution or disturbance upstream.	2016
	There are "best management practices" for 2 sources of pollutants: tourism (MX4c.1 to MX4c.6) and deforestation (MX4c.7 and MX4c.8) with a water quality monitoring program such as the water quality monitoring program. Rio Hondo water and marine water monitoring programs with sea water quality results (MX4c.9). Tourism activities include scuba diving, snorkeling, turtle, whale and dolphin watching, and water cleaning. Good practices are divided into practices for the community in general, for businesses and for tourists (MX4c.6). There is also a management plan for non-extractive use through the operation of eco-tourism snorkeling tours for the sighting of protected species such as sea turtles in Akumal Bay, which is under review and cannot yet be published. (MX4c.12). Regarding forest management, the SPFEQR acquired the technical capacities necessary for forest management, with a good understanding of the silviculture of the main commercial species and the management of regeneration in three types of clearings: logging, skidding and of storage yards (MX4c.7, page 79). Community forest management in Mexico has managed to contribute to reducing poverty through job creation and the distribution of the profits obtained with investments in public goods and with the management itself; this facilitates vertical integration and contributes to maintaining biodiversity (MX4c.7, p. 79). The results for 2013 in the quality of seawater (MX3b.5) can be consulted for Cancun, Cozumel, Isla Mujeres, Othón P. Blanco, Riviera Maya and Tulum (MX4c.9). Forest certification is a voluntary process that is taken as a solid institutional policy aimed at promoting good forest management and sustainable use of forest resources (MX4c.10). Ann Snook's comments (MX4c.13): In Quintana Roo most of the land is ejido and of this, a high proportion is under jungle. Approximately 800,000 hectares in areas designated for forest use or as many in areas that are not under use but where the forest has not been cut down or is in secondary forest already well developed. Deforestation rates are low, or in many cases the forest is gaining land. Land use change analyzes have been carried out using satellite images in the Mayan zone of Quintana Roo, where a rate of forest loss of 0.4% between 1976 and 1984 is calculated, declining to 0.1% from 1982 to 2000. Quintana Roo, in the south and center of the state, have permanent forest areas for which there are management plans. If there are no current and approved management plans then there is no extraction. The forests are managed by the forest owners themselves, which ensures that they are not permanently degrading them. Therefore, permanent forest areas are well-managed areas in	2014

Fuentes:

	Documento/Nombre del Archivo	Fecha	Institucion	Localizacion
2020	MX4c-1. Manual de mejores prácticas para la conservación de cenotes.	Oct-18		
	MX4c-2. Propuesta del articulado completo/iniciativa de Ley General de Aguas	Feb-20	ASK	ASK
2011-2016	MX4c.1. Buceando	2002	CORAL	CORAL
	MX4c.2. Snorkeling	2002	CORAL	CORAL
	MX4c.3. Turtle watching	2002	CORAL	CORAL
	MX4c.4. Underwater cleanup	2002	CORAL	CORAL
	MX4c.5. Avistamiento ballenas y delfines	2002	CORAL	CORAL
	MX4c.6. Mejores prácticas para todos	2002	CORAL	CORAL
	MX4c.7. Manejo Forestal Comunitario	NA	NA	PDF
	MX4c.9. Resultados de Calidad de Agua de Mar	03-Jul-13	SEMARNAT	SEMARNAT
	MX4c.10. Certificación Forestal	19-Sep-11	CONAFOR	CONAFOR
	MX4c.11. FSC	2013	FSC	FSC
	MX4c.12. Carta HRI Plan Manejo Akumal	2013	CEA	CEA
	MX4c.13. Comentarios Ann Snook	2013	Rainforest Alliance	Rainforest Alliance
	MX4c.14. Reserva Privada Ha Bin	2013	CONANP	CONANP
	MX4c.15. Reserva Privada Kitam	2013	CONANP	CONANP

Seguimiento:

Organización:	Amigos de SianKa'an
Contacto:	Liliana García Ramírez
Correo electrónico:	lgarcia@amigosdesiankaan.org
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

	Status: Final
Name:	Standardized monitoring of coral reef health and information management (regional indicator)
Description:	This indicator measures the efforts of researchers and managers to standardize monitoring methods, apply them in regular monitoring of representative sites (those selected based on non-biased sampling of different habitat types) and share the information in a publicly accessible and up-to-date database.
Theme:	Theme 5 – Research, Education and Awareness

Ranking Criteria:

5 – A regional standardized monitoring program of coral reef health and a database with routine, up-to-date and representative data both exist
4 – A regional standardized monitoring program exists, and assessments have been performed for representative sites (at least once)
3 – Representative data have been collected on coral reef health
2 – Plans to develop a regional standardized monitoring program and database are well underway (draft documents exist)
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Grade:

Grade:	2020: 5 - very good	2016: 5 - Very good	2014: 4 - Good	2011: 4 - good
Result:	There are two reef health monitoring protocols used and officially adopted in the region (AGRRA and SAM), and these can be considered equivalent to basic monitoring purposes. AGRRA has maintained an online database that has been widely used for over 15 years. Currently all the data of the regions is viewable in the HRI geoportal and the database available upon request. The bleaching monitoring protocol is adapted to add SCLTD			

Observations:

Observations:	The same criteria of 2016 are maintained. - Monitoring sites have been increased. - Since 2018, white syndrome disease has been monitored in corals, using an adaptation of the bar drop protocol for bleaching. - There is no standardized monitoring of water quality, but several proposals are being worked on at the Q. Roo and SAM level.	2020
	HRI perfected its online database for data entry, graphical and cartographic of the AGRRA methodology (MXSa.9 (http://www.healthyreefs.org/cms/es/sistemas-de-informacion/)). This new HRI database was launched in 2015 and contains data from the AGRRA methodology and will later be updated to include other methodologies. Reef health data collection is carried out by HRI every two years and is published in the Reports. The last report obtained 86 sites in total sampled by 6 different organizations, within which 24 belong to HRI, being able to expand the number of sites compared to 2012, where there were a total of 63 sites of which HRI sampled 22.	2016
	The Atlantic and Gulf Rapid Reef Assessment (AGRRA) protocol (www.agrra.org - BZSa.7, GUSa.7, HNSa.7, MXSa.10) maintains an active database of sites throughout the Caribbean, including the MBRS, since 1999 (www.agrra.org). The Mesoamerican Barrier Reef System (SAM) Synoptic Monitoring Project (BZSa.6, GUSa.4, HNSa.6, MXSa.6) once had a functional database, but it is no longer active. The two protocols are very similar, the key reef indicators can be compared. Conservation entities as well as HRI have monitored sites using AGRRA in the MBRS region since 2006, creating comparable data. The AGRRA Manual includes a description of the "representative" site selection process and a recommended number of pages for each country / geomorphological region in the Caribbean (Table 1 / BZSa.1, GUSa.1, MXSa.1, HNSa.1 / p.4). This methodology was used by TNC to select 326 sites throughout the MAR, surveyed in 2006 and presented in a format analyzed in the 2008 Report, which shows all the sites on the central page map (BZSa.2, GUSa.2, MXSa.2, HNSa.2 / pg 7-8 to see the map). All these sites were randomly selected using this methodology in order to ensure representativeness (BZSa.1, GUSa.1, MXSa.1, HNSa.1 / Table 1 / p.4). In the 2012 Ecological Health Report it can be found under HNSa.7, GUSa.8, BZSa.10, MXSa.8 (Pages 16 and 17). There is also an online map showing the sites under constant supervision, for the complete SAM and its values, in both IHRI and SIHRI (HNSa.9, BZSa.9, GUSa.10, MXSa.11).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX Sa-1 Informe Prorest 2019 del síndrome blanco	2019	CONANP	CONANP
	MX Sa-2_PlanDeAccionSindromeBlanco	2019	CONANP	CONANP
	MX 2c Reporte de salud 2020	2020	HRI	HRI
2011-2014	MXSa.1- Protocolo AGRRA Versión 5.4	Abr-10	AGRRA	AGRRA
	MXSa.2- Libreta de Calificaciones correspondientes al Sistema Arrecifal Mesoamericano 2008	2008	HRI	HRI
	MXSa.3- Monitoreo Arrecifal Rápido para identificar los sitios resilientes en el arrecife Mesoamericano (extracto)	2009	TNC	TNC
	MXSa.4- Reporte de la Salud Ecológica del Arrecife Mesoamericano 2010	2010	HRI	HRI
	MXSa.5- Data_Mar2010ReportCard	2010	HRI	HRI
	MXSa.6- Manual de Monitoreo Sinóptico de MBRS	11-Nov-02	Proyecto MBRS Programa de Monitoreo Sinóptico	MarFund o World Bank website
	MXSa.7- AGRRA Database	2007-2010	AGRRA	AGRRA
MXSa.8- Reporte de la Salud Ecológica del Arrecife Mesoamericano 2012	2012	HRI	HRI	
2016	MXSa.9. Base de datos en línea	2015	CREDIA-HRI-AGRRA	CREDIA-HRI-AGRRA
	MXSa.10-Atlantic and Gulf Rapid Reef	2013	AGRRA	AGRRA
	MXSa.11-HRI Interactive Map	2015	HRI	HRI
	MXSa.12- Reporte de la Salud Ecológica del Arrecife Mesoamericano 2015.	2015	HRI	HRI

Seguimiento:

Organización:	LUNAM
Contacto:	Lorenzo Alvarez Filp
Correo electrónico:	lorenzoaf@gmail.com
Organización:	
Contacto:	
Correo electrónico:	

Iniciativa Arrecifes Saludables
Hoja de Colecta de Datos - Informe de Avances 2020 - México

Indicador:

	Status: Final
Name:	Economic valuation of coral reefs
Description:	Economic valuation is a tool that can aid decision-making by quantifying ecosystem services provided by coral reefs in monetary terms. Valuation also provides a tool for evaluating the costs and benefits of management and economic development options, with an emphasis on long-term benefits, which can help avoid short-sighted development.
Theme:	Theme 5 – Research, Education and Awareness

Ranking Criteria:

5 – A national valuation of coral reefs or valuation of selected ecosystem services associated with 50% of MPAs has been completed
4 – A valuation of 2 or more MPAs has been completed
3 – A valuation of 1 MPA has been completed
2 – Assessments of coral reef economic contributions are currently being implemented
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Grade

Grade	2020: 3-Fair
Result	2016: 4 - Good 2014: 4 - Good 2011: 3 - Fair The few existing valuations are outdated.

Observations:

Observations:	There is a higher need for valuation of the reef. - The mentioned valuations are old and are no longer valid.	2020
	In December, CONANP, with the technical assistance of the German Development Cooperation (GIZ), submitted to the International Climate Initiative (IKI) a project to assess the ecosystem services of the federal Natural Protected Areas (ANPs) of Mexico and of this contribute to economic well-being, improve decision-making, conserve biodiversity and the appropriate management of protected areas (MXSb.8). In 2013, CONANP and GIZ commissioned by the Federal Minister of the Environment, Nature Conservation and Nuclear Safety (BMUB) began to implement the "EcoValor México" project (evaluation of the ecosystem services of federal protected areas of Mexico): an innovative tool to finance biodiversity and climate change, with a duration of five years. The first area of this project to be carried out is the Cozumel Reef Park and the assessment will be carried out in the coming years (MXSb.9 and MXSb.10).	2016
	The economic value of the APM Banco Chinchorro resides in the snail and lobster (page 5, MXSb.3.). The study was carried out in 1993, and since 1990 the price per kilogram of lobster has been \$ 70 pesos with a catch of 30 tons. As for the snail, the cost per kilogram is \$ 30 pesos with 25 tons for the year 1991. The ECOFRONTERAS magazine (MXSb.5.) Indicates the value of lobster fishing, estimated at 10 million dollars for the peninsula of Yucatán (page 3) and the value of the catch of grouper that its annual average has decreased from 78.1 tons in 1987-1991 to 13.8 tons in 2000-2006 (page 15). There is a socioeconomic assessment of the El Garrafón site, which is located within the marine protected area (APM) of the western coast of Isla Mujeres (MXSa.1., Page 1 and 5), where income was generated in 1997 of the order of 1,575,721.00 US dls and for related services 175,536 US dls. At this same site, a study of the payment of services was carried out and how this generates an economic value per unit of area (MXSa.4, page 3). The study Reefs in Danger (MXSb.2.) Shows the threats that the Caribbean reef has faced and the percentage of them that have affected the reef. Throughout 2012, a technical study was carried out whose objective of the study was to evaluate the economic aspect (costs and benefits) to establish an effective mechanism of payment for marine environmental services (PSAM) that allows financing the provision of marine environmental services and the long-term operation of a fishing refuge in the Mesoamerican town of Puerto Morelos (MXSb.6.). Together with socio-economic data on fisheries, reef use and recreational value, and biological data on the marine environment, the total benefits of marine environmental services are estimated to yield a maximum annual net income of approximately USD \$ 2 million. for the Puerto Morelos community that depend on resources (using a discount rate of 4.5%). The largest contribution (78%) of annual benefits is the annual added value of recreation and tourism (USD \$ 1.2 million per year), based on assessments of the willingness to pay of visitors to the reef. The second most important benefit of the fishing refuge is the environmental services that have an approximate value of USD \$ 360,000 per year. For fishing, the fishing shelter would represent an added value of USD \$ 80,000 per year. Comparatively, fishing is the sector with the least benefits related to the least important reef (MXSb.7). This is in part due to the high intensity recreational use in an enclosed space and the inevitable losses of natural resources, with huge implications for fish catches in the area. The study shows that anthropocentric changes, related to poaching, intense recreational use and degradation of	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 5b-1 Riesgos economicos CC Riviera Maya	2020	ADAPTUR	ADAPTUR
	MX 5b-2 Ecovvalor Cozumel	2018	CONANP	HRI
2011-2014	MXSb.1- Valoración socioeconómica El Garrafón	2004	Centro de Investigación y Estudios Avanzados del IPN, Mérida (CINVESTAV)	El Garrafón
	MXSb.2- Arrecifes en peligro_resumen	Sep-04	WRI	Arrecifes en peligro
	MXSb.3- Banco Chinchorro	1993	El Centro de Investigaciones de Quintana Roo (CIQRO)	Banco Chinchorro
	MXSb.4- Valoración El Garrafón	Jul-Sept-08	Centro de Investigación y Estudios Avanzados del IPN, Mérida (CINVESTAV)	Valoración El Garafón
	MXSb.5- Denuestropozo	2008	ECOFRONTERAS	Revista ECOFRONTERAS
	MXSb.6- PSAM Puerto Morelos Final	Jun-12	COBI	COBI
	MXSb.7 - PSAM Puerto Morelos Folleto	Jun-12	COBI	COBI
2016	MXSb.8. Valuación México CONANP	2013	CONANP	CONANP
	MXSb.9. Programa de trabajo Cozumel	Aug-14	CONANP	CONANP
	MXSb.10. Anexo, Programa de trabajo Cozumel	Aug-14	CONANP	CONANP

Seguimiento:

Organización:	CONANP
Contacto:	Blanca Quiroga
Correo electrónico:	blanca.quiroga@conanp.gob.mx
Organización:	
Contacto:	
Correo electrónico:	

Indicador: Accesibilidad de Información

Availability of information information on reef condition and threats... The public dissemination of information on reef condition and threats is essential to build a reference database that will support stronger reef protection regulations...

- Documents presenting scientific findings on coral reef condition and threats gained toward a general audience are widely available (print, television, social media, radio and online)
Documents presenting scientific findings on coral reef condition and threats gained toward a general audience are generally available (3 from the list above)
Documents presenting scientific findings on coral reef condition and threats gained toward a general audience are available (for at least 1 of the above) and more are being developed (strategic plan or calendar)
Scientific findings have been collected and there are plans to develop accessible products from this information
No dissemination of actions that meet the criteria to achieve a higher score is available

Grade table with columns for 2022-5, 2021-5, Very good, and 2021-3, Very good.

There is evidence reported for dissemination of the Reef Condition Report, Reef Watch and Instagram. Numerous print articles and television interviews covered the launch of the Measurement Reef Ecological Health Report 2020.

Observations table with columns for Observations, Year, and details of reports and video updates.

Fuente:

Main source table with columns: Documento/Nombre del Archivo, Fecha, Institución, Localización. Lists various documents and media sources from 2020 and 2021.

Suplemento table with columns: Organización, Contacto, Correo electrónico. Lists contact information for CONANP and other organizations.

Indicador:

	Status: Final
Name:	Interdisciplinary partnerships combine social and ecological research for management
Description:	Humans are an integral part of an ecosystem, with social sciences being increasingly integrated into ecological research. This indicator measures the application of these social-ecological integrated studies to the improved management of coral reefs and coastal zones within the MAR region.
Theme:	Theme 5 – Research, Education and Awareness

Ranking Criteria:

5 – Findings of integrated social/ecological research have resulted in significant management action (e.g. a change in legislation) (can include both formal and informal partnerships)
4 – Two or more formal interdisciplinary partnerships exist, which integrate social and ecological research, and have published results
3 – One or more informal interdisciplinary partnerships exist, and they are currently implementing joint integrated social/ecological research; or one formal interdisciplinary partnership exists and has published results
2 – Groups working on integrated social/ecological research have begun to plan joint work (work plans, research proposals or grant applications.)
1 – No documentation of actions that meets the criteria to achieve a higher score is available

Grade

Grade	2020: 3-Fair	2014: 3-Good	2011: 3 - Good
Result	There are interdisciplinary alliances investigating in the region, mainly focused on the declaration of areas of fishing refuge, water resources and environmental law. Few published results and little focus on social issues.		

Observations:

Observations:	The social part needs to be linked and developed more. The Kanan Kay Alliance works on training in fishing areas. There are CONANP studies that could delve into the social issue. There are informal interdisciplinary societies on issues of sustainable water management. It is necessary to deepen and integrate social projects and their relationship with the reefs.	2020
	The Kanan Kay Alliance was created in 2010 and today (2015) has more than 40 partners from the fisheries, government, academia, philanthropy and civil society sectors. This organization carries out 2 assemblies a year with the objective of establishing, monitoring and consolidating the network of fishing refuges in Q. Roo (MXSd.5). The Socio-Ecosystems and Sustainability Network is a space for interaction between networks whose objective is to maximize the potential for collaboration and attention to strategic environmental problems in the country (MXSd.6). The Environmental Law Alliance (ELAW) builds ties to network where participants work together to achieve climate protection, defend critical ecosystems and give communities a voice to build a sustainable future. (MXSd.7).	2016
	The Mexican Long-Term Ecological Research Network (MXSd.1, page 3) (Red Mex-LTER; http://www.mexlter.org.mx) is made up of 10 academic groups that cover the entire country (MXSd.2, MXSd.3, MXSd.4). It was created in October 2004 as an academic initiative aimed at fostering a form of research that allows an interdisciplinary approach to the study of ecological phenomena at broad spatial and temporal scales (Burgos et al. 2007, Maass et al. 2008). The research agenda of this Network was defined based on the major issues on the national agenda, and on an analysis of the country's possibilities to contribute to the international agenda. The seven Thematic Areas identified and applicable to the study of natural terrestrial, aquatic and managed ecosystems of Mexico are: i) Patterns and control of primary productivity in ecosystems; ii) Patterns and control of water, carbon and nutrient dynamics in ecosystems; iii) Role of biodiversity in the structure and functioning of ecosystems; iv) Patterns and frequency of disturbances in ecosystems; v) Effect of climate change on the structure and functioning of ecosystems; vi) Interactions at the interface level between managed and natural ecosystems; and vii) Definition of criteria for the management and conservation of ecosystems. Currently the Mex-LTER Network is working on the conformation of various strategic projects, around the Thematic Areas of its research agenda. The most advanced project focuses on aspects related to the issue of water, which, because it is fundamental in the dynamics of any ecosystem, makes the planning of a strategic project in which all the groups of the network can participate (Rivera et al. 2008). A central idea of the project is that proper water management triggers important economic and social development processes (page 4, last paragraph, MXSd.1).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
	Carpetas MX Sd-1, AKK Ecoaudit	2020	AKK	AKK
2020	MX Sd-2. Instituciones locales y procesos organizativos: el caso de la Reserva de la Biosfera Sian Ka'an	2020	AKK	AKK
2011-2014	MXSd.1- Redes de Investigación Ecológica y Socio-Ecológica a Largo Plazo	2010	SciELO	Web. Redes de Investigación
	MXSd.2- Liga Red Mexicana de Investigación	2010	SciELO	Web. Redes de Investigación
	MXSd.3- Individuos Miembros	2010	SciELO	Web. Redes de Investigación
	MXSd.4- Grupo Península de Yucatán	2010	SciELO	Web. Redes de Investigación
2016	MXSd.5 - Minuta 9a Asamblea Alianza Kanan Kay	Jun-15	Alianza Kanan Kay	Alianza Kanan Kay
	MXSd.6 - Red de Socio-Ecosistemas y Sustentabilidad	2014	Red Socio-Ecosistemas y	Red Socio-Ecosistemas y
	MXSd.7 - ELAW	2015	CEMDA	ELAW

Seguimiento:

Organización:	Alianza Kanan Kay
Contacto:	Minerva Rosette Perezvargas
Correo electrónico:	minerva.rossette@fmcg.org
Organización:	
Contacto:	
Correo electrónico:	

	Status: Final
Name:	Voluntary eco-standards program for marine recreation providers
Description:	Marine recreation providers depend on healthy marine ecosystems, especially reefs. Voluntary programs have been developed to help them be better stewards in their use of the reef for recreation. This indicator measures the degree of participation of marine recreation providers in programs that promote environmental sustainability.
Theme:	Theme 6 – Sustainability in the Private Sector

Ranking Criteria:

5 – A regional or national voluntary eco-standards program for marine recreation providers exists and more than 50% of all providers are participating
4 – A regional or national voluntary eco-standards program for marine recreation providers is developed and more than 25% all providers are fully participating
3 – A regional or national voluntary eco-standards program for marine recreation providers is developed and at least 10% of operators are participating
2 – There has been some effort to create standards and at least 3-4 marine recreation providers are participating in these efforts (data collection, improved practices or strategic plans)
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Grade:

Grade:	2020: 2 - Poor
Result:	2016: 2 - Poor 2014: 2 - Poor 2011: 2 - Poor
	The responsibility of the shipping companies is transferred to the local Tour Operators under contracts. However, shipping companies have the obligation of good practices, to comply with local regulations. MPA management programs include good practices and some of them monitor the effect of recreational use (Cozumel, Puerto Morelos). More involvement of providers is lacking.

Observations

Observations:	1) Harbor Master has a list of boat permits with the classification and use of the boat. 2) There is no relationship between recreational boats and those who follow good practices. 3) Manual of good practices for diving activities with bull shark. 4) ASK following Maya Ka'an good practice guides at Banco Chinchorro. Good practices as such do not exist, the World Cruise Association has parameters. The cruise industry is governed by levels of regulations and laws to be observed, including: 1) OMI Ships (cruise ships and cargo ships); 2) Laws and statutes of ports of each country visited. Coral Reef Alliance is working on a cruise destination governance project. MARTI is without effect.	2020
	We have a list of the dive houses in the Riviera Maya of APSA (association of aquatic service providers of the Riviera Maya, A.C.) (MX6a.8). There are also labels and canvases for service providers with the rules for swimming with whale sharks (MX6a.9 and MX6a.10), as well as a brochure with basic information on the biology of whale sharks, mantas, turtles and dolphins (MX6a.11). The voluntary programs of good practices have not been followed up and there is not a complete list of all the providers of marine recreational services in Q. Roo. Finally, we have good practice guides for the sustainability of the new Maya Ka'an destination in Q. Roo (MX6a.12) and good practices on land use from MARTI, ASK, TNC, and the Technological Institute of Chetumal (MX6a.13).	2016
	There is a Coral Reef Leadership network to create leaders in the training of good practices, counting on the guides for best practices, with the voluntary standards for best practices (MX6a.1-4). MARTI provided a list of recreational service providers that have adopted best practices from 2007 to 2011 in Cozumel (29 houses) and Riviera Maya (5 houses) (MX6a.5). This listing was updated until 2013 (MX6a.7) with the dive houses for Cozumel, some in Cancun / Riviera Maya (Note: this listing was added after the final review by PriceWaterhouseCoopers). There is also a management plan for non-extractive use through the operation of eco-tourist snorkeling tours for the sighting of protected species such as sea turtles in Akumal Bay, which is under review and cannot yet be published (MX6a.6).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX.1a, 1b, 1c Carpeta Programas de manejo	NA	CONANP-Dirección Regional	Carpeta Programas de manejo
	Lineamientos de buenas prácticas para cruceros	NA	Coral Reef Alliance - Javier Pizaña	https://cruising.org/about-the-industry/policy-priorities/environmental
	MX6a-1 Manual de buenas prácticas para actividades de buceo con tiburón toro	2017	Saving Our Sharks	SOS
	MX6a-2 MAR Network	2018	MARTI	HRI
2011-2014	MX.6a.1- Coral Reef Leadership network	Actual	CORAL	Coral Reef Leadership Network
	MX.6a.2- Guides and Best Practices	Actual	CORAL	Guides and Best Practices
	MX.6a.3- Estándares Voluntarios	2007	CORAL	Estándares Mejores Prácticas
	MX.6a.4- Estándares voluntarios como herramienta	Jul-08	CORAL	Article- Estándares voluntarios
	MX.6a.5- Listado de operadores en Cozumel	2007-2011	MARTI	MARTI
	MX.6a.6- Carta HRI Plan Manejo Akumal	2013	CEA	CEA
2016	MX.6a.7- Listado EWT's y seguimientos	2013	MARTI	MARTI
	MX.6a.8- Casas de buceo Riviera Maya-APSA	2015	AHRM	APSA
	MX.6a.9- Lona tiburón ballena	2015	CONANP	CONANP
	MX.6a.10- Etiqueta reglas tiburón ballena	2015	CONANP	CONANP
	MX.6a.11- Folleto tiburón ballena y especies	2015	CONANP	CONANP
	MX.6a.12 - Guías prácticas Maya Ka'an	2015	ASK	ASK
	MX.6a.13 - Guías prácticas MARTI	2015	ASK	ASK

Seguimiento:

Organización:	RAZONATURA
Contacto:	Olmo Torres
Correo electrónico:	olmo@razonatura.org
Organización:	Coral Reef Alliance
Contacto:	Javier Pizaña
Correo electrónico:	jpizanaa@gmail.com

Name:	Participation of coastal hotels in eco-certification schemes	Status:	Final
Description:	Several eco-certification programs for coastal hotels have been initiated in the MAR area. If designed and implemented well, these programs have the potential to reduce negative impacts on coastal ecosystems and promote environmental sustainability. This indicator measures the industry's extent of participation in these programs.		
Theme:	Theme 6 – Sustainability in the Private Sector		

Ranking Criteria:

5 – Over 25% of coastal hotels participate in one of the recognized eco-certification schemes
4 – 15 – 24% of hotels participate in eco-certification schemes
3 – 5 – 14% of hotels participate in eco-certification schemes
2 – Less than 5% of hotels participate in eco-certification schemes
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Grade:

Grade:	2020: 2-Poor	2016: 2-Poor	2014: 2-Poor	2011: 2 - Poor
Result:	Of the 1129 hotels registered by SEDETUR in Q. Roo, 32 have Earth Check, 35 with 5 and 15 with Green Key. More than 50% of these hotels with at least 2 of these 3 certifications, which represents a maximum 3%.			

Observations:

Observations:	1) Listings of hotels certified with Earth Check were requested, hotel associations., 2) SECTUR Certificate "S" of sustainability, 3) There are new eco-certifications in the area of Rainforest Alliance, Green Key, Oceanic Global Biosphere Tourism, 4) PROFEPA environmental certificates, 5) SEMA / PPA recognition.	2020
	Erica Lobos as representative of EARTHCHECK provided us with a list of the hotels that renewed their certification or obtained it for the first time (October 2015) for a total of 27 hotels (MXGb.10). The hotels in this document that indicate that they are in "Earthcheck assessed" status, with a total of 7, are participating in an initial phase program, prior to a certification process. However, they also implement a management system (with fewer indicators than certification) measuring and monitoring the consumption of energy resources, drinking water, CO2 and the generation of solid waste. Likewise, Fernando del Valle of the AHRM provided us with a list (MXGb.11) and graph (MXGb.12) of the 94 hotels surveyed with various certifications in the Riviera Maya, where 17 are under Green Globe and 7 in Rain Forest.	2016
	The document "Public Tourism Indicators per month 2010" shows a study done to quantify the influx of tourists to the state, cruise ship movement, passenger movement, hotel infrastructure, visitor influx to the state, hotel occupancy, average stay, economic income, influx to archaeological sites and average expenditure (MXGb.2.), this in order to know the current situation. The Green Globe website lists 14 hotels or hotel chains that are eco-certified (MXGb.3.). It also shows us the standards that hotels require for certification (MXGb.9). From an unofficial list of 154 hotels listed, 36 participate in an environmental management system and have it implemented. This is equivalent to 23% of the hotels on this Unofficial list, 20 of the 154 hotels (13%) are certified (MXGb.1.) With EARTHCHECK, which through 6 steps towards Sustainable Tourism Practices grants an eco-certification (MXGb.4.). On the official site of Earthcheck, the area of Quintana Roo, Mexico, has 13 eco-certified places: Xel-Há Park, Xcaret Park, Barceló Costa Cancún, Barceló Tulum Beach, Barceló Maya Beach Resort, Banyan Tree Mayakoba, Excellence Riviera Cancun, Excellence Playa Mujeres, Grand Palladium Riviera Maya, Grand Velas All Suites and Spa Riviera Maya, Grupo Vidanta Riviera Maya, Hotel el Tukan, Occidental Grand Xcaret (MXGb.5.). Additional information, which does not count for the classification of this indicator but which is important to emphasize as an effort in the state of Quintana Roo: By means of communication with Carlos Segura Ponce de León we want to highlight the efforts made by this initiative with respect to this indicator: The Mesoamerican Reef Tourism Initiative (MARTI) initiative has 140 hotels implementing an Environmental Management System (SAA), where most of the hotels that sought these certifications (Green Globe and Earthcheck) first implemented the MARTI program because they have not trusted the other certifications. In Riviera Maya alone, including all types of hotels from category 1 to ultra luxury, there are more than 356 hotels, in Cancun there are more than 180 hotels and Cozumel more than 30 that have adopted the SAA. A list of hotels from the database of the Riviera Maya Hotel Association (only includes partners) and the one that manages	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX Gb-1. Empresas EarthCheck Quintana Roo Vigentes Mayo 2020	2020	Earth Check	https://earthcheck.org/ig/arch/members/interactive-map/
	MX Gb-2 LISTA-DE-EMPRESAS-DISTINTIVO-S-2020 Listado de hoteles distintivo "S" SECTUR	2020	SECTUR	HRI
	MX Gb-3 Lista de hoteles en Quintana Roo con la certificación Green Key	2020	Green Key http://www.greenkeymex.com/	HRI
	MX Gb-4 Gui certificación turismo sostenible	2020	Certificación Turismo	http://www.rainforest-
	MX Gb-5. SEDETUR_COMO-VAMOS-201912	2020	SECTUR	SECTUR
2011-2014	MXGb.1- Listado de hoteles en programas medioambientales	2010	WWF	WWF
	MXGb.2- Indicadores Turísticos Públicos por mes 2010	2010	WWF / SEDETUR (Secretaría de Turismo)	WWF/SEDETUR
	MXGb.3- Green Globe web page	2011	Green Globe	Miembros en México
	MXGb.4- Earthcheck web page	2011	Earthcheck	6 pasos para certificación
	MXGb.5- Listado miembros actualizado Octubre	Oct-13	Earthcheck	Earthcheck
	MXGb.6- Directorio Dirs. Gles. Mayo 2010	2010	MARTI	MARTI
	MXGb.7- Directorio socios Septiembre 2011	2011	MARTI	MARTI
	MXGb.8- Indicadores MARTI FASE 1	NA	MARTI	MARTI
MXGb.9- Green globe standards	2013	Green Globe	Green Globe	
2016	MXGb.10- Listado Earthcheck	Oct-15	Earthcheck	Earthcheck
	MXGb.11- Listado Hoteles Riviera Maya	2015	AHRM	AHRM
	MXGb.12- Gráfica Listado Hoteles Riviera Maya	2015	AHRM	AHRM

Seguimiento:

Organización:	SUSTENTUR
Contacto:	Vicente Ferreyra
Correo electrónico:	vicente@sustentur.com.org
Organización:	RAZONATURA Oceanic Global
Contacto:	Olmo Torres
Correo electrónico:	olmo@razonatura.org
Organización:	Earth Check
Contacto:	Erica Lobos
Correo electrónico:	erica.lobos@earthcheck.org

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Indicador:

	Status:	Final
Name:	Adoption of seafood eco labeling programs	
Description:	Several different seafood labeling programs that promote sustainability. The Marine Stewardship Council (MSC) is the most advanced and environmentally robust. Several local eco-labeling efforts also promote sustainable seafood. This indicator measures the effort to develop and adopt these programs in the MAR region.	
Theme:	Theme 6 – Sustainability in the Private Sector	

Ranking Criteria:

5 – There exists a national seafood eco-labeling program, and at least one fishery in the country is certified by the MSC
4 – There exists a national seafood eco-labeling program (within the MAR region), and at least one fishery has completed a full MSC assessment
3 – Better management practices have been developed and agreed upon for the seafood industry, and a lead agency is developing the eco-labeling program
2 – Better management practices have been developed, but not agreed upon, or no national lead agency has been identified to develop the eco-labeling program
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Grade:

Grade:	2020: 4 Good
Result:	2016: 5- Very good 2014: 5- Very good 2011: 4 - Good
	The Chakay trademark has been registered in the MBRS region and the document to register it with the MSC was approved but has not been renewed. Good practices continue to be observed throughout the Lobster FIP.

Observations:

Observations:	MSC certification was no longer renewed, however fishing cooperatives continue to operate under these good practices and lobster FIP was established.	2020
	The MSC certification was renewed in August 2015 after a brand review and audit process carried out at the end of May 2015 (MX6c.11).	2016
	The document to register the Chakay brand lobster was approved by the MSC (Marine Stewardship Council) which manages an ambitious program through which, working together with its partners, it seeks to transform international markets for seafood towards a model that rewards and promote sustainable and responsible practices (MX6c.9-10). Live lobster and trademark registrations, collective trademark registration titles, as well as rules of use have been made (MX6c.2-4, 7). The use of this mark in the SAM region has been published by various means (MX6c.1, p-10-15, MX6c.5, 6, and 8).	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX6c-1 FIP Langosta	2019	COBI	COBI
	https://www.slowfood.com/es/que-Marca-Chacay : https://www.iucn.org/new	2020	Slowfood	Razonatura
		2020	Razonatura	Razonatura
2016	MX6c.11 - Sian Ka'an Banco Chinchorro Final Audit	20-Aug-15	MSC	MSC-web
2011-2014	MX6c.1- Biodiversitas	May-Jun, 2010	RAZONATURA	Razonatura
	MX6c.2- Reglas de Uso	05-Mar-09	RAZONATURA	Razonatura
	MX6c.3- Registro de Marca	10-Jun-09	RAZONATURA	Razonatura
	MX6c.4- Registro de Langosta Viva	09-Feb-10	RAZONATURA	Razonatura
	MX6c.5- Artículo_revista	NA	RAZONATURA	Razonatura
	MX6c.6- Reportaje_conanp	2010	RAZONATURA	Razonatura
	MX6c.7- Título de Registro de Marca Colectiva	11-Mar-09	RAZONATURA	Razonatura
	MX6c.8- Primera marca sustentable en México	05-Dic-10	RAZONATURA	Artículo - web
	MX6c.9- MSC página web	Actual	MSC	MSC-web
	MX6c.10 - MRFAF F Certificate Schedule V2	07-Aug-12	MSC	MSC

Seguimiento:

Organización:	COBI
Contacto:	Stuart Fulton
Correo electrónico:	sfulton@cobi.org.mx
Organización:	RAZONATURA
Contacto:	Kim Ley
Correo electrónico:	kim@razonatura.org

Indicador:

	Status: Final
Name:	Government incentives for conservation and sustainable businesses
Description:	Government tax and other incentives can provide an important stimulus for the private sector to adopt environmentally friendly practices and technologies. This indicator measures the degree to which each government in the MAR area has applied such incentives for conservation.
Theme:	Theme 6 – Sustainability in the Private Sector

Ranking Criteria:

5 – The national or provincial government provides incentives for four of the following: improvements in energy efficiency, improvements in the treatment of wastewater, reductions in waste production or recycling, alternative energy options, the adoption of four-stroke outboard engines, and land tax incentives for conservation

4 – Governments offer incentives for at least three of the above

3 – Governments offer incentives for at least two of the above

2 – Governments offer incentives for at least one of the above

1 – No government incentives were identified

Grade:

Grade:	2020: 4-good
Result:	2016: 5 - Very good 2014: 5 - Very good 2011: 4 - Good
	There are incentives from the Mexican government through the PROCODES and PROREST Programs, however they do not consider the incentives of the indicator; They are oriented to surveillance, monitoring, restoration and studies of load capacity. Previous incentives have not

Observations:

Observations:	There are incentives from the Mexican government through the PROCODES and PROREST Programs, however they do not consider the incentives of the indicator; They are oriented to surveillance, monitoring, restoration and studies of load capacity.	2020
	There is a list of PROCODES (2015) for the different existing projects such as training courses, technical studies, conservation and restoration of ecosystems, and productivity (MX6d.11). In the new ecological zoning plan for the municipality of Othón P. Blanco, south of Q. Roo, it has been agreed to implement tertiary-level wastewater treatment plants as established in the Cartagena Protocol. This publication is not yet available in the Official Gazette.	2016
	Modernization of smaller vessels by changing to four-stroke engines (MX6d.1). ProÁrbol is the main federal program to support the forestry sector that orders in a single scheme the granting of incentives to landowners and owners to carry out actions aimed at protecting, conserving, restoring and making use of the resources in forests, jungles and arid zones of Mexico. The National Forestry Commission is the institution responsible for carrying out this program, under operating rules and through an annual call in which the requirements, deadlines and procedures for the allocation and delivery of resources to the beneficiaries are established. Due to its characteristics, ProÁrbol guarantees equity, transparency and efficiency in the exercise of public resources destined to promote sustainable development for the benefit of the owners and inhabitants of the forest regions and the country in general (MX6d.2.). There are several programs to improve wastewater treatment: clean water, drinking water and sanitation program in urban areas, potable water and sanitation in rural communities, competitive fund for wastewater treatment (MX6d.3.). In order to support producers who use irrigation by electric pumping and achieve the efficient and sustainable use of water resources in irrigated agriculture, with the rehabilitation of pumping plants, wells and pumping equipment for agricultural irrigation, in the modernization of irrigation systems, CONAGUA and the Government of the State of Yucatán,	2014

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	Carpeta MX 6d. (1-7) Adopción de programas PROCODES y PROREST 2019 y 2020	2020	CONANP	CONANP
2011-2014	MX6d.1- Modernización embarcaciones menores	NA	SAGARPA	Motores 4 tiempos
	MX6d.2- Pro árbol	2011	CONAFOR (Comisión Nacional Forestal)	ProÁrbol-Web
	MX6d.3- Programas aguas residuales	NA	SEMARNAT-CONAGUA	Programas del Sector
	MX6d.4- Procodes	2011	CONANP	Procodes
	MX6d.5 - Presentación Bionenergía	2013	FIRA	FIRA
	MX6d.6. Principales características	NA	FIRA	FIRA
	MX6d.7. Memorias Sostenibilidad	2011	FIRA	FIRA
	MX6d.8. Carta Apertura de ventanilla	2013	FIRA	FIRA
	MX6d.9. Programas hidroagrícolas	2010	CONAGUA	CONAGUA
	MX6d.10. Prevención y gestión de residuos	2013	SEMARNAT / GOBIERNO DE QUINTANA ROO	SEMARNAT / GOBIERNO DE QUINTANA ROO
2016	MX6d.11- Listado de Procodes	2015	CONANP	Procodes

Seguimiento:

Organización:	HRI
Contacto:	Mélina Soto
Correo electrónico:	soto@healthyreefs.org
Organización:	
Contacto:	
Correo electrónico:	

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Indicador:

	Status:	Final
Name:	Private sector assistance to MPAs	
Description:	Incorporating private sector assistance for local MPAs is an important component in their sustained success. This indicator assesses the degree of local business assistance as reported by MPA managers. Private sector assistance is evaluated based on the existence of financial, in-kind, or technical assistance.	
Theme:	Theme 6 – Sustainability in the Private Sector	

Ranking Criteria:

5 – At least 50% of marine protected areas have high levels of private sector support
4 – At least 50% of marine protected areas have at least moderate private sector support and at least 25% have high private sector support
3 – At least 50% of marine protected areas have at least moderate private sector support
2 – At least 50% of marine protected areas have at least low private sector support
1 – At least 50% of marine protected areas have at least no private sector support

Grade:

Grade:	2020: 2-Poor
	2016: 1-Critical
Result:	The results of the survey applied to 11 ANPs in the State of Quintana Roo, yielded the data of 54.54% with low assistance from the private sector.

Observations:

Observations:	There are companies that through their foundations carry out conservation actions or support the work of CONANP in certain activities (ADO, Telcel, Carlos Slim, Alltournative).	2020
	Only 3 ANPs have private funds. One of them comes from KFW (German Development Bank) that operates with government and private resources, which is applied in the APFF Yum Balam to support projects of: conservation, surveillance, productive projects, etc. and this same KFW also supports the Sanctuary of the Manatí state area. The other ANP that has private funds is the Costa Occidental Isla Mujeres National Park, Punta Cancún, Punta Nizuc, through a board created specifically for the operation and maintenance of the MUSA (Underwater Museum).	2016

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX1e MPA_Original_Data_Collection_MX_esp-CONANP	May 2020	HRI	HRI
2011-2014	MX6e.1. Fondo para Áreas Naturales Protegidas	2010	SEMARNAT / CONANP / FM	SEMARNAT
	MX6e.2. Manual FANP	2010	SEMARNAT / CONANP / FM	SEMARNAT/FMCN
2016	MX6e.3. Encuesta CONANP apoyo sector privado	2015	CONANP	CONANP

Seguimiento:

Organización:	Consultora
Contacto:	Rosalía Andrade Medina
Correo electrónico:	r.andrademedina@gmail.com
Organización:	
Contacto:	
Correo electrónico:	

	Status:	Final
Name:	Mapping of potentially resilient reefs to warming seas / coral bleaching (regional indicator)	
Description:	Corals are highly sensitive to changes in temperature, resulting in bleaching. However, some species appear to be more tolerant, and some individual corals appear better adapted as a result of past exposure to stresses. Reefs that are better suited to avoid or tolerate bleaching are termed "resistant." Reefs that are affected but then recover to their original state are termed "resilient." Factors that appear to improve the resilience of a coral reef include minimizing local stressors, maintaining good connectivity to unimpacted or resistant reef areas, and enabling coral larvae to move in and establish the coral population. This indicator measures the extent to which a regionally accepted map of potentially resilient reefs has been adopted and utilized in the region.	
Theme:	Theme 7 – Global Issues	

Ranking Criteria:

5 – Existence of an accepted regional map that identifies reefs most likely to be resilient and is integrated into two national level plans and into at least 50% of MPA plans in those countries
4 – Existence of an accepted regional map that identifies reefs most likely to be resilient and is integrated into at least one national level plan and into at least 25% of MPAs in that country
3 – Existence of a draft MAR regional map of reef resilience using a regionally accepted method and is under review
2 – National work to develop regionally standardized resilience indicators is underway (data have been collected to identify resilient sites) and has been applied to create a regional map
1 – No documented action that meets the criteria to achieve a higher score is available

Grade:

Grade:	2020: 2-Poor	2014: 2-Poor	2011: 2 - Poor
Result:	There is no updated map of resilience indicators, the information is outdated regarding White Syndrome and mass bleaching events, it needs to be updated.		

Observations:

Observations:	The regional draft map cited in 2011, 2014 and 2016 is outdated given the current reef situation. The resilient reef indicators should be updated to take into account the white syndrome. - It would be prudent to take advantage of the information collected during PROREST 2019 - SCTL D to generate the updated map.	2020
	This work has stopped in the last year or two. One map was produced from the same TNC / WWF / HRI data that was used in the HRI 2008 Report Card. It combines several indicators into a resilience index, similar to the reef health index - although the results were different. There were questions about the indicators and ranges used, but the discussion / review was never completed. The draft map exists (MX7a.1), but there is no report detailing the indicators, ranges and justifications that has been located or approved. A draft Rapid Reef Assessment to Identify Resilient Sites in the Mesoamerican Reef (2009) was also identified (MX7a.2, page 2-3, MX7a.3), which identifies bleach-resistant and bleaching-resistant reefs in the region, examining Factors such as living coral cover, size and age of the coral colony, abundance of species resistant to bleaching, reefs that survived previous bleaching events, and areas with high recruitment. The other elements of this project (connectivity and effective management) were not identified.	2016

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	MX 5a-1 Informe Final_PROREST_CER_56	2019	CONANP y BarcoLab UNAM	CONANP
	MX 7a 1-7 Blanqueamiento de corales	2019	CINVESTAV	CINVESTAV
	Modelo de vulnerabilidad de los Arrecifes del SAM	En proceso	UNAM / HRI	HRI
2011-2016	MX7a.1- Map potential resilient sites_MAR	2008	TNC	TNC
	MX7a.2- Member's report on activities to ICRl Presented by The Nature Conservancy Reporting period January 2008 – December 2009	2008/9	TNC	TNC
	MX7a.3- Rapid Reef Assessment Extract	2009	TNC	TNC

Seguimiento:

Organización:	CINVESTAV
Contacto:	Israel Muñiz
Correo electrónico:	israbios.muca@gmail.com
Organización:	
Contacto:	
Correo electrónico:	

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Indicator:

	Status: Final
Name:	Engagement in international/regional treaties that support conservation
Description:	The following international treaties and conventions address solutions to issues relevant to marine conservation in the MAR area. This indicator measures the number of ratifications for these treaties.
Theme:	Theme 7 – Global Issues

Ranking Criteria:

5 – At least 95% and higher score
4 – Score of at least 85%
3 – Score of at least 75%
2 – Score of at least 65%
1 – Score less than 64%

Grade:

Grade:	2020: 3-Fair	2016: 3-Fair	2011: 3 - Fair
Result:	Mexico has ratified most of the main international treaties in previous years, however, no important protocols have been ratified and none of the international commitments are achieving their goals.		

Observations:

Observations:	To date, the PPO protocol for Specially Protected Areas of the Greater Caribbean and the protocol for contamination from land-based sources have not been ratified; we consider that no other international treaties have come out.	2020
	Mexico has not ratified the following 2 out of 9 existing treaties (MX7b.1): 1990 Protocol for Specially Protected Areas and Wildlife of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (MX7b.5); Protocol for Pollution from Sources and Land-based Activities (includes treated wastewater) (MX7b.6). The rest of the treaties have been ratified by Mexico (MX7b.2, 3, 4, 7, 8, 9, 10)	2016

Fuente:

	Documento/Nombre del Archivo	Fecha	Institución	Localización
2020	Acuerdo de Tulum (no vinculante)	2006	NA	7b_Declaración de Tulum /
	Sustainable Development Report 2020	2020	ONU	https://dashboards.sdgindex.org/#/MEX
	Directrices de pesca de pequeña escala (voluntario)	2017	FAO	7b_directrices pesca peq escala_FAO
	Acuerdo de París	2015	CNUCC	7b_spanish_paris_agreem
2011-2016	MX7b.1- Comparaciones por País-Tratados Internacionales más relevantes para el manejo del Arrecife	06-Oct-11	HRI	HRI
	MX7b.2- Convención de las Naciones Unidas de la Ley del Mar de 1982	10-Dic-82	United Nations Convention on the Law of the Sea	United Nations Convention on the Law of the Sea
	MX7b.3- Convención para la Protección y Desarrollo del Ambiente Marino de la Región del Gran Caribe	11-Oct-86	Caribbean Environment Programme	Caribbean Environment Programme
	MX7b.4- Protocolo para la Cooperación para el Combate de Derrames de Petróleo en la Región del Gran Caribe	1983	Caribbean Environment Programme	Caribbean Environment Programme
	MX7b.5- Protocolo para Áreas Especialmente Protegidas y Vida Silvestre de la Convención para la Protección y Desarrollo del Ambiente Marino de la Región del Gran Caribe -Mapa de Ratificación de SPAW	1990	Caribbean Environment Programme	Caribbean Environment Programme
	MX7b.6- Protocolo para la Contaminación Proveniente de Fuentes y Actividades Terrestres (incluye agua de desecho tratada) - Mapa de Ratificación Protocolo LBS	6-Oct-99 y 13-Ago-10	Caribbean Environment Programme	Caribbean Environment Programme
	MX7b.7- Convención para los Humedales de Importancia Internacional especialmente como Hábitat de Aves Acuáticas - Lista de Ratificación	02-Feb-71	Ramsar	Ramsar
	MX7b.8- Convención Marco de las Naciones Unidas para el Cambio Climático -Lista de Ratificación	09-May-92	UNFCC	UNFCC
	MX7b.9- Convención para la Diversidad Biológica - Lista de Ratificación	13-Jun-92	CBD	CBD
	MX7b.10- Convención sobre el Comercio Internacional de Especies Amenazadas de Fauna y Flora Silvestres - CITES Lista de Ratificación	1973 y 02-Jul-91	CITES	CITES

Seguimiento:

Organización:	Consultora independiente
Contacto:	Rosalía Andrade Medina
Correo electrónico:	r.andrademedina@gmail.com
Organización:	
Contacto:	
Correo electrónico:	

Indicador:

Name:	Adopt and expand a reward system for carbon sequestration and encourage a reduction in	Status:	Final
Description:	Justification-As human populations grow, so do the resource demands imposed on ecosystems.		
Theme:	Theme 7 - Global Issues		

Ranking Criteria:

5- An incentive program of ecosystem services for carbon sequestration exists with 10% of the MAR land area	
4- An incentive program of ecosystem services for carbon sequestration exists and it's being implemented within the MAR land area	
3- An incentive program of ecosystem services for carbon sequestration does exist but is not being applied	
2- There are plans to develop an incentive program of ecosystem services for carbon sequestration	
1- No documented action that meets the criteria to achieve a higher score is available	

Grade:

Grade:	2020: 3 - Fair	2014: 3 - Fair
Result:	Since 2017, three projects focused on the measurement, assessment and certification of a blue carbon initiative for the MBRs region have been launched in the APFYB and Cozumel. The pilot phases will generate the first blue carbon certification for mangroves based on the voluntary carbon market. Quintana Roo is part of the Governors for Climate Working Group (CGF Task force), thus assuming responsibilities for mitigation and adaptation to climate change.	

Observations:

Observations:	1) The ecosystem carbon sequestration was valued for mangroves and wetlands of San Ka'an, Yum Balam, and Nichupté. The mangrove carbon sequestration of Nichupté and Cozumel was also generated. 2) Work is being done on the economic valuation of environmental services and on the feasibility of a financial mechanism that contributes to the conservation and restoration of mangroves and seagrasses. 3) The sequestration of carbon (CO2) by mangroves and seagrasses must be taken into account throughout the entire Mesoamerican Reef System (MBRS).	2020
	"The local implementation program of the México REDD+ Alliance is carried out in seven states of the Mexican Republic and five REDD+ Priority Attention Areas. In them, efforts are made to address the causes of deforestation and forest degradation and promote forms of management territorial, agricultural and forestry that promote economic and social development opportunities for local communities (MX7c.8) In 2013, a pilot of the REDD+ Social and Environmental Standards (REDD+ SES) 1 was started in the Yucatan Peninsula with the objective of facilitate the process of designing a safeguards system at the regional level based on the REDD+ SES standards and provide concrete support to the national government, in particular the National Forestry Commission (CONAFOR) on social and environmental safeguards for REDD+ (MX7c.9). The scope of this one-year pilot was to facilitate the implementation of the awareness and capacity building, governance and interpretation processes (six of the ten steps included) of the REDD+ SES standards in conjunction with the relevant stakeholders in the Yucatan Peninsula (PY). Rafael León Negrete, state manager of the National Forestry Commission (Conafor), explained that the IRE seeks to provide positive incentives to reduce greenhouse gas emissions (GHG), while protecting forests, conserving biodiversity and improve the livelihoods of indigenous populations and local communities dependent on forests, while piloting the intervention model and the payment-for-results scheme for the REDD+ program, whose objective is to mitigate GHG emissions (MX7c.10). CONAFOR has paid since 2003 for the environmental services generated by the forest lands in Mexico, since the land is very large, local mechanisms have been created to pay for environmental services through recurring funds (MX7c.11, p. 16). There is also an estimate of Quintana Roo's potential for carbon sequestration, which is 1,858,724 thousand t of CO2 per year (MX7c.12)."	2016
	The Mexican government is preparing the incorporation of 138 million hectares (70 percent of the national territory) to the international Redd+ mechanism. Although the strategy is still in the discussion stage and will formally be submitted for consultation until 2014, the country has already received 33.8 million dollars from two World Bank funds: the Forest Carbon Partnership Facility and the Forest Investment Program. With this, he pledged to conclude the strategy and to advance for 5 years in the "early actions" of the Redd+ (MX7c.1. And MX7c.6.). The CarboNA projects, one of which is being developed in Yucatan, are aimed at building CO2 monitoring models in the region with remote sensors and maps. In 2011, a group of scientists created in Mexico the MexFlux network of water and carbon flows, with the same scheme as the American AmeriFlux, and which has at least seven study sites for these mass and energy exchanges (MX7c.2). The state of Quintana Roo has 30% of the surface of the territory is decreed under some scheme of protected natural areas, which is equivalent to a total of 1,423,141 hectares. However, since the eighties, various reports indicated the destruction of the forests as a result of the settlements in the interior of the state. Deforestation has gradually manifested itself and has become more acute in recent years, resulting in a notable reduction in the surface of the forest (MX7c.4). Carbon sequestration through management practices is a function of biomass accumulation and storage, so any activity that has a positive effect on the capacity of a given area to sequester and store carbon could potentially be considered as an option. Terrestrial carbon management to reduce CO2 in the atmosphere. In the sector "land use, change in land use and forests", two main carbon management strategies have been identified: 1) Increase the amount or rate of carbon accumulation, by creating or increasing carbon sinks and 2) Prevent or reduce the rate of release of carbon already fixed in existing sinks. Both strategies have been called "carbon sequestration" and "carbon conservation", respectively (IPCC, 1996). A third strategy called "carbon substitution" involves reducing the demand for fossil fuels, increasing the use of renewable wood products, either with durable wood products or with biochar (Bass et al., 2000) (MX7c.3). There are various strategies in various programs which are mentioned in MX7c.3, MX7c.5, MX7c.7.).	2014

Fuentes:

	Documento/Nombre del Archivo	Fecha	Institucion	Localizacion
2020	MX7c-1.INFORME-Final-Yum-Balam-VF Herrera et al. - Yum Balam	2017		
	MX7c-2. PMC_Ciclo de carbono y sus interacciones- Análisis de carbono azul en San Ka'an de Jorge Herrera	2019	CINVESTAV - MARFUND	FMCN
	MX7c-3.CGACC_2017_Balance- Primer reporte del Programa Mexicano del Carbono: "Estado del ciclo del carbono en México"	2019	PMC http://pmcarbono.org/pmrc/publicaciones/mn-nuiales.php	FMCN
2011-2014	MX7c.1. México cede sus bosques y selvas a REDD+	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
	MX7c.2. CO2 en Ecosistemas Caribe Mexicano	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
	MX7c.3. Políticas de mitigación	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
	MX7c.4. Estrategia Regional REDD+	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
	MX7c.5. Participación CONAFOR	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
	MX7c.6. México cederá el 70% de sus bosques	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
	MX7c.7. Avances del fortalecimiento del CTC	2007-2013	RED ++ / INE / CONA	RED ++ / INE / CONA
2016	MX7c.8. Alianza México REDD+ Peninsula de Yucatán	2015	Alianza México REDD	Alianza México REDD
	MX7c.9. Procedimiento Proceso REDD Final	Jan-15	Alianza México REDD	Alianza México REDD
	MX7c.10-SIPSE noticias. IRE, FOF, GEI)	13-Jan-15	SIPSE	SIPSE
	MX7c.11. Servicios Ambientales y Cambio Climático	NA	SEMARNAT	CONAFOR
	MX7c.12. INE - Potencial de seuestro de	2000	INE	INE

Seguimiento:

Organización:	FMCN
Contacto:	Mireva Resette
Correo electrónico:	mireva.resette@fmcn.org
Organización:	Programa Mexicano del Carbono
Contacto:	Rosalía Andrade Medina
Correo electrónico:	r.andrademedina@gmail.com