

In-Transition to MSC (ITM) Program Marine Stewardship Council

Mexican Pacific Red Sea Urchin Fishery

ITM Progress Verification Report

| Conformity Assessment Body (CAB) | SCS Global Services |
|-------------------------------------|--|
| ITM fishery | Mexican Pacific Red Sea Urchin Fishery |
| ITM project manager | Carlos Alvarez Flores |
| Assessment type | ITM progress verification |
| Date of first progress verification | May 31, 2021 |

Introduction

This template details the information required from Conformity Assessment Bodies (CABs) when verifying the progress of a fishery participating in Marine Stewardship Council (MSC) In-Transition to MSC (ITM) Program Pilot. It should be completed by the CAB with contributions from the ITM Project Manager as outlined in the ITM Program Requirements and Guidance – Pilot v1.1.

The template contains three main reporting sections:

Section 1 provides an overview of all verification activities, findings, and decisions for the full duration of the fishery's participation in the ITM program.

Section 2 is for capturing information provided by the ITM Project Manager ('self-reporting') to record any key updates or changes relating to the fishery and any Performance Indicator (PI) level score changes achieved along with supporting evidence.

Section 3 is for the CAB to record overall progress and progress at PI level for annual and additional verifications.

The same template shall be updated at each verification and the latest version shall be uploaded to the MSC Database in .pdf format as the Progress Verification Report along with the most recent version of the fishery's Improvement Action Plan and Benchmarking and Tracking Tool as supplied by the ITM Project Manager.

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1 Glossary

View the MSC-MSCI Vocabulary. Insert an optional glossary or list of acronyms used. Note that any terms defined here shall not contradict terms used in the MSC-MSCI Vocabulary.

2 Report overview

Guidance

This section shall be filled in by the CAB.

In **Table 2.1** the information should correspond to the Unit (s) of Assessment (UoAs) identified in the preassessment. Add additional rows for multiple UoAs. For vessel or fleet description, please include details about the number of vessels and vessel sizes of the UoA. This may require input from the ITM Project Manager.

In **Table 2.2** complete a row for each annual verification and add rows as required for any additional verifications such as expedited verification or if exceptional circumstances apply.

Table 2.3 is for recording the decisions of the CAB relating to annual verifications or other possible events such as suspension or withdrawal (following Sections 3.3 and 3.6 of the ITM Program Requirements and Guidance – Pilot v1.1). Additional rows may be added as required.

| Table 2.1 – Unit(s) of Assessment (UoAs) from pre-assessment report | | |
|---|---|--|
| UoA [enter number] | Description | |
| Species | Red Sea Urchin (<i>Mesocentrotus franciscanus</i>) | |
| Stock | The wild stock is distributed along the western coast of the Baja California Peninsula from the Coronado Islands to Cedros Island in Baja California and on Natividad Island in Baja California Sur | |
| Geographical area | Pacific coast of the state of Baja California, Mexico | |
| Harvest method / gear | Divers on hookah using hooks on board small vessels (i.e. pangas | |
| Fleet description (number of vessels and types) | Licensed and registered fishers in Baja California, operating small vessels with hookah-equipment (220 vessels) | |
| Client group | Pronatura Noroeste A.C. | |
| Other eligible fishers | To be determined | |
| Justification for choosing the Unit(s) of Assessment | Stock, area, and gear determined by client. | |

2.1 Unit(s) of Assessment (UoAs)

2.2 Progress verification summary

| Table 2.2 – Entry and progress verification summary | | |
|---|------------|---|
| Event | Date | Name/s of CAB and assessor/s |
| Pre-assessment report | 04/10/2019 | Dr. Enrique Morsan and Shelby Oliver, SCS Global Services |
| Eligibility verification | 13/12/2019 | SCS Global Services |
| 1st progress verification | 31/05/2021 | SCS Global Services |
| 2nd progress verification | dd/mm/yyyy | |
| 3rd progress verification | dd/mm/yyyy | |
| 4th progress verification | dd/mm/yyyy | |
| Other (expedited etc.) | dd/mm/yyyy | |

2.3 Record of progress verification decisions

| Table 2.3 – Progress verification and other decisions | | |
|---|----------------------------------|--|
| Verification/decision point | Decision or determination by CAB | |
| 1st progress verification | Adequate | |
| 2nd progress verification | Adequate / Inadequate | |
| 3rd progress verification | Adequate / Inadequate | |
| 4th progress verification | Adequate / Inadequate | |
| Additional verification required? | Yes / No | |
| Date of additional verification | dd/mm/yyyy | |
| Fishery suspended? | Yes / No | |
| Date of suspension | dd/mm/yyyy | |
| Fishery withdrawn? | Yes / No | |
| Date of withdrawal | dd/mm/yyyy | |

3 ITM Project Manager self-reporting

Guidance

This section should be completed by the ITM Project Manager for each annual progress verification on request of the CAB (in terms of Section 3.2 of the ITM Program Requirements and Guidance – Pilot v1.1).

The ITM project manager shall have 30 days to submit the progress report from the day the request was received.

Where references are required these should, where possible, include hyperlinks to publicly available documents, or document collections in digital file cloud storage, as is practical.

3.1 Key updates or changes in the fishery

Guidance

The ITM Project Manager shall outline in **Table 3.1** any notable changes to the fishery during the year since the pre-assessment and/or the last progress verification that could result in a lower draft scoring range at Principle or Performance Indicator level, including (but not limited to) changes to:

- Unit (s) of Assessment (UoA)
- Fishery fleet or vessels
- Management systems
- Relevant regulations
- Personnel involved in science, management, or industry
- Scientific base of information, including stock assessments
- Where enhanced fisheries, any updates on fishery's position in relation to scope criteria
- Other circumstances that might have hindered implementation of improvement actions

If no updates or changes occurred this should be stated.

| Table 3.1 – Record of key updates or changes in the fishery | | |
|---|------------------------|------------|
| Principle | Key updates or changes | References |
| Principle 1 | | |

| Year 1 | - The stock assessment method has been updated and a new assessment has been published in a peer-review article, suggesting a good stock status with some site-specific | Retelling the History of the Red Sea Urchin Fishery in Mexico |
|--------|--|--|
| | overexploitation that requires rebuilding actions. - A recovery plan was started to design, including the proposal of a fisheries production data | 2.3_Propuesta Registro de Datos Producción e Inspección y Vigilancia_FIP ERIZO_feb_2021 |
| | register (logbook) that allows the efficient collection of information for FIP evaluations | 1.1Protocolo simplificado recuperacion de bancos erizo rojo_DRAFT_sep_2020 |
| | At the request of the MSC, at the end of June the work plan was sent to them, adjusting the | 1.1 Orden del día_FIP_Erizo_Variabilidad ambiental y densidad de bancos_25_feb_2021_PA |
| | deadlines for the tasks that were affected by the current contingency caused by COVID-19, this to give continuity to the FIP as a participant in the Ocean Stewardship Fund. | 1.1 Reporte técnico_Variabilidad ambiental y del ecosistema en la pesquería de Erizo Rojo en la costa |
| | The fishery information need list was generated. | de Baja California |
| | The FIP technical advisor concluded his doctoral research; the main findings reflect the | 1.1 Tesis_ErizoRojo_AMedellin_Febrero_2021 |
| | relationship of environmental variables on the density of sea urchin banks on the coast of Baja California. In the following months the results of this research will be communicated to | 1.1_Coordinación semestral de tareas PRONATURA_2021-1_Enero_FIP_ERIZO |
| | the producers and using the data of fishing production 2019 and 2020 will begin to evaluate the conditions of recruitment of the sea urchin. | 1.1_Reunión semestral coordinación de tareas 2021- 1_Enero_FIP ERIZO |
| | The first training for fishermen began to be prepared, waiting for sanitary conditions to allow it. | 2.3FIP_Erizo_Coordinacion tareas 2020-2 y 2021- 1_sep_2020 |
| | In December 2020, a technical meeting was held to agree on the need to create a recovery | 2.1_Minuta_FIP_Erizo_resultados_diagnostico_lyV_feb_202 |
| | plan for sea urchin banks. Among the agreements of that meeting was proposed to follow up on the large-scale reforestation programme for seaweed forests for the benefit of | 2.1Inforgrafía_Recuperación de Bancos de Erizo |
| | benthic fisheries. The launch of the recovery plan proposes to collectivize with the members of the FIP, in an eloquent and simple way, the information regarding the environmental | 2.1Pros-Contras_ Procedimientos de recuperación de bancos de Erizo Rojo |
| | variability and the density of the banks. Therefore, the technical meeting of March 2021 | 2.3_Minuta_reunion_CRIAP- Ens_INAPESCA_PNO_FIPs_BC_feb_2021 |
| | presented: 1) The results of the research linked to the environmental aspects and the fishery of sea urchin and 2) The recovery procedures of hedgehog banks. The recovery actions | 2.3_Propuesta Registro de Datos Producción e Inspección y Vigilancia_FIP ERIZO_feb_2021 |
| | include the proposal of a fisheries production data register that allows the efficient collection of information for FIP evaluations. This proposal was presented and discussed at | 2.3_Screen Video_Correcto Llenado de Registro_FIP ERIZO_Capacitación_feb_2021 |
| | the February 12 meeting with the members of CRIAP-ENSENADA and subsequently presented at the meeting before the members of the FIP on February 12; it was agreed to follow the first state of the first sta | 2.3Minuta_FIP_Erizo_Estrategias_diagnostico_lyV_18 feb_2021.pdf |
| | follow it up to find the possibility of managing a single format of "bitácora". The correct filling of the data format was placed as a training element. Subsequent to the compliance of stakeholders with the recovery procedures, a recovery plan that is in line with the needs of the fishery will be consolidated. | 7.3.MINUTA REUNIÓN PRONATURA NOROESTE Y SUBSECRETARIA DE PESCA SEST 24 FEB 2021_PA |

| | At the meeting held on January 25, SUBPESCA offered collaboration and joint training to fishermen and monitors for the operation of the FIP. In an internal agreement, a workshop is planned to attend this action | |
|------------------|--|---|
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| Principle 2 | | |
| Year 1 | - A technical report was concluded where the effect of environmental variability on the density of the sea urchin patches is determined. | <u>1.1 Reporte técnico_Variabilidad ambiental y del</u> ecosistema en la pesquería de Erizo Rojo en la costa de Baja California |
| | A first report was started on identifying key ecosystem factors that give signs of change in its | 8.1InformeTecnicoERIZOROJO_VariabilidadAmbient al_DRAFT_sep_2020 |
| | structure that can be attributed to fishing. This report is expected to be ready for March of | 1.1 Reporte técnico_Variabilidad ambiental y del |
| | the following year, due to the effects of the health contingency caused by the COVID-19 virus. | ecosistema en la pesquería de Erizo Rojo en la costa de Baja California |
| | | ecosistema en la pesquería de Erizo Rojo en la costa |
| Year 2 | virus. The technical report was concluded where the effect of environmental variability on the | ecosistema en la pesquería de Erizo Rojo en la costa |
| Year 2 Year 3 | virus. The technical report was concluded where the effect of environmental variability on the | ecosistema en la pesquería de Erizo Rojo en la costa |

| Year 1 | - Management Committee as decision-making process was started to formally install | 9.1 Seguimiento establecimiento de Comités de la |
|--------|---|--|
| | - A diagnostic of inspection and surveillance of the Red Sea Urchin fishery was completed | pesquería del Erizo y Subcomité de la Pesquería de Langosta en BC feb 2021 |
| | - A surveillance section was added to the register (logbook) developed on Principle 1 | <u>10.1 Diagnóstico Inspección y vigilancia de la</u> pesquería de Erizo Rojo_feb_2021 |
| | A collaboration agreement was signed with the federal fisheries authority and the formal conformation of the space for decision-making has been followed up. | 2.3_Propuesta Registro de Datos Producción e Inspección y Vigilancia_FIP ERIZO_feb_2021 |
| | At the meeting held on January 14 of this year, the Director General of Fisheries Management proposed a work agenda for the installation of advisory committees and/subcommittees of different species in Baja California (Sea UrchinErizo, "Generosa" ClamAlmeja generosa and Red Rock LobsterLangosta). This process is in the stages of updating the structure of the Fisheries Committees and the current regulations are being | 9.1 1_instrumento_colaboracion_CONAPESCA_PNO_sep _2020 9.1_Seguimiento establecimiento de Comités de la pesquería del Erizo y Subcomité de la Pesquería de Langosta en BC_feb_2021 |
| | reviewed | 10.1Diagnóstico lyV Erizo rojo_draft_sep_2020 |
| | | I10.1_Diagnóstico Inspección y vigilancia de la pesquería de Erizo Rojo_feb_2021. |
| | In December 2020, it was agreed to strengthen community surveillance to assist the administration and protection of the Sea Urchin resource with inter-institutional support. At the meeting, the Secretariat of the Navy (SEMAR) agreed to provide support and advice to | 10.4_Respuesta CONAPESCA 0819700124220_feb_2021 |
| | fisheries organizations on inspection and surveillance. In addition, the diagnostic of inspection and surveillance of the Red Sea Urchin fishery was completed. The results and | 2.3_Propuesta Registro de Datos Producción e Inspección y Vigilancia_FIP ERIZO_feb_2021.pdf |
| | strategies proposed in this exercise were presented to FIPIFJ members on February 19, the same meeting where the working group was formed. In the coming months, the registration format will be adjusted and the action plan will be conformed | 1.1_Coordinación semestral de tareas PRONATURA_2021-1_Enero_FIP_ERIZOpdf |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |

3.2 Annual progress at Performance Indicator level

Guidance

In this section the ITM Project Manager should supply information about expected and achieved score changes at the Performance Indicator (PI) level. Every year where a score change is due, more supporting evidence should be added as required. The rationale and key points sections should contain enough detail to allow the CAB to judge whether any score change is justified, and it should clearly link to the Improvement Action Plan. If no score change was due in a particular year this should be noted under the rationale or key points (e.g., "No score change"). If a score needed downward adjustment this should also be included. Any rationale should be supported by references, including hyperlinks, to publicly available documents, or document collections in digital file cloud storage, as is practical. The progress indicated here should be according to the judgement of the ITM Project Manager and based on implementation of improvement actions during the period under assessment.

3.2.1 Principle 1 Performance Indicator level score changes and rationales

| Principle 1 – Performance Indicator level score changes and rationales | | |
|--|---------------------|--|
| 1.1.1 – Stock status | Draft scoring range | Rationale or key points |
| Pre-assessment | 60 – 79 | There is no formal or regular stock assessment for the Red Sea Urchin from which to explicitly evaluate the stock status, but several information sources including stock status reference points were available, and thus the RBF was not required. Jurado-Molina et al. (2009) applied a Bayesian framework to assess the stock, which showed biomass stabilizing around 3,500 t for the period 1994 – 2010. In 2018, INAPESCA published an update of the status stock including data up to 2013 which described a declining trend of biomass dropping from 3,440 t to 316 t (Medellín-Ortiz et al, 2019). However, actual catches of the Red Sea Urchin were greater than the official biomass estimate. Medellin-Ortiz (2019) applied a different method (length-based virtual population analysis) and reports a stable biomass fluctuating around 9,500 t, ranging among 8,338 t (2014) and 10,616 t (1998). These values are above the MSY estimates of 5,247 t. Currently, the average adult mean density across all fishing areas is below the 2 sea urchin/m2 limit set by INAPESCA. However, some individual sites have a mean density over 8 sea urchin/m ² . Results show that the stock is minily composed of recruits (between 7 – 37 mm) (Medellín-Ortiz, 2019). A direct positive relationship between density of adults and recruits was found. Also, the author comment that the stock could be supported by consistent recruitment in places with high catch volumes, which can reduce impacts of fishing on the stock. Based on the new analysis by Medellin-Ortiz, is likely that the stock is above the point where recruitment would be impaired, and SG60 is met. However, there is still uncertainty regarding the stock status in relation to MSY because the estimate varies considerably with the estimate used. uncertain because, until now, depends of the method used. Therefore, it cannot be said that the stock is at or fluctuating around a level consistent with MSY. SG80 is not met. |

- .-

| | Progress: | On track / behind, etc. |
|--------|---------------------|---|
| | References: | Include references here |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | Progress: | On track / behind, etc. |
| | References: | Include references here |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | Progress: | On track / behind, etc. |
| | References: | Include references here |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | Progress: | On track |
| | References: | Medellín et al 2020_Retelling the history sea urchin fishery |
| Year 1 | ≥80 | To achieve SG80, MSC standard requires that it is highly likely that the stock management unit is above the limit where recruitment is impaired; and SG100 requires that there is a high degree of certainty that recruitment is not impaired. According to most recent stock assessment (Medellin – Ortiz et al., 2020), intense harvest may temporarily deplete local harvestable biomass (urchins >80 mm TL) without an effect on population recruitment, since red sea urchins size at maturity is 40 mm TL, and are broadcast spawners with larvae that remain in the water column for 2 – 4 months and can travel long distances before settlement. For this reason, the Kobe plot of spawning biomass is preferred to that of the harvestable biomass. The Kobe plot shows that spawning biomass has been fluctuating or above the estimated level producing MSY for the entire history of the fishery. Based on these findings, it is highly likely that the red sea urchin stock is above the limit where recruitment is impaired. <i>The standard for SIa at SG80 is met and possibly SG100</i> |
| | References: | Medellín – Ortiz, A., G. Montaño – Moctezuma, C. Alvarez – Flores y E. Santamaria-del-Angel. 2019. Retelling the history of the Red Sea Urchin fishery in Mexico. |
| | | <i>J</i> urado-Molina, J., J.S. Palleiro - Nayar y N.L. Gutiérrez. 2009. Developing a bayesian framework for stock assessment and decision analysis of the Red Sea Urchin fishery in Baja California, Mexico. Ciencias Marinas 35(2):183-193. |

| 1.1.2 – Stock rebuilding | Draft scoring range | Rationale or key points |
|--------------------------|---------------------|--|
| Pre-assessment | <60 / 60 – 79 / ≥80 | The Carta Estatal Pesquera de Baja California (2000- 2015) considered the Red Sea Urchin stock to be diminished. Permit holders have started re locating projects of red sea urchins to "aid repopulation" and increase gonad size (SEPESCA-BC, 2016), under the "State program for re populate sea urchin fishing grounds." The goal is to provide financial aid to red sea urchin permit holders in the most depleted areas, transferring adult sea urchins that will lead to an increase of recruits as well as increase the weight and quality of the gonad, hence increasing profitability. According to the call extended by the Government of Baja California, through the Ministry of Fisheries and Aquaculture, these projects must contain information on the type of substrate, density of sea urchin, as well as the types of flora and fauna present in the extraction and transplant areas. However, there is no mention of follow-up variables prior to site selection, condition of kelp forests, their seasonality or permanence, carrying capacity, strategies in case of exceeding such capacity, as well as strategies to prevent purple sea urchin from colonizing the areas from which Red Sea Urchins are being extracted. In addition, the rebuilding plan does not specify a timeframe for the recovery of the stock and no evidence is available to suggest that the rebuilding strategies are rebuilding stocks, or it is likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe |
| | References: | (SEPESCA-BC, 2016) |
| Year 1 | ≥80 | To achieve SG80, MSC standard requires that the stock management unit is at or fluctuating around MSY; to achieve SG100 it requires that there is a high degree of certainty that the SMU has been fluctuating around or above MSY over recent years. Based on most recent stock assessment (Medellin – Ortiz et al., 2020), it can be observed that harvestable biomass is below $0.5B_{MSY}$; however, based on the fact that the minimum legal harvest size (80 mm TL) is well above size at maturity (40 mm TL). However, spawning stock biomass status is more representative of the status of the stock because it better depicts the reproductive potential of the stock. A Kobe plot for the spawning stock shows that biomass has remained fluctuating above $0.9 - 1 B_{MSY}$ for the entire history of the fishery. Therefore, it can be concluded that it is highly likely that the red sea urchin stock has been fluctuating around or above MSY over recent years. <i>The fishery meets the standard at SG80</i> . |
| | References: | Medellín et al 2020_Retelling the history sea urchin fishery |

| | Progress: | On track |
|--------------------------|------------------------|--|
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 1.2.1 – Harvest Strategy | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | The management strategy includes several complementary measures in order to protect the stock, such as: To continue the to evaluate the stock in terms of abundance Application of the NOM-007-PESC-2015 which established the permit holders regime, as well as input (area and seasonal closures, and minimum legal size) and output controls (do not reduce densities below the 2 sea urchin/m², and close areas where the density dropped down 1 sea urchin/m²). To establish mechanisms to assure the reliability of the information collected from the fishermen. To rotate the fishing grounds to ensure the reproductive successful and to protect the juveniles, which use the adults as protection. The harvest strategy has been in place for many years and has been modified based on experience and the evaluation of their effectiveness. The Carta Estatal Pesquera de Baja California describes the measures for the period between 2000 – 2015, in which Palleiro-Nayar (2013) proposed a series of measures that were considered and later incorporated to management, and Medellin-Ortiz (2019) proposed modifications of the current measures. These reviews are periodic and proposed alternative measures tending to improve the harvest strategy. But, they are not with a fixed regularity (annual or biannual). |

| | | During the last years, as part of the harvest strategy, the INAPESCA proposed: |
|------------------|----------------------|--|
| | | 1) Continue with stock assessments |
| | | 2) Close areas with densities less than two sea urchins per m ² |
| | | 3) Maintain the minimum size at 80 mm in diameter and do not exceed the 5% catch tolerance of sizes smaller than this size. |
| | | 4) Motivate producers to deliver reliable information on their catch activities in the daily arrival fishing logs |
| | | 5) Not increase the number of fishing units in any area due to over-capitalization of the fleet and that licenses should be retired as licensees withdraw from the fishery, rather than being reallocated |
| | | 6) To rotate the fishing grounds, harvesting until a pre-defined minimum density is reached to assure shelter for the survival of juveniles |
| | | 7) To increase the catch of Purple Sea Urchin in all areas of Red Sea Urchin, because of high abundance of the Purple Sea Urchin |
| | | 8) Grant concessions (exclusive rights) for the harvest of both red and purple sea urchins to permit holders that have a demonstrable history of responsible fishing |
| | | The CAB considers that the components of the harvest strategy based on the empirical foundation, work together to achieve stock management objectives. Data collection consists of sampling processing plants and insitu monitoring of density is sporadic, with considerable variance in outcomes across the various stock assessments. The latest biomass estimate by Medellín-Ortiz (2019) needs to be confirmed to support the effectiveness of the harvest strategy. In this case, the SG80 is not met. |
| | | PI's 1.2.1(e,f) are not applicable to this fishery as sharks are not the target species and the hand selection of the urchins means that there is essentially no UoA related mortality of unwanted catch of the target stock. |
| R | eferences: | Medellín – Ortiz, A., G. Montaño – Moctezuma, C. Alvarez – Flores y E. Santamaria-del-Angel. 2019. Retelling the history of the Red Sea Urchin fishery in Mexico. |
| | | Palleiro-Nayar (2013) |
| | | |
| Year 1 60 | 0 – 79 | No change in score |
| | 0 – 79 eferences: | No change in score Include references here |
| R | | |

| | References: | Include references here |
|---|---------------------|--|
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 1.2.2 – Harvest control rules and tools | Draft scoring range | Rationale or key points |
| Pre-assessment | | The Harvest Control Rules in the Red Sea Urchin fishery are generally understood and are analyzed by several sources. It is expected that they tend to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached. The tools used are appropriate to control the exploitation. The SG60 is achieved. |
| | | However, because of the lack of consensus regarding the status of the stock and the relation to MSY across the different stock assessments, it cannot be determined that the stock is fluctuating around a target level consistent with MSY. |
| | | There are well defined Biological Reference Points including both the Target and Limit reference points (DOF- 2010) The goals of the reference points are such that: |
| | <60 / 60 – 79 / ≥80 | Target Reference Point: to maintain the biomass around those that produce the maximum sustainable yield (Bo/2). |
| | | • Limit Reference Point: biomass less than those observed in 1996 (6,664 t), or less than the previous year. |
| | | Even when reference points are well defined, there are no descriptions of what actions were triggered when the biomass dropped below the LRP (spatial bans or closed areas, reduction of fishing effort, modification of the legal size). |
| | | Sources of uncertainty are well known and include El Niño, the Blob, competition with the Purple Sea Urchin at shallow depths, recruitment failure, other than fishing pressure. But there are no pre-determined (i.e. well defined) measures or agreed upon actions should the limit reference point be reached. SG 80 is not met |
| | | |

| | References: | (DOF-2010) |
|------------------------------------|---------------------|--|
| Year 1 | 60 – 79 | No change in score |
| | References: | Include references here |
| | Progress: | Scheduled |
| Year 2 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 1.2.3 – Information and monitoring | Draft scoring range | Rationale or key points |
| Pre-assessment | | The Red Sea Urchin fishery collects a comprehensive range of information on several key issues through several mechanisms including management and academic research that indirectly supports management. The available information includes stock structure, stock productivity, fleet composition, stock abundance, catches and environmental information. |
| | <60 / 60 – 79 / ≥80 | Information about removals can be considered reliable from the researchers and the coverage is sufficient to estimate the indicator of the biomass trend and to support HCR that would trigger management actions. This body of knowledge is summarized in theses of Palleiro-Nayar (2004; 2009), Medellin-Ortiz (2019) and the chapter of the book Recursos Bentonicos de Baja California by Palleiro-Nayar (2013). |
| | | Evidence of a regular sampling protocol to evaluate the catch composition (e.g. percentage of illegal or adult sizes) or density at the sea was not provided. Data available on the UoA removals of the species are only |

| | | supplied by the fishermen, and there is uncertainty associated with these estimates because of concerns over inherent biases in the data. It is uncertain to what degree these uncertainties impact estimates. Therefore, insufficient information is available to meet SG80. |
|--------|---------------------|---|
| | | |
| | | Medellín – Ortiz, A., G. Montaño – Moctezuma, C. Alvarez – Flores y E. Santamaria-del-Angel. 2019. Retelling the history of the Red Sea Urchin fishery in Mexico. |
| | - <i>i</i> | Palleiro - Nayar, JS 2004.Dinamica de la población de erizo rojo Strongylocentrotus franciscanus sujeta a explotación comercial en Baja California. Tesis de Maestría del Centro de Investigación Científica y de Educación Superior de Ensenada. Mexico. 82 p. |
| | References: | Palleiro - Nayar, JS 2009. Análisis poblacional del erizo rojo Strongylocentrotus franciscanus en la costa occidental de la península de Baja California. Puede considerarse una metapoblacion. Tesis doctoral Centro de Investigación Científica y de Educación Superior de Ensenada. Mexico. 129 p. |
| | | Palleiro-Nayar (2013). |
| Year 1 | 60 – 79 | No change in score |
| | References: | |
| | Progress: | On track |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |

| | Progress: | On track / behind, etc. |
|---------------------------------------|---------------------|---------------------------------------|
| 1.2.4 – Assessment of stock status | Draft scoring range | Rationale or key points |
| Pre-assessment | ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |

3.2.2 Principle 2 Performance Indicator level score changes and rationales

| Principle 2 – Performance Indicator level score changes and rationales | | |
|--|---------------------|-------------------------|
| 2.1.1 – Primary Outcome | Draft scoring range | Rationale or key points |

| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
|----------------------------|---------------------|---------------------------------------|
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.1.2 – Primary Management | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |

| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
|-----------------------------|------------------------|---------------------------------------|
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.1.3 – Primary Information | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |

| | References: | Include references here |
|---------------------------|---------------------|---------------------------------------|
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.2.1 – Secondary Outcome | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |

| 2.2.2 – Secondary Management | Draft scoring range | Rationale or key points |
|---------------------------------|------------------------|---------------------------------------|
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.2.3 – Secondary Information | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |

| | References: | Include references here |
|---------------------|------------------------|---------------------------------------|
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.3.1 – ETP Outcome | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |

| Year 3 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
|------------------------|---------------------|---------------------------------------|
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.3.2 – ETP Management | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |

| | Progress: | On track / behind, etc. |
|--------------------------|---------------------|---------------------------------------|
| 2.3.3 – ETP Information | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.4.1 – Habitats Outcome | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |

| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
|-----------------------------|------------------------|---------------------------------------|
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.4.2 – Habitats Management | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |

| | Progress: | On track / behind, etc. |
|------------------------------|---------------------|---------------------------------------|
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.4.3 – Habitats Information | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |

| | References: | Include references here |
|----------------------------------|---------------------|---------------------------------------|
| | Progress: | On track / behind, etc. |
| 2.5.1 – Ecosystems Outcome | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.5.2 – Ecosystems Management | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |

| | References: | Insert from the pre-assessment report |
|-----------------------------------|---------------------|--|
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 2.5.3 – Ecosystems Information | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | There is information collected by different sources and a strong body of ecological papers based in the experience of this environment in California. Main impacts of the Red Sea Urchin on the key ecosystem elements can be inferred from the published information, and some of them has been investigated (Medellin-Ortiz et al., 2019). Some aspects of the Baja California environments differ from those of California (US) because of the absence of the sea otter, which is an important predator of sea urchins in California (US). The population dynamics between the Red Sea Urchin and other species like Spiny Lobster (Panulirus interruptus) or "vieja" have been studied by Medellin-Ortiz (2019) in Baja California, but not formally documented. Dunn & Hovel (2019) mention that in the absence of otters, larger fish, such as sheephead (Semicossyphus spp.) and Spiny Lobster will fill this ecological role by controlling the populations of Red and Purple Sea Urchin. Hamilton and Casselle (2014) mention that only the largest old fish can exercise population control over sea urchins, and thus, fisheries for targeting these larger individuals can heavily reduce the impact that the species may have on controlling sea urchin populations. Information exists but it is limited in many circumstances. Adequate data been |

| | | collected from academic programs or projects of the Univerisidad Autonoma de Baja California Sur for scientific research proposes. However, there is no evidence of the continuity of these projects and there is a lack of management-oriented information by the official institutions. Thus, it cannot be said that adequate data continue to be collected to detect any increase in risk level. Furthermore, some studies suggest that removal of the Red Sea Urchin in deeper waters enables Purple Sea Urchins to move into those areas that they were previously kept out of. In turn, this can have negative consequences for the establishment and growth of giant kelp and other algae, and to other grazers (Kato & Schroeter 1985, Palleiro 2004). The dynamics between Purple and Red Sea Urchins are not fully understood, which in turn complicates management objectives aimed at removal of the Purple Sea Urchins as a means to balance the negative impact of the removal of the Red Sea Urchins. |
|--------|---------------------|---|
| | References: | Kato & Schroeter 1985, Palleiro(2004). Medellín – Ortiz, A., G. Montaño – Moctezuma, C. Alvarez – Flores y E. Santamaria-del-Angel. 2019. Retelling the history of the Red Sea Urchin fishery in Mexico. Dunn & Hovel (2019) Hamilton and Casselle (2014) Palleiro - Nayar, JS 2004.Dinamica de la población de erizo rojo Strongylocentrotus franciscanus sujeta a explotación comercial en Baja California. Tesis de Maestría del Centro de Investigación Científica y de Educación Superior de Ensenada. Mexico. 82 p. |
| Year 1 | <60 / 60 – 79 / ≥80 | No change in score |
| | References: | |
| | Progress: | On track |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |

| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
|--------|---------------------|---------------------------------------|
| | References: | Include references here |
| | Progress: | On track / behind, etc. |

3.2.3 Principle 3 Performance Indicator level score changes and rationales

| Principle 3 – Performance Indicator level score changes and rationales | | |
|--|---------------------|---------------------------------------|
| 3.1.1 – Legal and customary framework | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |

| | Progress: | On track / behind, etc. |
|--|---------------------|---------------------------------------|
| 3.1.2 – Consultation, roles and responsibilities | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 3.1.3 – Long term objectives | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 - 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |

| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
|--|---------------------|---------------------------------------|
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 3.2.1 – Fishery specific objectives | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | Insert from the pre-assessment report |
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |

| | Progress: | On track / behind, etc. |
|--------------------------------------|---------------------|---|
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 3.2.2 – Decision making processes | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | The LGPAS generally describes decision-making processes, where the Fisheries National Chart (Carta Nacional Pesquera) includes "the guidelines, strategies and other provisions for the conservation, protection, restoration and exploitation of fishing resources []". The contents of the Fisheries National Chart are intended to be binding in the decision making and adoption/implementation of management measures. The data sheet in the Fisheries National Chart for Red Sea Urchin outlines recommendations for the management by limiting permit allocation and closing areas where Red Sea Urchin density is below two individuals per square meter. The recommendations will be given to CONAPESCA via a technical opinion from INAPESCA based on an assessment of the status of the population based on monitoring of the resource. Thus, in theory the decision-making processes employ a precautionary approach and are based on best available information. (SI a) Technical information on the fishery's performance and management action was not available upon request, as at this stage INAPESCA is unable to disclose of internal reports, and the only official information publicly available on request, and therefore SI d at the SG80 level is not met. Conflict resolution is mainly based on communication, fishermen alert problems to the authorities and CONAPESCA in coordination with other institutions such as INAPESCA, CONANP, PROFEPA, and SEMAR seek for the origin of the problem. Once the problem and its origin have been identified, communication with the interested party is established again and an administrative and operative solution is proposed. When conflicts go beyond the dialogue, the support of the Attorney General's Office and the Ministry of the Navy is sought to ensure the sustainable use of fishery resources and to deal with conflicts according to the protocol of the aforementioned institutions. Though the dispute resolution procedures are not formalized they are considered effective. Thus, the management system or fishery acts pr |

| | | On account of the lack of transparency in available information on the performance of the fishery (SI d) the SG80 is not reached |
|------------------------------------|---------------------|---|
| | References: | |
| Year 1 | <60 / 60 - 79 / ≥80 | No change in score |
| | References: | |
| | Progress: | On track |
| Year 2 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 3.2.3 – Compliance and enforcement | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | At a federal and national level CONAPESCA's General Directorate of Inspection and Surveillance GDIS (Dirección General de Inspección y Vigilancia) aims to preserve marine ecosystems and species. The GDIS has 210 Federal Fisheries Officers strategically distributed throughout the national territory, inland waters and in the 17 states of the coastal republic. The inter-institutional coordination between CONANP and other competent authorities enable there to be clear procedures for inspection and surveillance in the Baja Peninsula is considered to be an implemented system, which has the ability to enforce relevant management measures, strategies and/or rules. The Red Sea Urchin fishery operates through concessions, and the self-policing of the community/fishers also support the implemented MCS system. Given that a system for MCS has been implemented, 80 is met. Sanctions to deal with non-compliance exist, however, evidence of the application of |

| | | sanctions was not provided to the assessment team for this evaluation. Therefore, it is unclear whether sanctions are consistently applied, and SG80 is not met. Fishermen use logbooks and occasionally, there may be sporadic verification and inspection of landings at processing plants to verify compliance with size limits (i.e. larger than 80 mm). However, the historic attempt to implement catch limits in the Red Sea Urchin fishery resulted in mass non-compliance from the processing plants in under-reporting numbers of Red Sea Urchins processed because of concern of the fishery being closed as a result of reaching catch limits. As a result, catch limits were removed from the fishery. This historic incidence of systematic non-compliance in the Red Sea Urchin fishery is a concern. However, given that the misreporting's in catch levels was historic, there is currently no evidence of systematic non-compliance. |
|--|---------------------|---|
| | References: | Insert from the pre-assessment report |
| Year 1 | <60 / 60 – 79 / ≥80 | No change in score |
| | References: | |
| | Progress: | On track |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 4 | <60 / 60 - 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| 3.2.4 – Management performance evaluation | Draft scoring range | Rationale or key points |
| Pre-assessment | <60 / 60 – 79 / ≥80 | There are mechanisms in place to evaluate some parts of the fishery-specific management system. The National Fisheries Act is reviewed and updated periodically, although the system for when the updates are conducted is |

| | | not clearly outlined. The reviews of the draft of the FMP may be considered an occasional internal review of the fisheryspecific management system. Therefore, there are mechanisms in place to evaluate key parts of the fishery-specific management system. However, no evidence was presented that the fishery management system is subject to regular internal and occasional external review, thus the SG80 is not met. |
|--------|--------------------------|---|
| | References: | |
| Year 1 | <60 / 60 – 79 / ≥80 | No change in score |
| | References: | |
| | Progress: | On track |
| Year 2 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | References: | Include references here |
| | Progress: | On track / behind, etc. |
| Year 3 | <60 / 60 – 79 / ≥80 | Include rationale and key points here |
| | | |
| | References: | Include references here |
| | References: Progress: | Include references here On track / behind, etc. |
| Year 4 | | |
| Year 4 | Progress: | On track / behind, etc. |

4 CAB progress verification

Guidance

This section shall be completed by the CAB at each annual and for any additional progress verifications. It should be done after reviewing the self-reporting information provided by the ITM Project Manager in Section 3 of this template and the most recent version of the fishery's Improvement Action Plan and BMT score.

4.1 Overall progress status

| Table 4.1 – Overall progress status for annual verifications | | | | |
|--|--|------------------|------------------|------------------|
| [Columns may be added for additional verifications] | Year 1 | Year 2 | Year 3 | Year 4 |
| Type of progress verification | Offsite | Onsite / Offsite | Onsite / Offsite | Onsite / Offsite |
| Justification for type of verification used | ITM 3.1.4 guidance recommends 'at least one onsite verification is conducted and that it takes place around the midway mark of the full ITM period.' The full ITM period is up to end of 2023 (4 years). Thus, if necessary, an onsite verification would be planned in 2023. Information can be verified offsite at this time. | | | |
| Date on which self-reporting information was requested from ITM Project Manager? | 18/05/2021 | dd/mm/yyyy | dd/mm/yyyy | dd/mm/yyyy |
| Self-report information received within 30 days? | Yes | Yes / No | Yes / No | Yes / No |
| Where any stakeholders consulted during progress verification? | No | Yes / No | Yes / No | Yes / No |

| Number of PIs with an improved draft scoring range due | 0 | | | |
|---|----------|-----------------------|-----------------------|-----------------------|
| Number of PIs that are behind target | 0 | | | |
| Number of PIs closed | 2 | | | |
| Did exceptional circumstances apply? | No | Yes / No | Yes / No | Yes / No |
| If exceptional circumstances apply, specify to which PIs this was/is applicable? | | | | |
| Updated Action plan received and checked? | Yes | Yes / No | Yes / No | Yes / No |
| The timeframe for actions to be completed do not exceed 5 years from the entry date | Yes | Yes / No | Yes / No | Yes / No |
| Actual BMT index | 0.88 | | | |
| Expected BMT index | 0.84 | | | |
| Overall progress determination | Adequate | Adequate / Inadequate | Adequate / Inadequate | Adequate / Inadequate |
| Next scheduled progress verification | 05/2022 | mm/yyyy | mm/yyyy | тт/уууу |

4.2 Status at Performance Indicator level

Guidance

Progress status options: for PIs that scored \geq 80 in the pre-assessment and are not included in the Action Plan = Not applicable; for PIs that scored below 80 with score increases due, choose from: Ahead of target / On target / Behind target / Exceptional Circumstances; PIs that have reached \geq 80 during this verification = Closed; for PIs with no score change due, choose from: Likely / Unlikely - based on the most recent version of the Action Plan.

Any chosen status should be supported by a justification for the decision.

Rows can be added for additional progress verifications as needed.

Principle 1 – Performance Indicator level score changes and rationales Justification 1.1.1 – Stock status **Progress status** 1.1 Year 1 To address the environmental factors that impact sea urchin variability and to discuss procedures for sea urchin stock rebuilding, the fishery did the following: -On March 25 the client held a 90 minute call on environmental factors that impact sea urchins and stock rebuilding procedures. Attendees included government officials, university researchers, and project members. -The Universidad Autónoma de Baja California produced a technical report on environmental and ecosystem variability of the sea urchin fishery. Based on a thesis by Medellín - Ortiz. -A draft stock rebuilding strategy was put together based on a thesis by Medellín – Ortiz. -A stock rebuilding strategy infograph was developed for fishers. Closed -A document on the pros and cons of proposed sea urchin repopulation was produced by the client -Portions of a 2-hour call on December 3 and February 18 were dedicated to a discussion on repopulation -Minutes from the sea urchin, lobster, octopus, and barred sand bass FIP meeting with INAPESCA on February 12 included a conversation on sea urchin catch. 1.2 Evidence was provided on identification and integration of environmental information in data bases. There is also an ecosystem and environmental variability report from the Universidad Autónoma,

| | | 2.2 |
|--------------------------|-----------------|--|
| | | As part of annual meetings to reach agreement on the recovery plan, a December 3 meeting presenting the results of the inspection and surveillance review was presented by the client. As a part of the meeting, there was a review of sea urchin repopulation activities and environmental factor that influence the effectiveness of these activities. |
| | | Additionally, a document facilitating project coordination was developed for 2020-2 and 2021-1. |
| | | 2.3 An infographic was developed for fishers on sea urchin stock rebuilding efforts as part of the training materials for this project. |
| | | Additionally, the client provided the assessment team with a published stock assessment (March 24, 2020) that concludes that the stock is fluctuation around MSY and that it is above the PRI. This justifies a score of <u>></u> 80 for this PI. The PI's progress is considered closed. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 1.1.2 – Stock rebuilding | Progress status | Justification |
| Year 1 | Closed | The stock assessment's results justify a ≥80 score for PI 1.1.1. As a result, 1.1.2 would not be scored in an assessment. For reporting purposes, the PI's progress is considered closed. |
| Year 2 | | |
| Year 3 | | |

| Year 4 | | |
|---|-----------------|--|
| 1.2.1 – Harvest Strategy | Progress status | Justification |
| Year 1 | Not applicable | No goals for year 1; no score improvement is due this year |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 1.2.2 – Harvest control rules and tools | Progress status | Justification |
| Year 1 | Not applicable | No goals for year 1; no score improvement is due this year |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 1.2.3 – Information and monitoring | Progress status | Justification |
| Year 1 | Not applicable | 7.1, 7.2, 7.3 As part of a February 24 meeting between Pronatura staff and representatives from various governmental agencies, discussed actions by the Subsecretary of Fisheries and Aquaculture in the development of sea urchin planning and management committees. Pronatura proposed that all parties stage sea urchin stock rebuilding training activities. Pronatura also commented that processing plant regulations regarding minimum size limits need to be enforced/strengthened via sanctions. Related to this point, SEST will share processing plant information to update the list of processors. |

| | | While the meeting is evidence that there was a discussion to identify information needs and other general topics, it is unclear to the assessment team from the documentation presented whether discussions included identifying sources of information, standardization, use of information, and an agreed sampling protocol related to 1.2.3. Additionally, it is not clear from the information presented how training will be monitored. It is likely that these topics were discussed; however, the meeting was not specific to the sea urchin fishery as other fisheries were discussed. Since the workplan states that a workshop on sources of information, standardization, use of information, etc. would be conducted and the minutes of said workshop submitted, and evidence of this activity was not presented to the assessment team. Since no score improvement is due this year, the fishery's progress status is not applicable. |
|------------------------------------|-------------------------|--|
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 1.2.4 – Assessment of stock status | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| Principle 2 – Performance | Indicator level score c | changes and rationales |
| 2.1.1 – Primary Outcome | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
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| Year 3 | | |
|--------------------------------|-----------------|--|
| Year 4 | | |
| 2.1.2 – Primary Management | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.1.3 – Primary Information | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.2.1 – Secondary Outcome | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |

| Year 3 | | |
|----------------------------------|-----------------|--|
| Year 4 | | |
| 2.2.2 – Secondary Management | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.2.3 – Secondary Information | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.3.1 – ETP Outcome | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |

| Year 3 | | |
|--------------------------|-----------------|--|
| Year 4 | | |
| 2.3.2 – ETP Management | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.3.3 – ETP Information | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.4.1 – Habitats Outcome | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |

| Year 3 | | |
|---------------------------------|-----------------|--|
| Year 4 | | |
| 2.4.2 – Habitats Management | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.4.3 – Habitats Information | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.5.1 – Ecosystems Outcome | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |

| Year 3 | | |
|-----------------------------------|-----------------|---|
| Year 4 | | |
| 2.5.2 – Ecosystems Management | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 2.5.3 – Ecosystems Information | Progress status | Justification |
| Year 1 | Not applicable | 8.1 An ecosystem and environmental variability report from the Universidad Autónoma de Baja California was produced for the sea urchin fishery. The report does not have a date. The workplan stated that beginning in January 2020, annual reports would be produced containing the following topics: The indicators of the ecosystem to be monitored The monitoring program to detect changes in the ecosystem The status of the information bank with the information collected in the monitoring program |
| | | The assessment team considers that the ecosystem and environmental variability report moderately covers these topics; however, in future audits it will need to be presented with more comprehensive reports with clear dates. Since no score improvement is due this year, the fishery's progress status is not applicable. |
| Year 2 | | |

| Year 3 | | |
|--|-------------------------|--|
| Year 4 | | |
| Principle 3 – Performance | Indicator level score o | changes and rationales |
| 3.1.1 – Legal and customary framework | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 3.1.2 – Consultation, roles and responsibilities | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 3.1.3 – Long term objectives | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |

| Year 2 | | |
|--|-----------------|---|
| Year 3 | | |
| Year 4 | | |
| 3.2.1 – Fishery specific objectives | Progress status | Justification |
| Year 1 | Not applicable | This PI scored ≥80 in the pre-assessment and is not included in the Action Plan. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 3.2.2 – Decision making processes | Progress status | Justification |
| Year 1 | Not applicable | 9.1 The client presented a signed document regarding collaborative strategies between CONAPESCA and Pronatura that covers all of the FIPs that Pronatura is developing (including sea urchin). The client presented an email from CONAPESCA to Pronatura that detailed the government's efforts to establish <i>Comites de Ordenamiento y Manejo</i> (Management and Planning Committees) for the Baja California sea urchin, clam, and lobster fisheries. Since no score improvement is due this year, the fishery's progress status is not applicable. |
| Year 2 | | |
| Year 3 | | |

| Year 4 | | |
|---|-----------------|--|
| 3.2.3 – Compliance and enforcement | Progress status | Justification |
| Year 1 | Not applicable | 10.1 A public facing diagnostic report that reviews sea urchin inspection and surveillance activities in Baja California was developed by Pronatura. Since no score improvement is due this year, the fishery's progress status is not applicable. |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |
| 3.2.4 – Management performance evaluation | Progress status | Justification |
| Year 1 | Not applicable | No goals for year 1; no score improvement is due this year |
| Year 2 | | |
| Year 3 | | |
| Year 4 | | |

5 Template information and copyright

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Template version control

| Version | Date of publication | Description of amendment |
|-------------|---------------------|---|
| 1.0 (Pilot) | 30 September 2019 | N/A – new document as part of ITM Program Requirements and Guidance – Pilot v1.0 |
| 1.1 (Pilot) | 14 December 2020 | Separated Progress Reporting Template from combined Eligibility and Progress Reporting Template and made standalone document. Added self-reporting section with guidance for ITM project manager. Changes to formatting of section for CAB findings. |

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