

Section	Sub-section	Question ID	Question
1. Case Identifiers	1.1.	1.1.1.	Name of fishery system
	1.2.	1.2.1.	What species are fished? (<i>If multi-species, please list all</i>)
	1.3.	1.3.1.	Where does the fishery occur geographically?
	1.4. Spatial scale	1.4.1.	At what spatial scale are you considering the system? Km2?
		1.4.2.	At what spatial scale are you considering the system? Lat/lon bounding coordinates?
	1.5. Temporal scale	1.5.1.	At what temporal scale are you considering this system? Over how many past years?
		1.5.2.	At what temporal scale are you considering this system? Over how many future years?
	1.6.	1.6.1.	What is the scale of the fishery? A. Large-scale B. Small-scale C. Mixed
	1.7.	1.7.1.	Who are the actors within the fishery system? Which ones do you know enough about to consider in this case study? A. Fishers B. Traders/dealers C. Processors D. Local community E. Scientists F. Resource Managers G. Others (Please specify):

Section	Subsection (where relevant)	Question ID	Question
2.1. Biogeographic Context	2.1.1.	2.1.1.1.	What is the physical context within which the fishery take place? Check all that apply: A. Intertidal (e.g., beach, mangrove) B. Estuary C. Coastal/nearshore (e.g., lagoon, fjord, coral reef, archipelago) D. Shelf E. Deep sea (e.g., canyon) F. Other:
	2.1.2.	2.1.2.1.	Which of the following contribute to primary productivity? A. Upwelling B. Fluvial inputs/ plumes C. Sea ice D. Vegetated habitats (e.g., salt marsh, mangroves, seagrasses, kelp forests) E. Coral reefs F. Other:
	2.1.3. Species	2.1.3.1.	What is/are the focal species of the fishery? (<i>Please list</i>):
		2.1.3.2.	What are the recent population trends (at time scale relevant to focal species lifespan)? A. Increasing B. Stable C. Declining D. Threatened or vulnerable E. Insufficient data
	2.1.4. Habitat	2.1.4.1.	What is the key habitat that supports species in this fishery?
		2.1.4.2.	What is the general status of the key habitat used by species in this fishery? (select one) A. Favorable B. Inadequate to Unfavorable C. Unfavorable D. Collapsed E. Data deficient F. Don't know
		2.1.4.3.	Trend in key habitats: A. Improving B. Stable C. Deteriorating D. Data deficient E. Don't know

	2.1.5. Stressors	2.1.5.1.	Is overfishing currently occurring on the stock/stocks in this fishery? A. Yes - substantially B. Yes - moderately C. Yes - minimally D. No E. Data deficient F. Don't know
2.2. Social political, and economic conditions and contexts	2.2.1. Social	2.2.1.1.	Are cultural, traditional, and historic practices observable? A. Yes (If yes, please explain briefly) B. No C. Don't know
		2.2.1.2.	How dependent are harvesters on the fishery for <u>food or nutrition</u> compared to their dependence on other food options? Please indicate the general range if there is a high degree of variability among participants. A. High B. Moderate C. Low D. NA E. Don't know
		2.2.1.3.	How dependent are harvesters or their communities on the fishery for <u>food or nutrition</u> compared to their dependence on other food options? Please indicate the general range if there is a high degree of variability among participants. A. High B. Moderate C. Low D. NA E. Don't know
		2.2.1.4.	Are any groups particularly dependent on this fishery for food or nutrition? A. Indigenous B. Women C. Rural D. Other: E. Don't know
	2.2.2. Political	2.2.2.1.	What is the average of the following indicator in <u>the World Bank's Governance Indicators</u> , each scored [-2.5,2.5] ? Government Effectiveness
		2.2.2.2.	What is the average of the following indicator in <u>the World Bank's Governance Indicators</u> , each scored [-2.5,2.5] ? Regulatory Quality
		2.2.2.3.	What is the average of the following indicator in the World Bank's Governance Indicators, each scored [-2.5,2.5] ? Rule of Law

		2.2.2.4.	What is the average of the following indicator in <u>the World Bank's Governance Indicators</u> , each scored [-2.5,2.5] ? Control of Corruption
		2.2.2.5.	What is the average of the following indicator in the World Bank's Governance Indicators, each scored [-2.5,2.5]? Voice and Accountability
		2.2.2.6.	What is the average of the following indicator in the World Bank's Governance Indicators, each scored [-2.5,2.5]? Political Stability
	2.2.3 Economic	2.2.3.1.	Which income category does(do) the harvesting country(ies) belong to (see definition by World Bank here)? A. High B. Upper-middle C. Lower-middle D. Low
		2.2.3.2.	What kind of sectors operate in the fishery? A. Small operators B. Large operators C. Recreational D. Artisanal E. Indigenous F. Other:
		2.2.3.3.	What is the current landed volume? (Indicate year represented)
		2.2.3.4.	What is the current landed value? (Indicate year represented)
		2.2.3.5.	What are the trends in landings over the past 10 years? A. Increasing B. Declining C. Stable D. Variable with no clear trend
		2.2.3.6.	Approximately how many vessels participate? (Estimate of number or order of magnitude: tens, hundreds, thousands)
		2.2.3.7.	How dependent are harvesters or other industry participants on the fishery for <u>jobs and income</u> compared to their other livelihood options? Please indicate the general range if there is a high degree of variability among participants. Harvesters: A. High B. Moderate C. Low D. NA E. Don't know

			<p>How dependent are harvesters or other industry participants on the fishery for <u>jobs and income</u> compared to their other livelihood options? Please indicate the general range if there is a high degree of variability among participants.</p> <p>Shoreside businesses:</p> <p>A. High B. Moderate C. Low D. NA E. Don't know</p>
			<p>How dependent are harvesters or other industry participants on the fishery for <u>jobs and income</u> compared to their other livelihood options? Please indicate the general range if there is a high degree of variability among participants. Dealer-processors:</p> <p>A. High B. Moderate C. Low D. NA E. Don't know</p>
			<p>How dependent are harvesters or other industry participants on the fishery for <u>jobs and income</u> compared to their other livelihood options? Please indicate the general range if there is a high degree of variability among participants. Others (Please specify):</p> <p>A. High B. Moderate C. Low D. NA E. Don't know</p>
		2.2.3.8.	<p>How dependent is the community on the fishery for economic benefits compared to its other sources of revenue?</p> <p>A. High B. Moderate C. Low D. NA E. Don't know</p>
		2.2.3.9.	<p>What is the primary purpose for utilization of the species harvested?</p> <p>A. Fresh consumption B. Processed (value-added) products (including both domestic and export-oriented) C. Export product</p>

2.3. Governance	2.3.1.	2.3.1.1.	<p>Within which jurisdiction(s) is the fishery contained?</p> <p>A. One domestic regional jurisdiction</p> <p>B. Multiple domestic regional jurisdictions</p> <p>C. One coastal state</p> <p>D. Multiple coastal states</p> <p>E. Areas Beyond National Jurisdiction (ABNJ)</p> <p>F. Other:</p>
	2.3.2.		<p>What laws, policies and practices exist concerning the fishery and are they upheld? (If you know them, or can easily look up, please list name of the statute and year)</p>
		2.3.2.1.	International treaty
		2.3.2.2.	National
		2.3.2.3.	Regional (State, Province, Prefecture etc.)
		2.3.2.4.	Municipal/local
		2.3.2.5.	Community (Including formal and informal rules and practices implemented by local cooperatives, sectors, and other organizations)
	2.3.3.		<p>What is the nature of governance arrangements?</p>
		2.3.3.1.	Top-down
		2.3.3.2.	Community-based (e.g. LMMA, TURF)
		2.3.3.3.	Co-management
		2.3.3.4.	Traditional/customary (e.g. ICCA)
	2.3.4.	2.3.4.1.	<p>Who is involved in governance?</p> <p>A. Multinational fishery management body</p> <p>B. National government agencies</p> <p>C. Regional (State, Province, Prefecture, etc.) government agencies</p> <p>D. Municipal/local government agencies</p> <p>E. Individual harvesters or harvester associations</p> <p>F. Dealers, processors or their associations</p> <p>G. Shoreside businesses</p> <p>H. Environmental NGOs</p> <p>I. Community organizations</p> <p>J. Other (please specify):</p>
	2.3.5.	2.3.5.1.	<p>What are important factors that confer capacity to effectively participate in the governance system? <i>Note whether your selections pertain to particular groups selected above.</i></p>
		2.3.5.2.	<p>What are important factors that limits capacity to effectively participate in the governance system? Note whether your selections pertain to particular groups selected above.</p>

	2.3.6.	2.3.6.1.	Is power in the governance system related to religion, gender, ethnic origin, political party, language, race or sexual orientation? A. Yes, please describe B. No C. Don't know
	2.3.7.	2.3.7.1.	Do power relations cause tension within the fishery? If so, please describe? A. Yes, please describe B. No C. Don't know
2.4. Management	2.4.1.	2.4.1.1.	Does a management plan exist for this fishery? A. Yes, please describe B. No C. Don't know
	2.4.2.	2.4.2.1	Who is involved in the management process? A. Multinational fishery management body B. National government agencies C. Regional (State, Province, Prefecture, etc.) government agencies D. Municipal/local government agencies E. Individual harvesters or harvester associations F. Dealers, processors or their associations G. Shoreside businesses H. Environmental NGOs I. Community organizations J. Other (please specify):
	2.4.3.	2.4.3.1.	Who plays the following roles in the fishery management process? (Each may include multiple actors.) <i>Please add other roles important to fisheries management in your case.</i> A. Determining access and harvest rights B. Determining harvest procedures and rules C. Enforcing rules D. Monitoring fishery activities (e.g., catch) E. Providing scientific information F. Other (Please specify):

	2.4.4.	2.4.4.1.	<p>What are the tools used to control catch? (please check all that apply)</p> <ul style="list-style-type: none"> A. None specific to this fishery B. Total allowable catch limit C. Individual catch limit D. Total allowable effort limit E. Individual effort limit F. Size limits G. Spatial restrictions on fishing H. Temporal restrictions on fishing I. Gear restrictions J. Species restrictions K. Other (please specify)
	2.4.5.	2.4.5.1.	<p>What measures are taken to conserve habitats?</p> <ul style="list-style-type: none"> A. None specific to this fishery B. Gear restrictions C. Season closure D. Year-round no-take zones E. Seasonal no-take zones F. Other (please specify)
	2.4.6.	2.4.6.1.	<p>Are management enforced, and if so, how?</p> <ul style="list-style-type: none"> A. Not routinely enforced B. Fines and penalty fees C. Revocation of access and harvest rights D. Social ostracism E. Other formal (codified) sanctions (please specify) F. Other informal sanctions (please specify)
	2.4.7.		<p>What data are collected to support management and who collects/reports the data?</p>
		2.4.7.1.	<p>Fishery dependent data: What type of data are collected?</p> <ul style="list-style-type: none"> A. Landed volume B. Discard volume C. Landed value D. Size E. Other (please specify)

		2.4.7.2.	<p>Fishery dependent data: Who collects and reports the data?</p> <p>A. National government agencies</p> <p>B. Regional (State, Province, Prefecture, etc.) government agencies</p> <p>C. Municipal/local government agencies</p> <p>D. Individual harvesters or harvester associations</p> <p>E. Dealers, processors or their associations</p> <p>F. Environmental NGOs</p> <p>G. Community organizations</p> <p>H. Other (please specify):</p>
		2.4.7.3.	<p>Fishery independent data (e.g. surveys): Are fished species surveyed?</p> <p>A. Yes</p> <p>B. No</p>
		2.4.7.4.	<p>Fishery independent data (e.g. surveys): Who conducts the survey? (please check all that apply)</p> <p>A. National government agencies</p> <p>B. Regional (State, Province, Prefecture, etc.) government agencies</p> <p>C. Municipal/local government agencies</p> <p>D. Individual harvesters or harvester associations</p> <p>E. Dealers, processors or their associations</p> <p>F. Environmental NGOs</p> <p>G. Community organizations</p> <p>H. Universities and/or other scientific organizations</p> <p>I. Other (please specify):</p>
		2.4.7.5.	<p>Fishery independent data (e.g. surveys): Survey frequency</p> <p>A. Seasonal (2 ~ 4 times a year)</p> <p>B. Annual</p> <p>C. Every 2 ~ 5 years</p> <p>D. Undermined frequency</p> <p>E. Other (please specify)</p>
		2.4.7.6.	<p>Environmental data: Are environmental data collected?</p> <p>A. No</p> <p>B. Yes, in situ samples</p> <p>C. Yes, from buoys</p> <p>D. Yes, from remote sensing</p> <p>E. Yes, other (please specify)</p>

		2.4.7.7.	Environmental data: Who collects/manages the data? (please check all that apply) A. National government agencies B. Municipal/local government agencies C. Individual harvesters or harvester associations D. Dealers, processors or their associations E. Environmental NGOs F. Community Regional (State/Province/Prefectures etc.) G. Universities and/or other scientific organizations H. Other (please specify):
	2.4.8.	2.4.8.1.	What are the general types of information sources used to manage the fishery? A. Local knowledge B. Scientific observation C. Stock assessment process D. Other (please specify)
	2.4.9.	2.4.9.1.	How is stock size tracked?
		2.4.9.2.	If stock assessments are in place, what types are used and who conducts them?
		2.4.9.3.	If stock assessments are not in place, are data synthesized in any manner to track stock size trends or status? If so, who conducts the synthesis?
2.5. Shocks and system response	2.5.1.	2.5.1.1.	Has the system experienced any major environmental or shocks in the last 20 years (detrimental or beneficial)? Select all that apply. A. No Shocks B. Environmental shocks (e.g., coral bleaching event, marine heatwave, king tide flooding or sea level rise, predator or invasive species outbreaks, disease events, typhoon/hurricane/cyclones, earthquake/tsunami, volcano, pollution, oil spills, nuclear disaster) C. Governance/management shocks (e.g., change in political/ruling party, change in fishery management structure, change in management approach) D. Socioeconomic shocks (e.g., military conflicts, public health crises, recessions, major supply chain disruptions) E. Other (please specify)
	2.5.2.	2.5.2.1.	Please identify the most important shocks (of any type) experienced in the system that have shaped its current structure, status, and capacities.
	2.5.3.	2.5.3.1.	What were the major impacts on natural (e.g., biological, oceanographic, coastal landscapes, habitat), human (e.g., economic, social, governmental), and coupled systems caused by the shock or shocks mentioned above? <i>If multiple shocks occurred, please be specific about which shocks caused which effects to the fishery or stock(s).</i>
	2.5.4.	2.5.4.1.	What actions were taken to alleviate such impacts, and who took (or contributed to) these actions? <i>If multiple shocks occurred, please be specific about which actions are associated with which shock.</i>

	2.5.5.	2.5.5.1.	Subsequently what happened to the natural, human, or coupled system? A. Full recovery to the pre-shock state B. Recovering towards the pre-shock state C. Transformed to a different state but still providing valuable services D. Transformed to different state but losing a majority of services
	2.5.6.	2.5.6.1.	What kind of changes do we observe in the natural, human, or coupled systems if we compare pre-shock state to post-shock state?
	2.5.7.	2.5.7.1.	Did experiences during this shock lead to changes that will enhance resilience to future shocks?
2.6. Climate projects	2.6.1.	2.6.1.1.	What types of climate change projections are available for the system? A. Global climate models only B. Downscaled regional projects C. Other:
	2.6.2.	2.6.2.1.	What time frame is most relevant to this case study, for which projections are available within your consideration? A. Projections to 2050 B. Projections to 2100 C. Interdecadal variability D. Interannual variability E. Other (please specify):
	2.6.3.	2.6.3.1.	What are the key limitations of available climate projections in the context of this case study?
	2.6.4.	2.6.4.1.	Which of the following climate disturbances are projected to alter the future of the fishery and surrounding ecosystem? Select all that apply. A. Ocean Warming B. Ocean acidification C. Frequency and/or severity of coral bleaching D. Frequency and/or severity of marine heatwaves E. Frequency and/or severity of extreme El Nino-Southern Oscillation events F. Frequency and/or severity of large storm events G. Ocean cooling H. Loss of sea ice I. Sea level rise J. Increase or decrease in upwelling K. Changes in ocean current patterns L. Other (Please specify):
	2.6.5.	2.6.5.1.	How is climate change expected to affect physical conditions (e.g., water chemistry, habitat availability or quality, primary productivity) in the system? Describe briefly.
	2.6.6.	2.6.6.1.	How is climate change expected to affect physical conditions (e.g., water chemistry, habitat availability or quality, primary productivity) in the system? Describe briefly.
	2.6.7.	2.6.7.1.	How is climate change expected to affect fishing opportunities and the fishery (e.g., yield, variability, effort)? Describe briefly.

	2.6.8.	2.6.8.1.	How is climate change expected to affect social and economic conditions of individuals and communities (e.g., overall profit, profit distribution, trade mechanisms, societal effects (e.g., markets, migration, labor, consumption), harvest safety, infrastructure, other livelihood opportunities)? Describe briefly.
	2.6.9.	2.6.9.1.	Will climate change and fishing interact in ways that could create negative or positive feedback loops for the natural, human, or coupled system? If so, how would these dimensions interact and in what direction? Describe briefly.
	2.6.10.	2.6.10.1.	Are there any perverse incentives created by climate change? Describe briefly.