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| Indicator | Variable | Proxy | Definition of the proxy | Justification |
| **Social adaptive capacity**  (Cinner et al., 2013)  “Conditions that enable people to anticipate and respond to change, to minimize the consequences, to recover, and take advantage of new opportunities.”  (Cinner et al., 2018) | **Social capital**  (Cinner et al., 2013)  Trust and social cohesion within communities (Bonding). Connections across communities (Bridging).  Connections with people or organizations operating at larger scales (Linking).  (Cinner, et al., 2018) | Programs for cooperative formation  Programs\_for\_Co\_op\_Formation | Binary variable indicating whether some form of program, in the form of legislation or NGO action, is in place promoting the development of cooperative fisheries management for the fishery in question. | This type of programs should promote bonding and bridging social capital. In addition, the existence of this programs suggests that linking social capital is likely to be present. |
| Engagement in cooperative behaviors  See Table 1 | The proportion of cooperative behaviors (from those listen in Table 1) in which the members of the fishery engage. | Reflects collective action which requires trust and group cohesion (Ostrom, 1990). |
| Umbrella organization  Umbrella\_Organization | Identifies whether or not the fishery represents other smaller fisheries. For example, FEDECOOP is a fishing organization in Mexico that organizes management among several member cooperatives, and as such is classified as an “umbrella organization”. | Reflects the ability to organize and generate institutions across communities. A measure of bridging social capital. |
| **Diversification** | Number of targeted species  Number\_of\_species | The total number of species primarily targeted by the fishery | Diversity in the catch could buffer negatives impacts of climate change on landings if there are species-specific responses to climate change. |
| **Change anticipation and capacity to change**  (Cinner et al., 2013) | MSC certification  MSC\_certification | Indicates whether the target species has been MSC certified. | The third principle of MSC requires fisheries to comply with relevant laws and be able to adapt to changing environmental circumstances (www.msc.org) |
| Information support  Information\_support | The government provides means for disseminating or collecting information relevant to the success of the cooperative. For example, the government provides researchers or catch logging databases. | Allows to anticipate and respond to change. |
| Stock assessment  Stock\_assessment\_ | Indicates whether a stock assessment is available for the target species. A stock assessment was categorized as any scientific estimation of the current biomass/size and state of the target species stock in the region of the fishery. | Assessing the status of the stock allows to respond to it. |
| **Governmental support to the cooperative** | Financial services  Financial\_Services | The government provides financial support to the cooperative. For example, the government provides grants to fund research or equipment purchases for the cooperative, or provides tax benefits, loans, loan guarantees, or subsidies to the cooperative. | Enhance agency to respond to social and environmental change. In addition, “it reflects the capacity or willingness of governments to assist the sector in resolving new challenges” (Blasiak et al., 2017). |
| Legal protection  legal\_protection\_\_standing | The government provides legal protection and standing to the cooperative. A legal challenge to the cooperative’s right to operate in a fishery would most likely upheld in court of law. | Enhances agency to respond to social and environmental change. |
| Enforcement  Enforcement\_ | The government provides support for enforcement, in the form of enforcement agents, or enforceable penalties for violations of cooperative rules. For example, the government enforces fines for fishers found to be violating the recognized rules of the cooperative. | Enhances agency to respond to social and environmental change. |
| **Material style of life** | Poverty index  Poverty\_index\_ | The Human Poverty Index of the host country, as defined by the HPI-1 (human performance indicator) criteria of the United Nations Development Program (UNDP). This reflects the percentage of the population without safe water, and the percentage of children that are underweight |  |

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| Indicator | Variable | Proxy | Definition of the proxy | Justification |
| **Social sensitivity**  “Economic, political, cultural and institutional factors that allow buffering or attenuation of change. For example, social systems are more likely to be sensitive to climate change if they are highly dependent on a climate-vulnerable natural resource.”  (Cinner et al., 2013) | **Economic dependence** | Percentage of GDP from fishing  A\_\_of\_GDP\_from\_Fishing | The total amount of a host country’s GDP made up from fishing, expressed as a percentage of total GDP | If people depend to much economically on fisheries their total incomes are susceptible to be impacted by climate change through a decline in catch |
| **Food dependence** | Use of the catch for subsistence  Short\_catch\_use | Whether the catch is used for basic subsistence of the local fishing community | impact the health of a community by reduction its protein sources if fisheries catch is mostly designated to subsistence |
| **Number of people depending on the fishery** | Number of participant operating within the cooperative  Short\_participants | Number of participant operating within the cooperative | If lots of people depend on fisheries for their livelihoods or subsistence impacts of cc over catch are going to be spread through the community. |

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| Indicator | Variable | Proxy | Definition of the proxy | Justification |
| **Ecological sensitivity** | **Habitat susceptibility** | Sea level vulnerability |  |  |
| Sea temperature vulnerability |  |  |
| Ocean acidification vulnerability |  |  |
| Ozone UV vulnerability |  |  |
| **Overfishing** | Recorded fishery closure  Recorded\_Fishery\_Closure | Indicates whether the fishery has been closed at some point since 1960. Fishery may be due to an actual stock collapse or as preventive management. |  |
| **Species susceptibility** | Cheung et al., |  |  |

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| Indicator | Variable | Proxy | Definition of the proxy | Justification |
| **Ecological exposure** | **Temperature change** | Temperature change |  |  |

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| Indicator | Variable | Proxy | Definition of the proxy | Justification |
| **Ecological recovery potential** | **Recovery potential** |  |  |  |
| **MPA** | Marine protected area mpa | Fishing is restricted in portions of the fishery. For example, MPAs preventing fishing on a certain reef for all species or for solely the target species in question. | “Well-managed marine reserves may help marine ecosystems and people adapt to five prominent impacts of climate change: acidification, sea-level rise, intensification of storms, shifts in species distribution, and decreased productivity and oxygen availability, as well as their cumulative effects” (Roberts et al., 2017) |

**Table 1.** List of potential cooperative behaviors (from Ovando et al., 2013)

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| **Cooperative Behavior** | **Description** |
| Marketing Marketing | Cooperation to collectively market or brand catch |
| Profit Sharing Profit\_Sharing | Pooling system to distribute proceeds from fishing among fishery members |
| Coordinated Harvesting co\_harvest | Coordination of fishing strategy among fishery members |
| Cooperative Administration Cooperative\_Administration | The cooperative engages in voluntarily development of on-shore cooperative administration. Examples would include division of the group into fishers, accountants, managers, etc, and the creation of bylaws (formal or informal) to manage these institutions (e.g. rules regarding the entry of new members). |
| Catch Limits Cooperative\_TAC | Implementation of self-imposed catch limits above and beyond any similar governmental restrictions |
| Gear Restrictions Cooperative\_Gear\_Restrictions | Implementation of gear restrictions, e.g. the prohibition of dynamite, beyond any similar governmental regulations |
| Size Limit Cooperative\_Size\_Limit | Implementation of self-imposed size limits above and beyond any similar governmental regulations |
| Gear Sharing Gear\_sharing | Collective ownership or use of fishing gear, such as boats, nets, or landing facilities |
| Direct Enforcement Direct\_Enforcement | Collective action to physically enforce fishery regulations, for example organization of patrols |
| Codified Penalties Codified\_Penalties | Collectively determined set of defined penalties for infractions of fishery regulations |
| Temporal Restrictions Temporal\_No\_Take | Voluntary cessation or restriction of fishing activities for the fishery as a whole, or for a defined spatial region, for a given period of time |
| Spatial Marine Protected Areas Spatial\_No\_Take | Voluntary closure or restriction of spatially defined portions of the fishery |
| Restocking Restocking | Collective action to restock the fishery, for example through the seeding of juveniles |
| Habitat Restoration Habitat\_Restoration | Voluntary efforts to restore fishery habitat, for example planting of mangroves |
| Gear Shift Gear\_Shift | Collective choice to switch to more environmentally friendly gear types |
| By-catch avoidance By\_catch\_avoidance | Cooperative actions to reduce by-catch above and beyond any government stipulations |
| Research Support Research\_support | Cooperative support of fishery research activities, such as data collection or science funding |
| Information sharing Information\_sharing | Cooperative information sharing consists of organized collective behavior by fishers to share information relevant to fishing activities. Examples include sharing knowledge of fishery conditions or location of productive fishing grounds. |