* Vessel activity and characteristics are from the Global Fishing Watch (GFW) Database, which captures satellite transmissions from AIS-equipped vessels. These are mostly large-scale industrial vessels. There was not enough available data globally to include small-scale fishing effort to a comparable level of detail in this model.
* In reality, fisheries are subject to varying degrees of management. For simplicity, we assume that fisheries can be categorized into two management regimes: “open-access” and “managed”. Vessels in both types of fisheries can be affected or unaffected by a subsidy reform policy. However, we assume that the management regime will dictate the strength of the response to reform. In an open-access fishery, fishing effort is largely driven by costs, thus, vessels in the open-access regime will experience greater changes in effort in response to changes in costs. Under the open-access regime, if costs increase (e.g., in response to reforms), effort will decrease; if costs decrease (e.g., in response to greater biomass), effort will increase. In managed fisheries, fishing effort is often decoupled from costs, and instead dictated by the manager. We therefore assume that vessels under the managed regime will not experience the same changes in effort in response to changes in costs. Our model therefore operates with four fleets: two fleets affected by reform (open-access and managed) and two fleets not-affected by reform (open-access and managed).
* To model each WTO Member proposal, a number of additional assumptions were often required. Some proposals are lacking in detail because they were intended to be a starting point for further negotiations, while others call for information that does not currently exist in any publicly available format. Assumptions were necessary to overcome both types of limitations. *To learn more about the specific assumptions required to model each WTO Member proposal, use the hamburger menu at the top to navigate to the results page - click ‘Learn How Subsidy Reform Could Help Fish’ and then ‘Explore Results’.*
* Subsidy estimates (and classifications) used in the model are from Sumaila et al. (2019). Only fisheries subsidies that decrease the marginal cost of fishing effort would be expected to change fishing behavior (subject to management as discussed above). Sumaila et al. classify subsidies according to their purpose, rather than the form in which they are provided, so we can only make assumptions about the subsidy types that would be expected to affect fishing behavior. We have therefore excluded the “beneficial” subsidies as defined by Sumaila et al. from this model. Though it is not used in the model, OECD data from the FSE Database are presented for comparison on the “Fishery Statistics by State” page.