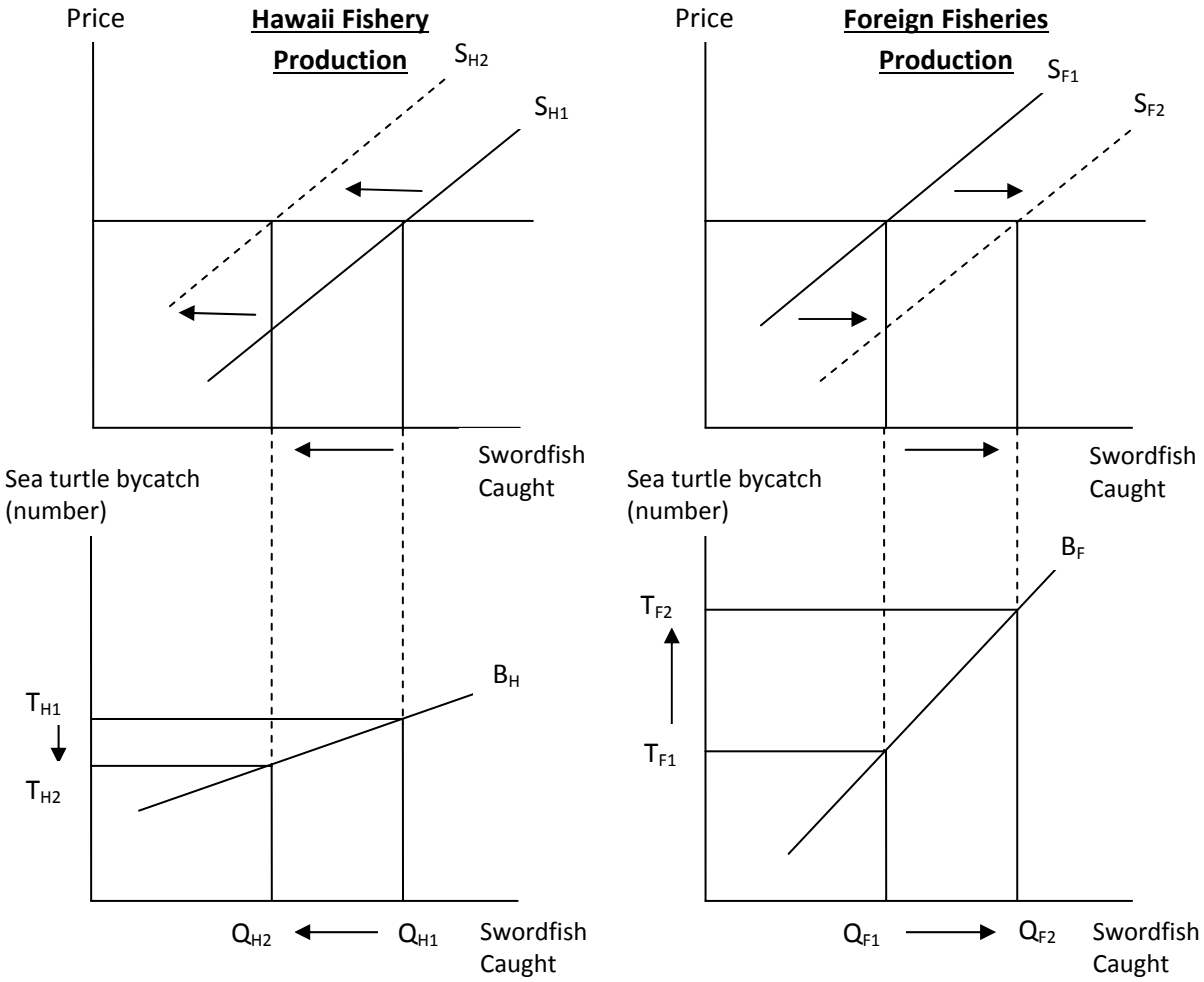

Figure 1. Conceptual Diagram of Spillover Effects Between Fisheries

Conceptually, U.S. regulatory changes restricted fishing activities in the Hawaii fishery and caused the Hawaii production of swordfish to decrease from Q_{H1} to Q_{H2} and induced foreign swordfish production to increase from Q_{F1} to Q_{F2}. Because these foreign fleets often were not required to use gear or procedures that minimize sea turtle interaction, the foreign fishery effort had a higher sea turtle bycatch per unit effort relative to U.S. fishing effort, as demonstrated by a steeper foreign fisheries' bycatch curve (B_F; i.e., more interactions per marginal unit effort) than the Hawaii longline swordfish fishery's bycatch curve (B_H). Therefore when the Hawaii longline swordfish fishery reduced its production due to domestic regulation, foreign fisheries increased their production and overall turtle interactions were higher. This unintended effect, known as a "spillover effect" or "market transfer effect", is an externality; i.e., an effect of economic activity that impacts entities other than those participating in or directly targeted by the activity.