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Supplementary Information

Section 1: Interview protocols

Two trained and experienced researchers collected information in 17 fishing communities on the North-western and Northern coast of the Caspian Sea, including the Volga Delta fishing communities (n=7), and open sea fishing communities of Dagestan (n=10). Face-to-face direct questioning of informants were conducted with fishermen and intermediaries involved in Illegal Wildlife Trade (IWT) operations and direct observation at intermediaries trade yards.

The method of direct face-to-face questioning of informants was chosen as the main method because it has been previously used to tracks operations of illegal activities in natural resource use (Gavin et al. 2009, Smethurst & Nietschmann 1999) and because both researchers had previously established the rapport with fishing communities (Ermolin & Svolkinas 2016), that had been identified as sites of data collection prior to expeditions. When in fishing communities, researchers told to their potential informants by introducing who they were, what the intended purpose of their visit was and why they wanted to speak to fisherman. Researchers emphasized that they were independent researchers with long lasting research interests in the Caspian and did not work for law-enforcement or authorities.

The issue of distrust and tendency for people to remember common event can create bias [Gavin et al., 2009]. Distrust might be deeply embedded within the interaction because sharing of information could be seen as potentially threatening well-established livelihoods and social norms [Nuno and John 2014]. The factors that the authors spoke Russian and had previously acquired research experience in the Caspian region as well as because interviews and observation were conducted on «informant's turf» under informant's premises, could have further contributed to increased levels of trust between researchers and informants. Thus, the trust the communities had for the researchers meant they were willing to provide

information since the interview methodology, and low probability of law enforcement, meant that they would not experience legal consequences from disclosing information.

The authors assumed that it would be difficult for informants to remember exact numbers of sturgeon catches and seal by-catch, since the previous studies suggested the phenomena to be a common issue [Dmitrieva et al., 2013], especially if it happened many years ago, at a constant rate for a period of time. In order to overcome such bias, we firstly tried to collect data over two years continuously, allowing repeated interviews with the same members of SFB. Thus, researchers mainly asked about fishing in the period concurrent with the visit, thus avoided asking respondents on exact quantities collected in the past, hence it could lead them to the recall bias [Gavin and Anderson 2005]. Conducting such sets of interviews also aimed at strengthening the trust between two parties and increase possibility to get more valid data based on the developed trust [Spiro 1996; see also de Munck 2009]. Second, fishermen were interviewed independently from each other and cross reference data from members of the same boat was used to validate each others responses. It helped yield a wide range of data over time.

Researchers asked fishers to report not only the catch per bayda and length of fishing gears, but also to provide them with the number of sturgeons and seals caught per fishing effort. Unfortunately, researchers were unable to confirm such data on set by means of direct observation. However, they used data on sets to identify high-risky gears for seals and sturgeons. They asked the members of SFBs to identify the sturgeon catch and seal by-catch per 150 m set of nets (commonly known by the Russian acronym poryadok). In order to compare the impact of high-risky gears, researchers also asked their respondents to identify the number of sturgeons and seals caught per 150 m set of kalada taking into account that each hook is attached to the fishing line using about two meters length of line (approximately 75 hooks per poryadok).

Interview responses and informal conversations also brought up the question of seasonality. Researchers divided all responses into three categories according to season reported by fishers:

- from the middle of February til the end of April;
- July-August;
- from September until the beginning of January.

Recruitment for interviews happened in public places of fishing villages, however interviews were conducted in places where a private conversation was possible and outsiders could not distract the conversation. Interviews were recorded only if informant gave his permission to do so. If the permission was not received, than notes were taken on spot. An informant would typically be asked to choose a nickname for the duration of interview (if not he would be assigned one). Not every fisherman was interviewed after being recruited. If fisherman had little or no information on catch and by-catch, interviewing them would not deliver a very efficient way for obtaining information on the topic of interest.

Additional expedition was organized to collect information on numbers of seals utilized in intermediaries trade yards. Typically intermediaries are individuals who operate on the second level in the proposed chain (if fishermen are considered as first) and would buy up delivered to the shore carcasses of by-caught seals, skin them and sell skins to either craftsmen or other intermediaries for a small profit. In addition to the direct questioning, the method of direct observation was used to crosscheck the information obtained through questioning of fishermen.

Thus, the methods of direct face-to-face questioning of informants, informal conversation and direct observation were chosen as the only realistic approach to gathering the necessary data in this social context.

Section 2: Interview questions for assessing sturgeon catch and Caspian seal by-catch

Questionnaires developed for by-catch research on Ladoga ringed seals and earlier studies of by-catch of Caspian seal done by Dmitrieva were taken into account [Verevkin et al. 2008; Dmitrieva et al., 2013].

1. Type of fish
2. Type of fishing gear.
3. Mesh size.
4. Depth of fishing gear setting
5. How do you choose a specific area of sea for setting gear?
6. Quantity of gear (or length of nets)
7. Fishing area
8. Do you have any tensions due to allocation of specific fishing areas?
9. Season or period of fishing
10. Do you work as fisherman officially employed by local fishing enterprise? During summer months?
11. How many long-lasting trips have you done during this season (two-three months)?
12. What was your highest catch of sturgeons during these trips?
13. How many trips were done without getting any sturgeon / any seal?
14. Fishing seasons when seals by-catch happens.
15. How many seals are caught in your fishing gear during a year/season/one set?
16. How many seals have you left at sea?

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