NPFC-2024-SC09-WP04 (Rev. 4)

**Request from the TCC Chair on the development of an ROP and responses from SC**

The TCC Chair, Ms. Alisha Falberg, requested to answer the following questions so that TCC can consider SC’s answers in their development of a regional observer program (ROP):

1. Are there different needs for the different fisheries regarding data collection?
2. What new data would the SC prioritize/need from a ROP?
3. What new data would be nice to have (i.e. not needed/priority)?
4. Whether this data could be collected through electronic monitoring (EM)?
5. Whether the observer needs to be a scientist, or can data be collected by a non-scientist?

**SSC PS**

**1. Are there different needs for the different fisheries regarding data collection?**

*There would be no needs for data collection through the fisheries different from the stick-held dipnet fisheries which are dominant in Pacific saury fishing.*

**2. What new data would the SC prioritize/need from a ROP?**

*Towards introduction of age-structured model, collection of size data is essential. Although, in that sense, ROP may facilitate it, current schemes to collect size data applied in each Member, such as port size sampling and at-sea onboard sampling by fishermen can secure collection of precise size data.*

**3. What new data would be nice to have (i.e. not needed/priority)?**

*Data on environmental conditions, such as temperature, would be beneficial but not a top priority.*

**4. Whether this data could be collected through electronic monitoring (EM)?**

*EM can collect those data (environmental information mentioned in 3). In general, cameras are used as possible devices in EM. Feasibility of camera observer should be investigated in collection of information on species identification and size of catches in the small pelagics-targeting fisheries such as purse seiners and trawlers which can capture multiple fish species concurrently.*

**5. Whether the observer needs to be a scientist, or can data be collected by a non-scientist?**

*Referring to ROP in tuna RFMOs, on-board observers are not always performed by scientists. Nevertheless, the non-scientist observers should be trained regarding species identification and procedure of size measurement.*

**SSC NFS**

**1. Are there different needs for the different fisheries regarding data collection?***Yes, different fisheries have specific data requirements based on their unique ecological, fishery operational characteristics, and stock assessment approach. That being said, there are definitely common data needs across different fisheries.*

**2. What new data would the SC prioritize/need from a ROP?**  
*High-priority data includes catch composition, catch, and effort data for NFS. In particular, it is important to collect age and size composition data for more accurately separating the two cohorts of NFS. Size data can be collected by onboard observers or by port sampling. Such data could potentially be collected by electronic monitoring, but further study and technical work is needed to confirm whether this would indeed be possible.*

**3. What new data would be nice to have (i.e. not needed/priority)?**  
*Data on environmental conditions, such as temperature, would be beneficial but not a top priority.*

**4. Whether this data could be collected through EM?***Size data can be collected by onboard observers or by port sampling. Such data could potentially be collected by electronic monitoring, but further study and technical work is needed to confirm whether this would indeed be possible.*

*Environmental data can easily be collected through EM. Biological data (catch composition, catch, and effort data) can be collected for NFS if devised wisely. Having worked on an NFS jigging vessel for several months (as a graduate student), I am familiar with their catch processing. The squid are sorted by size and packaged, and all squid are moved to the cooler via a conveyor. If a device is installed above the conveyor, it could potentially count the number of packaged bags by size and estimate total catch and size composition. Developing such a device could be a potential research project and may be worth pursuing as it would be less costly and could potentially provide more accurate and comprehensive data.*

**5.** **Whether the observer needs to be a scientist, or can data be collected by a non-scientist?***An observer collecting size composition data would not necessarily need to be a scientist but would need to be able to distinguish between different squid species, which could be achieved with the appropriate training and could possibly be further supported by the development of a species identification guidebook by the SSC NFS.*

**TWG CMSA**

1. **Are there different needs for the different fisheries regarding data collection?**

* *There is no need, because TWG CMSA can gather important catch information from the dominant fisheries by Member.*

1. **What new data would the SC prioritize/need from a ROP?**

* *Detailed information on fishing effort and catch, such as* 
  + *searching time of school of targeted fish species, and*
  + *target by operation (set)*
  + *number of operation (set)*
  + *more accurate information about catch by species (blue mackerel and chub mackerel)*
  + *biological information on the catch*
* *Information on development of easy-to-use species identification of mackerel species on board by fishermen*

1. **What new data would be nice to have (i.e. not needed/priority)?**
   * *Data on environmental conditions, such as temperature, would be beneficial but not a top priority.*

**4. Whether this data could be collected through electronic monitoring (EM)?**

* *EM is expected to collect this information.*
* *The feasibility of EM should be discussed and recognized by the Members. Furthermore, because understanding of the fisherman is needed for introduction of EM, intensive outreach should be done.*

**5. Whether the observer needs to be a scientist, or can data be collected by a non-scientist?**

* *Although the observers are not necessary scientists, they need to be trained by scientists to meet requirements.*

**SSC BF-ME**

1. **Are there different needs for the different fisheries regarding data collection?**
   * *Yes. Please refer to the NPFC Bottom Fisheries Observer Programme Standards (Annex 5, CMMs 2024-05 and 2024-06).*
2. **What new data would the SC prioritize/need from a ROP?**
   * *All data needs are currently being met with the NPFC Bottom Fisheries Observer Programme Standards (Annex 5, CMMs 202405 and 2024-06)*
3. **What new data would be nice to have (i.e. not needed/priority)?**
   * *None from an observer program.*
4. **Whether this data could be collected through electronic monitoring (EM)?**
   * *Yes for sablefish, but not for NPA, SA*
   * *It is unclear if other important data can be collected with EM*
   * *This depends on the gear type: EM could work for longlines, but could be difficult for trawlers without effective technologies*
   * *Some biological data can only be (or is best) collected by humans*
5. **Whether the observer needs to be a scientist, or can data be collected by a non-scientist?**
   * *Observers do not need to be scientists, but they need to be well-trained to collect the data needed correctly*