



## Description of the KRAV Fisheries Committee's evaluation of a fishery according to the KRAV standards in chapter 17.3 using the flowchart

### Introduction/How to read the flowchart

This flowchart describes how the requirements found in 17.3 should be applied in the approval process of a fishery. Note that:

- ✓ The approval starts with check of content of toxic substances in step 1, followed by an assessment of the management plan of the fishery in step 2, and ends in step 11.
- ✓ The evaluation from step 6 and on is more qualitative than in steps 1-5.
- ✓ To move on to the next steps, the assessment must first pass step 1 and then meet the requirements in step 2 or in steps 3-6 combined for the evaluation to continue.
- ✓ If the criteria in steps 7-10 are not fulfilled, conditions can be added.
- ✓ A fishery may be opened for certification despite identified weaknesses in meeting the criteria in 7-10, if appropriate conditions can be set.
- ✓ If the weaknesses found in steps 7-10 are considered severe and conditions will not be efficient or feasible, the evaluation process may be stopped in any of these steps.
- ✓ Conditions set will be followed up as part of the annual audit by certification body.
- ✓ The burden of evidence lays with the applicant

#### 1. Is consumption restricted due to content of toxic substances?

The Committee checks with the Swedish National Food Agency's Dietary Guidelines whether the target species is limited for any consumer group. If there are such limitations the general rule is that the fishery cannot be approved. However, if the applicant can present local scientific data to show that the product does not exceed legal limits with regard to the substance causing the limitation, approval is possible. The samples must be from the fishing area concerned in the application and from individuals of sizes sold for human consumption.

If levels of foreign substances in the target fish and shellfish exceed legal limits, the fishery cannot be approved.



## **2. Is there a well-functioning management plan? Yes/No**

The KRAV Fisheries Committee checks whether a long-term management plan exists for the stock and if the scientific body giving advice considers it to be appropriate, i.e. that it fulfills its goals. If the answer here is yes, the evaluation continues directly to step 7.

In some cases, management plans can, during transition periods, allow fishing mortalities and/or spawning stock biomasses outside MSY reference points (as defined in 3 and 4). When this is the case, it should be clearly stated, but does not affect the evaluation.

If the answer is that there is no well-functioning management plan in place, the assessment will need to be based on a collective evaluation of steps 3-6.

## **3. Spawning Stock Biomass above $B_{MSY}$ /30 % above $B_{pa}$ , alt. Regional data supporting approval? Yes/No**

The committee evaluates scientific assessments from ICES or equivalent scientific advisory body in other parts of the world to determine whether the Spawning Stock Biomass is above the biomass leading to MSY or  $B_{MSY}$ . For fish stocks where a  $B_{MSY}$  reference point has not been defined, the stock size can be assessed against the precautionary reference point for biomass,  $B_{pa}$  in which case the biomass should be at least 30% over  $B_{pa}$  as a buffer.

In cases where no scientific evaluation of the stock is available and both  $B_{MSY}$  and  $B_{pa}$  reference points are missing, the committee investigates if there is reliable local or regional data of sufficient quality that indicates that the stock biomass is on a sustainable level. This can for example be the case for stocks or sub-stocks with a limited geographic distribution for which a time series of local catch or survey data is available.

## **4. Fishing Mortality below $F_{MSY}$ /30 % below $F_{pa}$ /Regional data supporting approval? Yes/No**

The committee evaluates scientific assessments from ICES or equivalent scientific advisory body in other parts of the world to determine whether the fishing mortality is below the fishing mortality leading to MSY or  $F_{MSY}$ .

For fish stocks where a  $F_{MSY}$  reference point has not been defined, the fishing mortality can still be assessed against the precautionary reference point for fishing mortality,  $F_{pa}$ , in which case the fishing mortality should be at least 30% under  $F_{pa}$  as a buffer. In cases where no scientific evaluation of the fishing mortality of the stock is available and both  $F_{MSY}$  and  $F_{pa}$  reference points are missing, the committee investigates if there is reliable local or regional data. This data needs to be of sufficient quality that indicates that the fishing mortality is on a sustainable level. This can for example be the case for stocks or sub-stocks with a limited geographic distribution for which a time series of local catch or survey data is available.



## 5. Recruitment OK? Yes/No

The committee evaluates recruitment based on the scientific assessment from ICES or an equivalent scientific advisory body in other parts of the world. The committee studies trends in recruitment over time and how present recruitment compares with the average recruitment. Since these values can vary, no absolute level of required recruitment for approval has been defined. A more qualitative assessment of recruitment is used in the next step, where biomass, fishing mortality and recruitment are assessed together.

## 6. Is the stock fished sustainably? – Combined assessment of the outcomes in step 3, 4 and 5

In this step, a combined evaluation of the three parameters stock size (3), fishing mortality (4) and recruitment (5) is performed. If two of the parameters are assessed to be sustainable but one is not, the stock can still be considered to be sustainable under certain circumstances. These special circumstances can be illustrated with examples:

- a) If the recruitment has been assessed to be lower than usual during a shorter period of time, but the spawning stock biomass is above the biological reference points and the fishing mortality is below the biological reference points, the stock can be considered to be sustainably fished.
- b) If the spawning stock biomass is above the reference point and the recruitment is large but the fishing mortality has slightly exceeded the reference point during a single year, and measures have been taken to avoid overexploitation in the future, the stock can still be considered to be sustainably fished.
- c) In cases when a stock is at its reference points, it will be taken into account whether trends in stock parameters over time are positive or negative in this more qualitative, combined evaluation, i.e. if the  $F$  has been too high and is decreasing to  $F_{MSY}$ ; this is considered more positive than an  $F$  that is increasing towards the reference point.

If the outcome in this step is that the stock is fished sustainably, the evaluation can continue, if not, no further evaluation is made.

## 7. Compliance and enforcement is well-functioning? Yes/No

The committee checks if existing regulations are followed and enforced by responsible authorities, for example if ICES (or corresponding body) indicates problems with compliance in the fishery. Enforcement activities of responsible authorities are qualitatively evaluated against the risk for non-compliance, as judged from the scientific advice.

This also includes national and international rules and guidelines regarding animal welfare and the handling of live animals for human consumption.



If the stock is assessed to be used sustainably, the fishery is well-managed and regulations enforced, the assessment continues with an evaluation of effects on bycatch species and ecosystem effects. If not, the committee will evaluate whether the weaknesses are so severe that the evaluation cannot continue for certification, or conditions may be applied (such as area or gear restrictions).

#### **8. Important bycatch/bait species/stocks are fished sustainably? Yes/No**

The committee evaluates the important bycatch species/stocks affected. This could be species caught in large amounts or species for which catches in the fishery assessed constitute a large part of total catches. These species/stocks need to come from stocks that are fished following the advice given by ICES or equivalent scientific advisory body (i.e. steps 2-6 above).

The same criteria apply to species used as bait in applicant fisheries. If available information indicates that bycatch/bait species are not fished sustainably, this can motivate stop of the evaluation. If feasible, the committee could instead suggest that conditions should apply e.g. excluding use of certain bait types and area or gear restrictions that aim to minimize impacts on the threatened species.

Most often, the level of detail of desired information is not available for by-catch and bait species/stocks, as formal stock assessments are not available for them. When this is the case, evaluation step 8 follows.

#### **9. Are sensitive (threatened) bycatch or bait species affected by the fishery? Yes/No**

Bycatch and bait species for which no stock assessment data is available are checked against the most local IUCN Red List (for example the Norwegian IUCN Red List for a Norwegian fishery, the European one if there is no national one). If a species is listed as threatened (critically endangered, endangered or vulnerable; CR, EN or VU), the application can still be approved if there is evidence that a particular stock affected is in a better condition than the species (as the Red List assesses species and not stocks). In such cases, such data shall be presented. In other cases, conditions that work to minimize negative effects on the threatened species from the fishery can be added, e.g. by excluding use of certain bait types, by area or gear restrictions aiming to minimize impacts on the threatened species. Alternatively, the evaluation will be stopped if no conditions can be designed to protect the threatened species caught by the fishery.

#### **10. Irreversible benthic impacts of fishing? Yes/ No**

The committee investigates if the fishing gears used have negative effects on the seabed according to scientific research both in general for the fishing method used and habitat type affected by the fishery and, if available, for the particular fishery/fishing area. If there is evidence



for irreversible effects of the fishery, the application can either be rejected or, approved with conditions that aim to minimize the negative effects.

### **11. The fishery can be opened for certification**

If the stock is assessed to be used sustainably, the management of the stock is assessed to be working well and the negative effects on bycatch species, bait species and other ecosystem effects are small, or can be reduced by conditions, the KRAV Fisheries Committee can recommend KRAV to open the fishery for certification.

When a fishery is open for certification, vessels wishing to become KRAV certified need to apply with an independent certification body to schedule an audit. Definitions:

#### **Abbreviations/Definitions**

**Bycatch** - All species caught by the fishery (either landed or discarded), except the target species which the application concerns

**MSY** - Maximum Sustainable Yield, the highest catch that can be obtained sustainably

**F** - Fishing Mortality, which is the proportion of the spawning stock biomass that is killed annually by the fishery

**F<sub>MSY</sub>** – Level of Fishing mortality that, on the long term, will achieve the Maximum Sustainable Yield

**F<sub>pa</sub>** - Precautionary reference point for fishing mortality (higher than F<sub>MSY</sub>)

**B<sub>MSY</sub>** – Level of spawning stock biomass that, on the long term, will achieve the Maximum Sustainable Yield

**B<sub>pa</sub>** - Precautionary reference point for spawning stock biomass (lower than B<sub>MSY</sub>)

**ICES** - International Council for the Exploration of the Sea

**IUCN** - International Union for Conservation of Nature (Red List of threatened species)