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TECHNICAL ADVISORY COMMITTEE (TAC)

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REGIONAL GUIDELINES ON ENVIRONMENTAL IMPACT ASSESSMENT IN AQUACULTURE

INTRODUCTION

1. This document provides the background information on regional guidelines on environmental impact assessment in aquaculture (Annex I) which has been submitted to TAC for scientific and technical consideration. The guidelines principally focus on the procedure of Environmental Impact Assessment (EIA) and define the procedural stages and include model application templates for aquaculture development projects. These guidelines also identify the roles and responsibilities of agencies and individuals in the EIA process.

2. Over the last few decades, aquaculture production has witnessed remarkable global increase. Aquaculture is now one of the world's fastest growing food sectors now accounting for almost half of total food fish supply. Although the Asian region contributes greatly to the global capture fisheries and aquaculture production, share of Central Asian and Caucasus countries to these production remains negligible. Central Asian and Caucasus aquaculture is typically characterized by pond farming of few numbers of commercial fish species. The rapid developments in aquaculture make it important to develop effective management and control frameworks for regulation of the development of aquaculture. In this regard, Environmental Impact Assessment (EIA) has become a common environmental management and planning tool for prediction and assessment of potential environmental impacts of a proposed aquaculture development project or an aquaculture activity and to identify mitigation measures. A well-accepted definition of EIA is as follows: “a process for identifying the likely consequences for the biophysical environment and for man’s health and welfare of implementing particular activities, and conveying this information, at a stage when it can materially affect their decision, to those responsible for sanctioning the proposals” (Munn, 1979). Main aim with the EIA is to mitigate the possible direct, indirect and aggregate negative impacts to environment by evaluation the possible impacts and risks considering all stages of project in support of a sustainable exploration of aquaculture resources in a planned manner. Uncertainty with the impacts and risks should be clearly given in such EIA assessments and evaluations. The EIA process should possess a mechanism that allows respective stakeholders to comment on or deliver their concerns or feedbacks to a given EIA.

3. EIA has been a legal requirement in many countries as a mechanism used in decision-making for certain types of development projects that require planning permission. Although the use of EIA is increasing at global level in many areas (i.e. construction of dams, roads, underwater channels, land use, water use, mining, oil installations, etc.), it has received comparatively less use in aquaculture in certain regions of the world, including Central Asia and Caucasus regions. Intensive marine finfish culture and large-scale shrimp farming seemly are main areas where EIA is commonly used in aquaculture. Scale of the project, type of fish species and production type are generally the main considerations of States when requiring EIA in aquaculture. Use of EIA in small-scale projects and development activities has been increased over years with an increasing attention to the monitoring and follow-up. EIA has also found implications in fisheries. Current trend indicates relatively increased use of EIA in small-scale projects and development activities while some countries with significant large-scale aquaculture industries do not apply EIA to aquaculture development, but rather rely on a range of alternative environmental management procedures. Besides the EIA, a set of voluntary guidelines, reference tools and standard best practice guidelines (i.e. Best Management Practices, Code of Best Practices, Code of Good Practices, etc) are being used in fisheries and aquaculture with an aim to extending the use of better practices. Many countries now implement EIA for aquaculture developments to varying degrees, as an environmental management/planning instrument that is seen as a requirement by such guidelines, tools and practices which frequently set specific minimum requirements and standard criteria for the suggested EIA procedures and implementation.

4. As indicated on the study/document the national legislation of the States of Armenia, Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan do not require a direct EIA for aquaculture development activities and projects. Besides, the region generally lacks technical regulations that would set minimum technical requirements for the primary farmed species, namely common carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*), grass carp (*Ctenopharyngodon idella*), crucian carp (*Carassius carassius*), rainbow trout (*Oncorhynchus mykiss*), and pike perch (*Sander lucioperca*). Therefore, setting up technical standards for EIA is of high importance for the regulation of aquaculture in the region within the context of EIA. It should be noted, however, that legislation of these states include varying provisions on general environmental assessment and controls; and that environmental assessment and control responsibilities are shared generally by several agencies in these States.

5. If aquaculture operations planned and managed well, potential environmental risks associated with aquaculture are generally limited. There are, however, many examples of misplanning and mismanagement that resulted in, among others, habitat destruction, pollution, escapes of non-native fish into natural water bodies. Uncontrolled rapid expansion of commercial shrimp aquaculture in Southeast Asia over the last three decades is one of well known examples of such mismanagement in aquaculture. Aquaculture has varying types of production systems namely intensive, semi-intensive and extensive. EIA of an aquaculture project should also consider cautiously the production system of the given project during pre- and post assessment phases (i.e. controlling and follow-up). The effects of aquaculture practices/operations vary among the types of productions systems. For example, intensive production system would comparatively produce more complex environmental impacts which require more attention in terms of EIA.

6. TAC would have a role in development of a scientific/technical EIA framework for aquaculture that can be applied in CACFish competence area, taking into regional needs and future challenges. Setting of scientific/technical minimum requirements, thresholds, minimum standards for project-specific and development activity EIA would be primary feedbacks that TAC may provide in this regard. TAC may also generate such scientific/technical guiding advice for fisheries. With regard to such feedback , TAC would also identify required actions and mechanism for tackling the difficulties faced by the region.

SUGGESTED ACTION FOR TAC

Against the above background, the Committee is invited to discuss and generate scientific/technical advice, for consideration of CACFish, on how to improve integrated frameworks for use of EIA in the Central Asia and Caucasus by defining, among others, main scientific/technical considerations and minimum standards criteria.

Annex:

REGIONAL GUIDELINES ON ENVIRONMENTAL IMPACT ASSESSMENT IN AQUACULTURE

(Extracted from a draft report prepared by Richard Anthony Corner, Sunil and Haydar Fersoy)

GUIDELINES FOR A PRACTICAL EIA PROCESS FOR AQUACULTURE DEVELOPMENT ACTIVITIES/PROJECTS

Guiding principles of the EIA process

The basic or guiding principles for effective and efficient implementation of an Environmental Impact Assessment process are given below. These guiding principles are largely based on the guiding principles identified by the International Study of the Effectiveness of Environmental Assessment launched by the Canadian Environmental Assessment Agency and the International Association of Impact Assessment (Sadler, 1996). These guiding principles are applicable not only to implement an Environmental Impact Assessment process in aquaculture, but to all types of other development . When applying or referring to them, it is important to consider the principles as a single package, recognising their varying interrelationships. By keeping the following principles in mind, rather than focusing narrowly on specific procedures, the application of existing EIA will be more flexible and cost effective. These principles should also form a sound basis for the development of new or modified procedures applicable to particular sectors or development contexts (Hambrey, *et al.* 1999).

Adaptability: EIA should be adjusted to the realities, issues and circumstances of the aquaculture development proposals under review.

Accountability: Decision-makers are responsible to all parties for their actions and decisions under the assessment process.

Certainty: The process and timing of an assessment should be agreed in advance and followed by all participants;

Credibility: Assessment is undertaken with professionalism, fairness, impartiality and objectivity.

Efficiency and Cost-effectiveness: The assessment process and its outcomes should ensure environmental protection at the least cost to the proponent.

Flexibility: The assessment process should be able to adapt to deal efficiently with any proposal and decision making situation.

Practicality: The information and outputs provided by the assessment process should lead to identification of measures for impact mitigation that are practical and can be implemented by the developer.

Transparency: All assessment stages should be clear, easily understood and open processes, and decisions and their basis should be open and accessible.

Participation: EIA should provide appropriate and timely access to the process and opportunities to inform and involve all interested parties.

Environmental Impact Assessment

EIA is a process which evaluates all possible *relevant* environmental and other impacts that a development may have throughout its life-cycle conducted before major investment in the project has taken place. An important word within this is the word "relevant". This does not necessarily involve assessing all possible, even minor, impacts. It does infer that impacts that are or are potentially "significant" should be assessed. Whilst there would be a question about what the word "*significant*" means it has been shown that certain types of fish farming have particular impacts, which are variable depending on local conditions and requirements.

When is an EIA needed? EIA involves a number of steps (Figure 1), which may be implemented in full for complex developments or in fewer steps as necessary. Where the risks of impact are high or where an impact may be catastrophic even if the risk is low, for example, full EIA may be required. It may be implemented only partially or not at all for less complex or less impacting aquaculture developments.

Whether or not an aquaculture development requires any form of EIA, can be determined during the early stages of defined process.

Certain types of production are liable to have limited impacts, have a low risk of occurring or be insignificant if they do occur. Such projects therefore require less intensive evaluation. In this situation the applicant need only provide basic information about the development, then approval can be given at an early stage. The process need not be more complicated or bureaucratic than present.

Examples might include low production, extensive systems, single-pond pond systems; or pond systems where water flows directly into irrigations channels without passing through rivers, lakes and other water bodies. However, caution needs to be maintained. Even here there may be situations which require more detailed information to be provided, because the impacts become proportionately higher. These might include:

- Higher level production / higher stocking density
- If feed or other fertilizer is added to increase pond productivity
- Larger single farms covering several hectares, or multiple ponds in a single site
- Multiple farms in a single local area, which together might have a proportionately larger impact.
- Where outflow water goes into streams and rivers then into lakes, or directly into lakes which maintain specific biodiversity that might be impacted by excess nutrient load.

Project Preparation	**The developer prepares information about the development.**
Pre-application consultation	**The developer informally seeks the views from main stakeholders, prior to making a formal application**. Stage is optional. Can often determine whether sufficient information is being passed to the CA, to provide a good screening opinion.
Screening	**The CA determines whether an EIA is required**. This may happen when the CA receives notification of the intention to make a development consent application, or the developer may make an application for a Screening Opinion. The CA should seek screening opinion from other stakeholders to ensure all impacts are considered and information requested
Scoping	**Developers may request a Scoping Opinion from the CA or the CA may offer their scoping opinion after screening**. The Scoping Opinion will identify the matters and information to be included in the environmental Impact Statement EIS.
Environmental Studies	**The developer carries out investigation, studies and assessment of information and prepares an EIS.** Takes account of the scoping opinion and any more general advice issued by the CA on the requirements of the EIS.
Submission of information to the competent authority	**The developer submits the environmental information to the CA together with the application for development consent.**
Review adequacy of the Information presented	**There may be a need to review the adequacy of the EIS submission from the developer.** This may be done by the CA or a nominated person/organisation. This is NOT an assessment of the merit of the information, only that it is in sufficient detail to adequately cover the screening opinion and other guidance.
Consultation with Statutory consultees, other stakeholders and the public	**The EIS must be made available as a minimum to those that offered a screening opinion. But should also be available more generally.** Sufficient time should be allotted to allow comment on the development proposal abnd supplied information prior to the decision on the request.
Consideration of the submission and comments from consultees	**The environmental information and results from consultations must be considered by the CA, in determining whether to approve or not approve the development.**
Announcement of the decision	**The decision must be made available to the developer and consultees, and more generally.** The decision should include reason for the decision, and in relation to the licence granted, the application of conditions attached to the licence which the developer must follow to comply wit the licence issued. There should be the right of appeal.
Follow-up monitoring of the development, if granted permission	**There maybe a requirement to monitor the activities after approval.** This is to ensure compliance with the licence conditions and other applicable regulations, and to monitor the impacts against those predicted in the EIS.

Figure 1: Steps in the Environmental Impact Assessment procedure.

Guidelines on the EIA procedure

Legal components

i. **Competent Authority** (CA) should provide guidance to Aquaculture Farmer and other stakeholders on what laws and regulations are applicable for aquaculture development applications.

Pre-application Discussion

i. Pre-application consultations should take place any time before a formal application is submitted and approval requested.

ii. Pre-application consultation and discussions should be informal and non-binding on both parties. However, it will be important to make comprehensive notes about the consultations that do take place.

iii. The Aquaculture Farmer should contact key stakeholders, who may be any organisation or persons that may be affected by or have some opinion about the development. As a minimum this will include the statutory consultees as defined above; and perhaps some of the non-statutory consultees as well, depending on the circumstances and if appropriate.

iv. The Aquaculture Farmer should complete a Pre-Application and this document should form the basis of the consultation. The finalised template should act as a standardised format for presenting information about the development.

v. Any meetings held should be held informally, in order to discuss the proposal. Each person within the process has different responsibilities.

vi. The Aquaculture Farmer should initiate the consultation, which may simply be sending out a completed Pre-Application Consultation Template document and asking for feedback, but should include meetings where appropriate.

vii. Prior to any meeting the Aquaculture Farmer should offer as much information as possible to the stakeholders, as identified in the Pre-application Template. This should be in some detail so the stakeholder understands what is being considered and discussed. There will be a need to provide a detailed description of the proposed development activity. The more information provided at this stage the better.

viii. For reasons of confidentiality, the Aquaculture Farmer may decide to limit the consultations to statutory consultees only. It may not be appropriate to discuss the development with a wide stakeholder group if the Aquaculture Farmer feels it may cause undue concern and objection in these groups at an early stage. Such objection will need to be addressed head-on in due course through the EIA process.

ix. Even though the order in which consultees are contacted is not relevant, it should be started by contacting the CA, followed by other stakeholders.

x. At any meeting the Aquaculture Farmer should ask stakeholders about their opinion on the development and listen specifically to the points raised. The Aquaculture Farmer should discuss the issues openly and where possible provide responses which should be, based in fact, experience or through general knowledge.

xi. The Aquaculture Farmer should be prepared to at least consider altering the development plans to take account of the concerns that arise .

xii. The Pre-Application Template should at least contain descriptions of the following information (as a minimum).

- Location, description and size of the site
- Planned biomass or production
- Fish species being considered
- Land or water area to be used
- Infrastructure proposed (cages, ponds, need for storage facilities, feed mills and storage)
- A description of the production process to include where fish / eggs will come from, how they will be grown, what feed will be used and how much and how feed will be delivered, stocking density, fertiliser requirement (for ponds), production timescales, what if any chemicals will be used and so on); and
- Pictures of the proposed site(s) may also be useful.

xiii. Where the Aquaculture Farmer knows that a particular impact will occur e.g. nutrient waste) or receptors impacted (e.g. river, from nutrient waste), they should also offer information (such as reports or research) about these receptors and impact/s and provide mitigation against these at this early stage. These should be added as additional document into the Pre-Application Template.

xiv. Key stakeholders should support requests for pre-application consultations and requests for pre-application consultation with stakeholders, Aquaculture Farmer, should be greeted positively.

xv. It should be regarded as an informal request to provide feedback on an application that may at some point be made. Whether or not the Aquaculture Farmer goes ahead with the application may come out of the pre-application consultation process.

xvi. Stakeholders should point out specific issues that concern their organisation and give their opinion about the development in this context.

xvii. They should not raise issues that are trivial, or outside their specific expertise or remit, or are personal issues relevant to the person being consulted. Issues raised should be real issues and , with a basis in fact, not merely anecdotal.

xviii. Stakeholders should read the information provided by the Aquaculture Farmer and consider its merits, and areas of concern. These areas of concern should be raised with the Aquaculture Farmer during the meeting(s).

xix. Stakeholders should point out issues that it thinks may be insurmountable or even provide objection to the development. This should be supported by specific evidence that either the impacts are likely to be so significant as to be sufficient to object fully to a proposal, or where it is thought that impacts cannot be mitigated against, i.e. it should be evidence based. Stakeholder should, however, listen to the Aquaculture Farmer to see how such objections might be overcome.

xx. Depending on the remit of the stakeholders they should point out to the Aquaculture Farmer any legal impediment to the development.

xxi. When stakeholders have no objections to the development and are in agreement with the proposed development should also respond to any further queries from the CA when are requested to do so.

xxii. Stakeholders should not impose any fees for the Pre-application consultation and discussions, even if it would be normal to do so for formal applications. The exception would be where the Aquaculture Farmer is asking formally for information or a report, which the Aquaculture Farmer will use, for which a fee would normally be paid.

xxiii. If a full EIA is required by the CA, then the EIS should refer to the pre-application consultations, and note where the development design and implementation has changed as a result.

EIA screening (Initial Environmental Examination - IEE or need for EIA):

i. During screening the CA must decide whether or not an EIA is required for the proposed aquaculture development/facility. It is therefore an initial examination of the proposal and its likely impacts.

ii. The Aquaculture Farmer should make a formal application to the CA for permission to go ahead with the aquaculture Development. This should include submission of a letter of application, include any application forms required by the CA and should include the completed Screening Template

iii. For the screening process the Aquaculture Farmer should provide as much information as possible. The list of information to be provided is similar to that provided under Pre-application discussion, only in more detail where possible, and taking account of the discussions which took place.

iv. Where pre-application consultations took place, the Aquaculture Farmer should outline what these discussions were, what was highlighted as issues, what the

outcomes of this were and what changes have been made to the development as a result.

v. In addition the Aquaculture Farmer should make some attempt to consider what receptors may be impacted by the development. Where the Aquaculture Farmer is aware that a particular impact will occur (e.g. waste feed and faeces, where their effects are well documented), they should also offer information (reports, research, expert opinion) on this and provide mitigation against these impacts at this stage.

vi. Following a formal application for an aquaculture development, the process of Screening should be carried forward and driven by the CA. Even though the CA has the full responsibility for making the final decision on the need for an EIA, it should not do this alone and must ask others for their opinion. As a minimum the other Statutory Consultees should be consulted CA, during the screening phase, will make a number of judgements on the application for an aquaculture facility that broadly fit in to three categories. It should decide whether:

- The proposed aquaculture development is below criteria thresholds set (see below) and is liable to have no significant impacts on the environment, and there are no concerns raised by other Stakeholders. In which case no further steps in the EIA process are needed and the CA can immediately make a decision to approve, or not approve (for other reasons) the development.
- The proposed development is below the criteria thresholds set (see below) but there are one or two (or more) areas where further information would be useful in order to carry out the evaluation and come to a decision.
- Finally, if the aquaculture development falls into a category where EIA is compulsory, or where the level of production is above the criteria threshold set (see below) and impacts are liable to be significant, or a large number of "receptors" are affected, then the CA can require that a full EIA assessment to be carried out.

vii. Where the decision falls into category 2, the CA should evaluate the additional information provided by the Aquaculture Farmer to see whether they are satisfied with the response. In this a decision can then be made regards approval or non-approval of the development. Where there is no developed criteria-based decision making system, system could be adapted.

viii. CA should ask the opinion of other stakeholders. In the main such requests should be limited to the Statutory Consultees only, with other consultees where necessary. As stated previously the Template should be used by those consulted to provide the feedback and comment, thus providing their assessment of the proposal, in writing. This Template should be returned to the CA for consideration.

ix. The written statement provided by the Statutory Consultees should outline what concerns them, receptors they think are likely to be impacted by the development, and

some opinion to what extent these are significant impacts or not. (The Screening Template should provide a numbered series of boxes that can be completed for each point raised).

x. Those consulted should consider the information that the Aquaculture Farmer has sent with the application to see if some of these concerns can be offset or mitigated through design or other changes, suggesting what these changes might be.

xi. Those consulted should also identify those aspects where further information or a more comprehensive assessment is needed.

xii. On the balance of their expertise, of the information provided by the Aquaculture farmer and the areas that need further investigation, they should provide their opinion about whether the full EIA is needed or not.

xiii. The decision made by the CA to require an EIA or not require an EIA should take account of:

- The application and a comprehensive description of the development.
- The additional information (pre-application discussions, changes made to design, known impacts and mitigation against these) provided by the Farmer/Developer in support of the application.
- The Screening Opinions provided by the Consultees
- The CA's opinion.

xiv. CA should ensure there is no legal impediment to the development and that the application complies with the national criteria set (see above), and thus the application should only be rejected outright if there is sufficient information available and formal grounds to make this decision.

xv. Any decision; to not require an EIA, to require an EIA, or to reject the application outright should be fully justified.

xvi. The outcome of the Screening phase should be a written document (screening report) sent to the Aquaculture farmer outlining the decision made and the comprehensive reasons for this decision.

xvii. Where an EIA is not required and approval is given for the development, in addition to the screening report the CA should issue a Licence.

EIA Scoping assessment (scope of the EIA)

i. Scoping occurs after screening and only if an aquaculture project requires an EIA. The aim of Scoping is for the CA to provide written confirmation, called a "Scoping Statement", to the Aquaculture farmer about what information is needed in the EIS:

ii. This Scoping Statement should be the Terms of Reference under which the Aquaculture farmer needs to investigate and report on these issues and prepare an EIS.

iii. The "Scoping Statement" should as a minimum include one or more below requirements listed below as required:

- Alternatives to be considered within the project (such as alternate sites or alternate production type, for example)
- Requests for baseline surveys and investigations to be carried out, e.g. testing of water quality, measurement of quality parameters
- Methods to be used, if appropriate. Continuing the example above, the CA may require a specific method to test water quality, or describe how specific parameters are to be assessed. These should be specified.
- Mitigation which needs to be considered
- Organisations to be consulted, and
- The structure, content and extent of the environmental information to be provided (in the EIS).

iv. If a full EIA is needed then the Aquaculture farmer should request a Scoping Statement from the CA. They should do this by completing a Scoping Template and sending this to the CA

v. The Aquaculture farmer should completes the basic information on the front page of the template and sends this to the CA.

vi. The CA should formally provide a Scoping Statement which takes account of their requirements and those of the Statutory Consultees. Scoping Template has for the Statutory Consultees to make their comments. Or the CA should use the information given by the full Statutory Consultees which should be sent to the Aquaculture Farmer. Scoping Statement should be as comprehensive as possible, but it has to be recognised that further information may be needed in order to make the best overall decision, which may not have been apparent at the time the Scoping Statement was initially produced. Thus it should be a flexible document that information can be added to.

vii. The flexibility should not be used as a never-ending need for the Aquaculture Farmer to provide information and supporting evidence. In the long term this can lead to frustration on the part of the Aquaculture farmer.

viii. The following key questions should be considered when developing the Scoping Opinion:

- What effects could this project have on the environment, or social considerations?
- Which of these is liable to be significant and therefore require further investigation?, and
- What alternatives and mitigation measures ought to be considered?.

xi. The Scoping Statement should be presented to the Aquaculture farmer as a written document, through the Scoping Template.

The Environmental Investigation and Impact Statement

i. The Aquaculture farmer should produce the EIS as a single document, to be submitted to the CA.

ii. EIS should be a comprehensive written document, responding to the issues raised in the Scoping Statement

iii. The Aquaculture farmer should also include further information that it feels is needed to enhance the final decisions made.

iv. To be effective and comprehensive the EIS should at least contain:

1) A description of the project, including in particular:

    a. A description of the physical characteristics of the whole project, the land and water use requirements, infrastructure (cages, tanks, ponds) and what will happen during the construction, operational and decommissioning phases of the development.

    b. This could include maps and pictures of the site and surrounding area, what infrastructure and buildings need to be constructed or used, feed and equipment storage facilities, office space and so on.

    c. A description of the main characteristics of the production processes to be used. For example, the type and quantities of fish to be grown and feed to be used, how are the fish to be fed or pond systems fertilized and when; materials used in construction and anchoring of cages or earth working required for ponds; if grading is carried out how this is completed, what happens at harvesting time and so on. Effectively a description of all processes used in the culture of fish.

    d. An estimate, by type and quantity, of expected residues and emissions resulting from the operation of the proposed project. Here considering feed, faecal and excretory products lost to the environment, whether continuously as in cage culture or flow-through pond culture, or intermittently as in standing pond culture when water is released or exchanged, perhaps at harvest/re-stocking. But also consider any chemicals used (for cleaning, against disease), likely noise from boats, generators, people, , lighting required and so on.

2) An outline of the main alternatives considered by the Aquaculture farmer and an indication of the main reasons for the particular choice made, taking into account the environmental effects.
3) A description of the aspects of the environment likely to be significantly affected by the proposed project, including fauna, flora, soil and water, but also local population,

landscape, local archaeology, national and regional parks, and any aspect that may be significantly impacted.

4) A description of the likely significant effects of the proposed project on the environment resulting from:

    a. the existence of the project,
    b. the use of natural resources, i.e. water
    c. the emission of pollutants, the creation of nuisances and the elimination of waste, and the description by the Farmer/Developer of the methods used to assess the effects on the environment, e.g. computer modeling perhaps, research papers, technical opinion, expert advice.

5) A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

6) A non-technical summary of the information provided under the above headings.

7) An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the Aquaculture farmer in compiling the required information.

v. The EIS should also highlight changes to the development design or to activities planned initially for the development that are now different as a result of mitigation measures imposed on the project.

vi. The State should produce a guidance document specific to aquaculture describing preparation of an Environmental Impact Statement and methods to evaluate some of the more obvious impacts from Aquaculture.

Delivery and reviewing the adequacy of the EIS

i. The Aquaculture farmer should deliver the completed EIS to the CA as a hard copy document or in electronic format, as required.

ii. The CA should specify the number of hard copies the Aquaculture farmer should submit, at his/her own expense. The CA should then use these to send to Consultees later in the process.

iii. Review of the adequacy of the EIS should be conducted by the CA, another State Agency or more preferably by an independent person/organisation. The person reviewing the EIS should understand the Scoping Statement so they are clear what was expected (Then the reviewer should read EIS and determine whether the EIS is adequate addresses the issues raised in the Scoping Statement.

iv. A checklist should be produced under Scoping and the reviewer should verify that the quality of is sufficient and adequate and confirm whether the EIS has responded fully to these points in the Scoping Statement.

v. Where the EIS does not address the points in the Scoping Statement h the Aquaculture farmer should be given the chance to provide additional information, and to clarify the points made as required. Alternatively the Aquaculture farmer can comment on why the additional information was not possible.

vi. When the Aquaculture farmer re-submits the revised EIS, then the next review should only assess those areas previously stated to be inadequate.

vii. This review of adequacy of the EIS should not make any judgement on whether the development can go ahead or not, and makes no recommendation about whether it can go ahead or not. The review merely identifies that the EIS is sufficient, that the responses are based in fact/science/reality and are realistic.

Consultation phase

i. After the review of adequacy the EIS should be made available (electronically or as hard copies) to the Consultees.

ii. Consultation should be comprehensive and include not only the Statutory Consultees, but also the Non-statutory Consultees, and if desired the public.

iii. The EIS should be made available (electronically or as hard copies) to the consultees. This is so they can assess whether the particular concerns they had during screening and scoping have been addressed satisfactorily. If organisations and the public are being consulted for the first time, then they can see that the issues raised have also been addressed satisfactorily.

iv. Those consulted should read through the EIS and highlight the areas of concern that have been adequately addressed and those that in their view have not been addressed sufficiently.

v. The Consultees should not at this stage raise additional concerns that have not previously been highlighted, unless they become apparent only when reading the EIS. The Consultee should highlight issues that have not been adequately addressed and require further work.

vi. These comments should be passed back to the CA in writing. Provided the issues of concern have been adequately addressed, this declaration should include that the Consultee has no objection to the proposal.

vii. If there are any further concerns or clarifications raised by the Consultees, then the CA should pass this information back to the Aquaculture Farmer, in order to allow the Aquaculture Farmer time to provide additional information, if he so wishes.

viii. If decided to include general public in the Consultation, the public should be informed through media advertising that a development proposal has been made and that the EIS is available for scrutiny and to present their views. This notification should

include an address so that the public know who to contact to gain a copy of the EIS and a deadline for responses should be set.

ix. Where the CA believes it is in the public interest to hold a public hearing the Aquaculture farmer should given the opportunity to present details about the application for the development, present a summary of the EIA process and provide details of the assessments made and the outcomes.

x. The CA should ignore any responses made after this period.

Decision making phase

- Once the EIS has been delivered and found to be adequate, and the Consultees and general public (as applicable) have provided their responses to the consultation period then the final decision must be made about approval for the development.

- The final decision will rests with the CA.

- The decision making process, conducted by the CA, should be a systematic review of the EIS, an evaluation of data provided, and a consideration of the consultees and general public responses.

- The CA should be satisfied that the potentially significant impacts from the development have been addressed and minimised through mitigation and changes to the development proposal. If this is the case then the CA should approve the application. If not then rejection of the application is the likely result.

- The CA must weigh up the balance of evidence, consider the applicant and their track record and ability to run an aquaculture facility, consider their intentions and agreement to manage the development in a sustainable way, and take account of the varying opinions from Consultees and Stakeholders. On the balance of the evidence the CA should come to a decision.

- After the systematic review the CA should make a decision to approve or not approve the development.

- This judgement must be provided in writing, and should be comprehensive. It should outline the reasons for the decision made. This is required so that the Aquaculture farmer, other consultees and interested parties understand exactly the reasons for approval of the project are given or the reasons for the rejection of the application.

- On approval the CA must issue the necessary permissions to go ahead. This should include the issue of a licence to go ahead with development of the facility. This licence should be a written document that outlines what has been approved and include any associated conditions placed on the development.

- Such a Licence document should in general include the following, though the detail will vary depending on the development type:

- A brief description of what has been approved, i.e. a descriptive summary of the development.
- A map of the site;
- Conditions or limitations on what is allowed and not allowed
- Expectations about paperwork that needs to be maintained, or data that needs to be provided regularly
- Monitoring requirements.
- Should identify what chemical medicines, fertilizers and other treatments are approved and what quantities of these products are allowed to be used, and.
- Any other requirements of the development

- In all cases the licence should also identify the monitoring requirements at the site. This should include actions that the CA expects that the Aquaculture farmer will carry out to assess local impacts on water quality, sediment quality or other impacts depending on the development type and the outcomes of the process.

- The license should also specify what actions the CA will take, by way of site visits or monitoring activity.

- The permission granted and the licence and conditions that are applied should explicitly describe what is permitted and what is expected of the development and the Aquaculture farmer.

- It should be in sufficient detail that site visits and checks carried out can verify that the licence and the conditions applied are being adhered to and the requirements carried out.

The Figure 2summarizes the phases of decision making in EIA process.

Figure: to be inserted

Figure 2. Decision making in EIA process

Monitoring and managing

i. After the development has gained approval, follow up site visits and regular monitoring is a necessary function to ensure that the activities identified and mitigation offered in the EIS is being adhered to. Site visits should be carried out by an appropriate State Agency.

ii. Regardless of who does what, the monitoring should ensure compliance with the licence. It should consider how the site is run and the fish and activity are managed. Specific aspects of monitoring should not be carried out by more than one Agency, to avoid conflicting information.

iii. Such monitoring should be limited to assessing the most significant impacts. Once production has started monitoring should, show whether the mitigation or alternatives proposed in the EIS and actions taken by the Aquaculture Farmer, are having the desired effect.

iv. Having monitored over a reasonable period and where the impacts are larger than those predicted there should be a mechanism to allow for corrective action.

v. The CA/responsible State Agency in conjunction with the Aquaculture farmer should propose and make changes to the site, the process or the infrastructure, to overcome the deficiencies or impacts identified.

vi. Having identified what the changes need to be, the Aquaculture farmer should be allowed sufficient time for the changes to be implemented and to conduct monitoring to see whether the changes have made any difference.

vii. Monitoring should ensure that the impacts identified in the EIA process and the mitigation measures identified are being carried out and are having the desired effect; and that the licence and conditions applied are being adhered to.

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