

REGULATORY AMENDMENTS TO SUPPORT ELECTRONIC PROVISION OF CATCH AND EFFORT RETURNS – FINAL ADVICE PAPER

Executive Summary

- 1 The Ministry of Fisheries (MFish) proposes to introduce regulatory amendments in order to introduce catch effort electronic data transmission (CE EDT). A recently released Initial Position Paper (IPP) consulted on amending the Fisheries (Reporting) Regulations 2001 (the Reporting Regulations) to enable permit holders to complete and provide their catch effort returns electronically.
- 2 MFish is aware there is general support within the fishing industry for such a proposal and is confident that the technological capabilities will exist to enable such a regime to be in place. This proposal deals with the regulations that support the technology and necessary process. Other legislative amendments would occur separately.
- 3 Currently, around 170,000 catch effort returns are received annually by FishServe. MFish believes that allowing permit holders to complete and provide catch effort returns electronically could result in cost savings for Industry by eliminating or reducing the need for each return to be scanned and subjected to the data entry process.
- 4 MFish also believes that electronic catch effort reporting is likely to result in better quality and more timely information being available to MFish, provided a robust legal framework and process is also in place. This would better inform fisheries management decisions as well as assisting with such things as the MFish Compliance business group's risk management approach.
- 5 The Reporting Regulations currently support a paper-based regime; the legislative framework to support the electronic transmission of returns proposed by MFish is a chief executive approval under section 296(1) of the Fisheries Act 1996 (the Act) and amendments to the Reporting Regulations under section 297(1)(u) of the Act.
- 6 This proposal is fully supported by the industry. The submissions received raised minor queries about the implementation of CE EDT.
- 7 MFish believes that the proposed regulatory amendments can be broken into two broad categories.
- 8 Firstly, administrative regulations will need to be created to:
 - Require authorised users of the electronic process to be registered;
 - Enable a software approval process;

- Prescribe alternative reporting requirements in the event that the electronic option is temporarily not available;
 - Ensure electronic systems operate effectively.
- 9 The second category of proposed regulatory amendments will deal with those aspects of electronic catch effort reporting that differ from paper-based reporting, including:
- Altering the timeframes for provision of completed catch effort returns;
 - Whether electronic catch effort reporting should be voluntary or become mandatory for some or all permit holders or vessels over time.

The Issue

- 10 Under the Reporting Regulations, fishing permit holders are required to complete and provide returns on which details of fishing activity and amounts of fish landed are reported. These returns are often collectively termed “catch effort returns”. There are currently 13 different types of catch effort returns. Additionally, high seas permit holders are required to complete one of five high seas catch effort returns as required on the High Seas permit conditions.
- 11 Currently permit holders and High Seas permit holders must complete all required returns manually before posting the completed returns to FishServe, who scans each return and enters the data into MFish’s catch effort database. Currently, FishServe receives around 170,000 returns annually. Under the proposed electronic regime, the responsibility to complete and submit these required returns will remain, as it currently stands, with the permit holder.
- 12 Both the Reporting Regulations and High Seas permit conditions presume paper-based catch effort reporting. Regulatory amendments are necessary to include an appropriate framework under which returns will be able to be completed and provided electronically.
- 13 At present, \$2.1m is levied from quota holders to cover catch effort administration costs. MFish believes that enabling all catch effort returns to be completed electronically is likely to result in cost savings for Industry over time.
- 14 Electronic completion should also result in permit holders requiring less time to complete returns. Other benefits will include fewer errors in the data provided in electronic returns and the data being available to MFish earlier than at present. Reduced errors in returns will result in fewer returns being sent back to permit holders for correction.
- 15 Electronic log books have been, or are currently being introduced in other countries. MFish believes that to not consider the option in New Zealand would ignore the technological advances that have been made in recent years and would ignore an opportunity to create cost savings for Industry. A key consideration for MFish is to ensure that the framework and process is established in a way that does not undermine MFish’s ability to maintain the integrity of the Quota Management System (QMS). It is reliant on the ability to verify information supplied on returns, and ensure liability and

accountability for this information is clear and can be upheld in fisheries legislation.

Summary of Options

Initial Proposal

16 The IPP proposed the following options:

- a) *Option one* - Status quo: Under this option permit holders and High Seas permit holders would continue to complete paper returns and post them to FishServe, who would continue to scan and manually enter the data into the catch effort database. There would be no opportunity to use the available technology that would allow fishers to complete and provide returns electronically, which would enable data to be transferred to the catch effort database. This in turn would not create cost savings for Industry nor provide any benefits to MFish.
- b) *Option two* – Having obtained the chief executive approval to transmit catch effort returns electronically, amend the Reporting Regulations to allow electronic completion and provision of catch effort returns.

On 28 April 2009, the chief executive approved the electronic transmission of catch effort returns. To enable these returns to be transmitted electronically, amendments will need to be made to the Reporting Regulations.

A chief executive approval and changes to the Reporting Regulations is MFish's preferred option as electronic catch effort reporting cannot be achieved without this legislative framework.

Under this option there will be five proposals to be outlined further in the paper. These are:

- Requirement for users of electronic catch effort reporting to be registered;
- Requirement for software to be approved;
- Specifications for alternative options in the event of problems with electronic catch effort reporting;
- Consideration for amending the timeframes by which catch and effort information is provided to FishServe;
- Consideration of whether electronic reporting should be mandatory over time.

Final Proposal

MFish recommends that you:

AGREE to:

i) Amend the Fisheries (Reporting) Regulations 2001 to:

- Allow for the electronic completion and provision of catch effort returns; AND
- Require all users of electronic catch effort reporting to be registered; AND
- Allow for the approval of all third party software; AND
- Set out the specifications for alternative options in the event of problems with electronic catch effort reporting; AND
- Make this change mandatory from the commencement of this regime for all catch effort returns provided from High Seas permit holders and foreign charter vessels; AND

Either **AGREE** to:

- ii) Daily electronic reporting of catch and effort information; OR
- iii) Maintain the current reporting timeframes in electronic form, while providing the capacity for the Chief Executive to change the timeframes at some point in the future (**MFish's preferred option**).

Consultation

17 MFish released the IPP for formal consultation on 23 February 2009. The IPP was available from the MFish website. Stakeholders and the general public were consulted on amending the Reporting Regulations to enable catch effort returns to be completed and provided electronically. The statutory authority for the proposed electronic system is pursuant to sections 296(1) and 297(1)(u) of the Act.

Submissions Received

18 Submissions regarding this proposal were received from:

- M. Hardymont – BYX Fishing Company Ltd. (BYX)
- New Zealand Recreational Fishing Council (NZRFC)

- New Zealand Rock Lobster Industry Council (NZ RLIC)
- The New Zealand Seafood Industry Council Ltd. (SeaFIC)

MFish Discussion

- 19 BYX, NZ RLIC and SeaFIC support MFish's preferred proposal as providing for the option of electronic reporting as set out in option 2. NZRFC supports the movement towards providing catch effort data electronically.
- 20 All of the submissions identified the importance for vessel operators to retain the option of either paper or electronic reporting, as the suitability of electronic reporting will depend on the size and design of vessel, fishery, and method of operation. BYX noted that electronic reporting should not be used for vessels less than 15 metres in length. BYX raised concerns about small vessels being unable to provide the facilities available to cope with the electronic submission of catch effort forms. In providing these facilities issues with vessel stability, safety, space, electricity and money would arise.
- 21 However BYX noted that if a significant advance in technology occurs, electronic reporting should be reconsidered. MFish is aware of the issues associated with the electronic submission of catch effort forms upon small vessels. MFish proposes under option 2 of this Final Advice Paper (FAP) that the mandatory use of electronic reporting would initially apply only to foreign charter vessels (FCVs) and High Seas permit holders. For all other vessels, use of electronic reporting would be voluntary until it was decided otherwise.
- 22 Submissions from NZ RLIC and SeaFIC suggest that MFish will require a clear process to ensure the software is fully functional and that participants will be trained and prepared before the system goes online.
- 23 MFish notes that a third party software developer will have to make an application to the chief executive to have their software approved. The software would be tested by an independent party that would certify that it meets the required standard set by MFish. Currently FishServe, as a third party, is developing a software package that will be available to permit holders. Training manuals will come with FishServe's software package.
- 24 NZ RLIC and SeaFIC wish to highlight certain aspects of the IPP that need further clarification. These include; the requirements for carrying paper back-up copies if using the electronic system, the procedure for electronic signing and the suggestion that FishServe would become an approving agency in the event that a participant nominates to revert to using paper returns.
- 25 MFish notes all permit holders and authorised users will only be required to use paper catch effort returns in the event of a CE EDT Application failure. The CE EDT Application will require all catch effort forms to be digitally "signed" by an authorised user before being provided to FishServe. Digital signing of the catch effort forms will not require a physical signature; the catch effort forms will only require the authorised user to enter a password into the system. FishServe is contracted under MFish to receive applications

for cancelling a registration of CE EDT. FishServe approve the application, however there are requirements that must be met when cancelling a CE EDT registration.

- 26 NZ RLIC and SeaFIC noted, in order for electronic reporting to become successful, they would prefer slow development and implementation of electronic catch effort reporting in the industry.
- 27 MFish agrees with the comments from NZ RLIC and SeaFIC, concerning the slow implementation of CE EDT through the industry. Alternative 2 under proposal 5 (MFish's preferred option) addresses this comment.

Rationale for Management Options

- 28 Section 296(1) of the Act allows the chief executive to approve the electronic transmission of returns. Any such approval is subject to such conditions and other provisions (if any) as may be set out in regulations made under section 297(1)(u) or determined by the chief executive.
- 29 Any change to the current process will involve costs. For permit holders, costs will include: any new equipment or software necessary to complete and provide returns; operating costs (e.g. data transmission costs); and staff training costs. For FishServe, costs would be incurred in purchasing the necessary technology to enable data to be received in an electronic format. For MFish, the costs would be associated with new technology to facilitate transferring electronic data from FishServe to MFish's catch effort database. Further costs for MFish would be associated with new techniques and analysis approaches for utilising and investigating catch effort information than used in the current paper regime.
- 30 MFish expects that CE EDT will have data quality benefits; these will result from automatic error checks that are built into the software.
- 31 Use of electronic reporting for this key set of data must be established in a framework that is robust with risks managed through legal framework. Similar frameworks are already in place for electronic transactions in other agencies e.g. Land Information New Zealand regarding land transfers.
- 32 The rationale for why option 2 is MFish's preferred option includes:
 - MFish is satisfied that the technological capabilities will exist to enable electronic catch effort reporting;
 - MFish believes that electronic catch effort reporting has the potential to reduce the costs of catch effort administration, which are fully cost recovered via cost recovery levies imposed on quota owners;
 - MFish believes that electronic catch effort reporting is likely to result in better quality data as well as data being available to inform fisheries management decisions earlier than at present;

- The costs to both FishServe (estimated at \$800,000) and MFish (capital and operating costs estimated at \$388,000) of moving to electronic catch effort reporting, have been approved;
 - MFish is satisfied that allowing returns to be provided electronically does not alter MFish's ability to take enforcement action based on information supplied in a catch effort return provided the legally robust framework is in place;
 - Electronic transmission of catch effort information has been a key industry request for almost 10 years.
- 33 MFish notes that permit holders and licensed fish receivers (LFRs) have had the ability to provide monthly harvest returns (MHRs) and licensed fish receiver returns (LFRRs) electronically since 2001. Around 50% of MHRs and 80% of LFRRs are received electronically. While a more robust framework is required for electronic catch effort reporting, the level of support for the existing electronic provision of the returns stated above provides some basis for identifying the value and benefits of electronic transmission of returns.
- 34 MFish aims to have the necessary regulatory amendments in place by 1 October 2009.

Assessment of Management Options

Option 1 – Status Quo

Impact

- 35 The current paper-based regime has been in place for approximately 20 years therefore fishers are familiar with the operation of this regime.
- 36 On-going issues associated with the current regime include:
- Fishers entering certain fields, for example the date, in the incorrect format. Similarly, when fishers do not enter information in required fields, both these require returns to be sent back to the fisher for correction, which incurs costs;
 - Data entry errors (the standard is that 99% of data fields entered must match that on the return);
 - Hand-writing interpretation errors. For example SNA is sometimes interpreted as SWA and GUR is sometimes interpreted as SUR;
 - The lack of ability for MFish to determine whether a return was completed in accordance with the timeframes specified in the Reporting Regulations. This also applies to forms being altered after completion but prior to submission in an effort to obscure offending such as misreporting.

Costs

- 37 MFish currently pays FishServe \$2.1m per annum to administer the catch effort reporting regime. This amount is recovered from quota holders via cost recovery levies. For those permit holders who are not quota holders the only direct cost of the current regime is that of posting returns to FishServe. Presumably the amount levied from quota holders is passed on indirectly to fishers as part of annual catch entitlement (ACE) prices.
- 38 Using data from the last 12 months, 16% of forms (or 2297 forms per month) are required to be physically sent back to the fisher for correction.
- 39 The primary disadvantage of the current regime is that any potential for cost savings and improved data quality is not realised.
- 40 FishServe has 15 days to key in forms after they are due. There is a long lead time before MFish can view the data from the form and if there are any errors it can be up to three months or longer after they are corrected.

Benefits

- 41 The benefits of maintaining the current paper-based catch effort reporting regime include:
- Its familiarity to fishers;
 - MFish, FishServe and Industry would not incur any of the costs associated with setting up and operating an electronic regime;
- 42 MFish realises that the ability for permit holders to complete paper returns will always have to exist to cope with eventualities such as the electronic option not being available. Additionally, there will always be some permit holders for whom the electronic catch effort reporting option is not feasible. MFish wishes to clarify that it is not proposing to remove paper-based catch effort reporting.

Option 2 – Amend the Fisheries (Reporting) regulations 2001 to allow electronic completion and provision of catch effort returns – high level overview

Impact

- 43 Amending regulations to allow permit holders (including High Seas permit holders) to complete and provide catch effort returns electronically would offer permit holders a different mechanism of fulfilling their catch effort reporting obligations. It is only the method of provision that would change. The information that would be required electronically would be the same as that currently collected on existing catch and effort returns; MFish is not proposing to make any changes to the information required to be provided.
- 44 Under the electronic process proposed there would be some key differences between the operation of the paper-based regime and that of an electronic regime (for basic details on how an electronic catch effort reporting regime

would be likely to operate please see Appendix 1). MFish considers that some aspects of the proposed electronic regime will require regulatory support, while others would not. The key “new areas”, where regulatory support is likely to be required, include:

- A requirement for all authorised users of the electronic catch effort reporting regime to be registered;
- A process for approving any software that is to be used for electronic catch effort reporting;
- Requirements that paper returns must be carried as backup in the event of computer failure.

45 As well as the “new areas” where regulatory support is required, MFish considers that there are two further areas where differences could exist between the electronic and paper-based regimes that could require regulatory support. These are:

- Timeframes for providing returns containing catch effort information (amendments to timeframes for providing catch landing information is not under consideration);
- Whether electronic catch effort reporting should be voluntary or become mandatory for some or all permit holders or vessels over time.

46 The points detailed in the preceding two paragraphs will be assessed separately later in the FAP.

Costs

47 Electronic catch effort reporting will involve costs to MFish, FishServe and Industry. The capital and operating costs to MFish (approx. \$388,000) will be cost recovered from quota holders. Ongoing MFish operational costs associated with electronic catch effort reporting will include investigative tools and analysis techniques for operating in this alternative reporting environment.

48 Direct costs to permit holders associated with electronic catch effort reporting include:

- Fishers will need a computer so that data can be entered at the time required by the reporting regulations;
- Administrative costs associated with the time involved to ensure that the appropriate persons are registered as being authorised to provide electronic returns;
- Completed returns will be provided to FishServe via an approved electronic medium i.e. internet access, satellite connection or ALC will be required. This is discussed in more detail below;

- Software - FishServe will provide a third party software package free of charge, however if permit holders wish to use alternative packages they may need to purchase them.

Benefits

- 49 Catch effort administration costs should reduce once returns start to be provided electronically as the current scanning and data entry requirements will be reduced. The reduction in costs would be passed on to Industry through reduced cost recovery levies. FishServe has estimated that their net cost savings will be \$102,000 in the first year, \$137,000 in the second year and \$181,000 in the third year.
- 50 Additional benefits of electronic catch effort reporting include:
- It will reduce the time needed by fishers to comply with reporting obligations;
 - MFish also expects that CE EDT will have data quality benefits, but these will be in the result of the automatic error checks that are built into the software.
 - It should reduce the number of send-backs. Although information can be inputted incorrectly, a message will appear to let authorised users know they have entered invalid information;
 - It will aid in-season fisheries management decisions as better quality information will be available to fisheries managers earlier than under the current paper-based system;
 - It will benefit the MFish Compliance business group as more timely receipt of information will assist with MFish's monitoring;
 - MFish will be able to determine whether or not returns were completed within the timeframes specified by the Reporting Regulations;
 - Fishery Officers will be able to take copies of completed returns removing the need to seize return books. This will ensure that permit holders are still able to meet all requirements relating to providing returns within the required timeframes.

Proposal 1 – Requirement for users of electronic catch effort reporting to be registered

Impact

- 51 Prior to providing returns electronically, MFish will require all authorised users of electronic catch effort reporting to be registered. The rationale for this is that only authorised users will be able to create, open, save, sign and submit electronic returns on behalf of a permit holder. Each authorised user will be issued with a USB token that is specific to that person and that must be used when entering data on and signing returns.
- 52 In order for MFish to keep track of all authorised users, registration will be required. FishServe will manage this registration process. The regulations relating to this will authorise the creation of an approved form on which

registration applications must be completed and which must be signed by each prospective authorised user. Both the permit holder and the authorised users will be required to sign a declaration stating that they understand and acknowledge all terms and conditions contained within the application form.

- 53 Regulations are also likely to be needed to prescribe the process that permit holders must go through if they are using electronic catch effort reporting and wish to cancel their registration and revert to using paper returns. MFish proposes that the regulations require permit holders to notify FishServe prior to reverting to paper returns who will process the application if all requirements are met. It would be an offence to not do so, which would carry a penalty.

Costs

- 54 There will be no application fee associated with this process, which will be carried out by FishServe under contract to MFish. There may be costs to permit holders associated with the time taken to ensure that prospective authorised users sign the approved form. There will also be a cost associated with purchasing Catch Effort software. As an example of such a cost, FishServe propose for their software, a USB token will need to be purchased by permit holders at an estimated cost of \$100 - \$150.

Benefits

- 55 The primary benefits of registration are that MFish will have full details of all a permit holder's authorised users and that USB tokens can be created specifically for each authorised user. Registration information will be available to the Catch Effort system so as to ensure that returns can only be received from authorised users.

Proposal 2 – Requirement for software to be approved

Impact

- 56 MFish proposes that a requirement be created that any software that will be used for electronic catch effort reporting purposes is subject to an approval process. The rationale for this is to ensure that all software is capable of both collecting all required information and of providing it to FishServe in an appropriate format.
- 57 As stated earlier FishServe is developing a third party software package that will be available to permit holders at no cost. This package will also be required to go through the software approval process.
- 58 Other third party software developers will have to make the same application to the chief executive to have their software approved. The software would be tested by an independent party that would certify that it meets the required standard set by MFish. Such approvals will be gazetted.

Costs

- 59 There will be direct costs to the software provider in having their application considered and approved.

Benefits

- 60 The primary benefit of this proposal is that MFish can be assured that once approved, a software package will be capable of collecting all required information and providing the information in a format that can be received by FishServe.

Proposal 3 – Specifications for alternative options in the event of problems with electronic catch effort reporting

Impact

- 61 MFish considers that the regulations relating to electronic catch effort reporting need to cover all scenarios that may eventuate in the event of problems with completing and/or providing electronic catch effort returns. Scenarios could include:

- *Problem with computer meaning that returns are unable to be completed.* The solution to this would be a requirement for all permit holders to carry paper return books for use in this type of situation. Entry and completion times of catch effort information would remain the same as electronic requirements.
- *Returns are able to be completed but unable to be provided to FishServe within the required timeframes.* The proposed requirement in this situation would be for the permit holder to continue to complete returns electronically but to notify FishServe that returns are unable to be provided on time.

Costs

- 62 As return books will always be required to be kept on a vessel the primary cost would be the administrative cost to FishServe of maintaining a system capable of dealing with paper returns. These systems already exist so there is no marginal increase in costs.

Benefits

- 63 This option ensures that the relevant information would still be provided in the event of electronic reporting being unavailable.

Proposal 4 – Consideration for amending the timeframes by which catch and effort information is provided to FishServe

Impact

- 64 The Reporting Regulations currently require all permit holders to complete catch and effort information on each day or part day of a fishing trip. The requirement to complete catch effort information on each day does not extend to information regarding the quantities of fish landed. Most landing

information is required to be completed immediately on landing, with the exception of that which is dependent on information being received back from a LFR. In all cases returns are required to be provided to FishServe not later than 15 days after the end of a trip or by the 15th of the following month.

- 65 Regardless of how returns are completed, permit holders will still be required to complete all returns containing catch effort information on a daily basis and landing returns as currently required. An electronic return is completed when it has been data entered and the USB token has been used to add the digital signature. In the case of paper returns it is not possible for those returns to be provided to FishServe until the vessel reaches port and they can be put in the post. MFish believes that the existing timeframes for providing paper returns to FishServe are adequate.
- 66 Under electronic completion, a vessel may be capable of sending returns to FishServe as soon as a return is completed. Because of this MFish believes that consideration could be given to amending regulations such that returns containing catch effort information would be required to be provided to FishServe earlier than under existing timeframes.
- 67 The IPP proposed four options on timeframes for providing electronically completed returns containing catch and effort information to FishServe could include:
- 1 - Status quo;
 - 2 - Immediately upon a vessel arriving back in port;
 - 3 - Within one week of completion; or
 - 4 - Upon completion i.e. daily.
- 68 MFish prefers option 1, to maintain the current reporting timeframes in electronic form while providing the capacity for the Chief Executive to change the timeframes at some point in the future. Option 1 will have a minimal impact on all CE EDT users.

Costs

- 69 For the first two options the costs of providing electronic returns to FishServe are presumed to be negligible provided that the permit holder has an internet connection. This is because electronic returns will be provided to FishServe via an approved electronic medium.
- 70 For options 3 and 4 the costs would be totally reliant on the nature of the fishing operation i.e. whether or not the length of a trip meant that returns were required to be provided while a vessel was at sea.
- 71 If the length of a trip meant that returns were required to be provided while a vessel was at sea, MFish anticipates that the costs associated with this are likely to be considerably greater than if returns are provided while in port.

Two mechanisms for providing returns from a vessel at sea are discussed below.

Cellphone network

- 72 MFish understands that marine cellphone coverage is currently not capable of being used to send completed returns from a vessel at sea to FishServe. Telecom is planning to unveil a new network in mid-2009 that may provide the required coverage. However the capabilities of the new network are unknown at present.

Satellite

- 73 MFish and FishServe have investigated several products and providers that use satellite technology to determine whether they could be used cost-effectively for providing returns to FishServe while a vessel is at sea. The information below is based on examples of current systems requirements. There is potential to explore the below systems as viable possible options for future use once further investigation into the process and software systems e.g. file transmission sizes, is developed.

Satellite option 1 – Existing Type Approved Automatic Location Communicator / Vessel Monitoring System devices

- 74 Vessels over 28m, FCVs, and vessels under 28m fishing for orange roughy, scampi and deepwater clam or fishing in a benthic protection area must all carry and operate an automatic location communicator (ALC). There are currently around 90-100 vessels with registered ALCs. Most approved ALCs use the Inmarsat-C system.
- 75 MFish has investigated whether approved ALCs could be used to provide completed electronic catch effort returns to FishServe from a vessel at sea. MFish has concluded that currently, approved ALCs are not capable of being used for this purpose to the level of specificity required.

Satellite option 2 – Iridium phone

- 76 MFish understands that many of the FCVs operating in New Zealand have Iridium phones. FishServe has advised MFish that such phones have the capability of being used to provide returns to land but that they are not capable of being used to allocate form numbers to returns, which is a key requirement.

Satellite option 3 – Inmarsat Fleet (various options)

- 77 All Inmarsat Fleet options are capable of performing all required functions. However, with a variable price of NZ\$5,000 upwards, the setup cost is significant and only a small number of vessels in the New Zealand fleet are believed to be using this technology.

Satellite option 4 – Iridium Based Devices (various options)

78 As with Inmarsat options, Iridium options are capable of performing required functions. Set up costs start from \$4500, but as these devices have not been typed approved, permit holders would not be able to use this option until this approval occurs.

Benefits

79 Receiving catch and effort information earlier than under the current timeframes is likely to provide the following fisheries management benefits:

- More timely information would assist with monitoring the sub-QMA catch-splitting arrangements in fisheries such as hoki and orange roughy;
- It would provide additional information upon which to base in-season TAC increases. Currently this is only really applicable to the squid fishery; however the previous Minister of Fisheries recently requested that MFish develop decision rules to provide flexibility to increase the TAC when red cod and flatfish stocks become more abundant in the future;
- Receiving more timely non-fish and protected species information via the recently-introduced non-fish / protected species catch return (NFPSCR) would enable MFish to more effectively monitor marine mammal capture rates against assumed catch rates. It would allow MFish to monitor and react to capture events on vessels without observers instead of having to wait until the end of a trip when the permit holder lodges their return. It also has the potential to streamline the existing marine mammal catch reporting arrangements between vessels, Commercial Stakeholder Organisations and MFish;
- The ability to monitor compliance using more ‘real time’ information would be beneficial to identifying risks and highlighting uncertainties within a fishery. The reduction in time spent waiting for catch effort forms to be posted, or incorrect forms to be resubmitted, would enable MFish Compliance staff to act in a timelier manner to potential offences such as area or weight misreporting.

80 Posting paper returns to FishServe can take up to seven days. Once received by FishServe, the standard is that all data on returns must be entered within 15 days of receipt. Information received electronically by FishServe would be transferred to MFish overnight. Therefore even under the status quo for timeframes catch effort information would be available earlier than information provided on paper returns.

Proposal 5 – Consideration of whether electronic reporting should become mandatory over time

Impact

81 As detailed earlier, MFish and FishServe expect that allowing permit holders to complete and provide catch effort returns electronically could result in cost savings for Industry by eliminating or reducing the need for each return to be scanned and subjected to the data entry process. It follows therefore that the

greater the proportion of returns received electronically, the greater the potential cost savings.

- 82 MFish also expects that CE EDT will have data quality benefits, but these will be in the result of the automatic error checks that are built into the software. The greater the proportion of data received electronically the greater the overall data quality.
- 83 For these reasons MFish believes that consideration should be given to whether use of electronic catch effort reporting should become mandatory. Alternatives proposed by MFish are:
- **Alternative 1** – use of electronic catch effort reporting is voluntary for all vessels.
 - **Alternative 2** – use of electronic catch effort reporting becomes mandatory over time. MFish proposes that the mandatory use of electronic reporting would initially apply to FCVs and High Seas permit holders. For all other vessels, use of electronic reporting would be voluntary until decided otherwise.
- 84 MFish believes that alternative 1 is a valid option. Many vessels are currently capable of moving to electronic catch effort reporting without the need to acquire any additional equipment other than a software package. If the predicted cost savings eventuate this is likely to encourage more vessels to take up electronic reporting in order to save costs.
- 85 MFish believes that alternative 2 is also a valid option. FCVs and High Seas permit holders can pose a significant compliance risk for offences such as misreporting and MFish believes that this risk could be reduced by requiring electronic catch effort reporting. MFish will have the ability to ascertain whether electronically-completed returns have been completed within the timeframes required by the Reporting Regulations. Requiring electronic catch effort reporting could therefore reduce the opportunities for multiple offences, including are, weight and/or species misreporting.
- 86 FCVs and vessels that have a High Seas permit are also the most likely to have an existing ability to complete returns electronically i.e. have a computer on board the vessel. For these reasons MFish proposes that all FCVs and High Seas permit holders be required to complete and provide catch effort returns electronically from the commencement of the new system.
- 87 As with the current permitting system, High Seas permit holders will be able to request an exemption in special circumstances from catch and effort reporting. This is usually granted when they are fishing in a Convention area that requires separate reporting. The exemption is granted to save them reporting the same catch to multiple entities.
- 88 For all other permit holders use of electronic reporting would remain initially voluntary. However, over time MFish would review whether additional returns should be reported electronically. Additional mandatory electronic reporting would require an amendment to the Reporting Regulations.

Costs

- 89 Neither alternative would result in additional costs to either MFish or FishServe. MFish believes that both alternatives would be unlikely to result in significant costs to Industry. Those fishers that choose to complete returns electronically would probably already have vessels with the existing capabilities to do so. Alternative 2 would require FCVs and High Seas permit holders to have the equipment necessary to complete returns electronically and this could result in additional costs to those operators who would have to purchase such equipment. However, MFish believes these classes of vessels are already capable of using electronic reporting.
- 90 A cost associated with electronic reporting remaining voluntary is that potential improvements in data quality and cost savings can be made will not be maximised. As stated earlier data quality and cost savings will be maximised only if a large majority of returns are provided electronically.

Benefits

- 91 Both alternatives (excluding FCVs and High Seas permit holders) would benefit Industry by allowing individual operators to choose whether or not electronic reporting is going to be suitable for the nature of their operation.
- 92 Alternative 2 would benefit MFish by ensuring that a minimum of 18% of returns were initially provided electronically (FCVs and High Seas permit holders are currently responsible for approximately 14.5% of returns that are submitted annually). It would also assist with the compliance risk posed by these vessels.
- 93 Alternative 2 therefore is likely to benefit Industry the most. It will result in the least cost to Industry associated with acquiring the equipment needed to complete returns electronically while ensuring that some cost savings will be made.
- 94 MFish recommends alternative 2, to make this change mandatory from the commencement of this regime for all catch effort returns provided from High Seas permit holders and foreign charter vessels.

Other Management Controls

- 95 Any new regulations that are developed to deal specifically with electronic reporting will need to specify offences and penalties. Any new reporting offences and penalties will be consistent with MFish's existing reporting offences and penalties framework.

Statutory Considerations

- 96 In considering any proposed amendments to the Reporting Regulations the Minister is required to follow relevant statutory criteria contained in the Act. These are set out below:
- 97 **Section 10** – Information principles: Section 10 states that the best available information should be taken into account when making decisions that affect

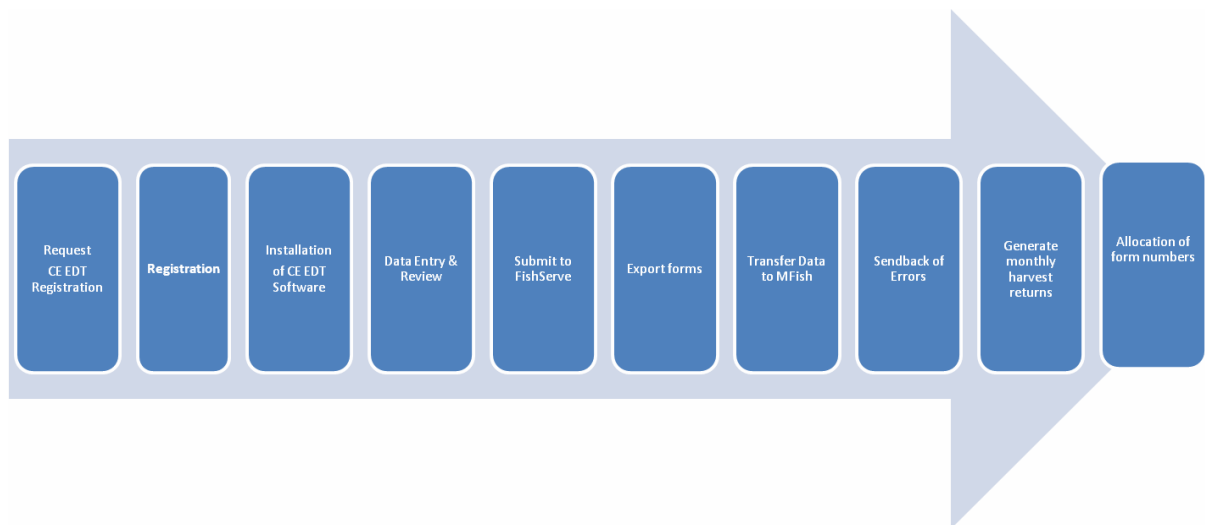
sustainability or utilisation. The proposal to introduce electronic catch and effort reporting is likely to improve the quality of data that may be used when making decisions that affect sustainability or utilisation.

- 98 **Section 113K(1)(i)** – Conditions of High Seas fishing permit: This section states that a High Seas fishing permit may be subject to conditions including reports and information required to be given to the chief executive by the permit holder and records required to be kept by the permit holder. Any requirement relating to electronic reporting may involve amending permit conditions, as allowed by section 113K(2).
- 99 **Section 189** – Persons who are required to keep records and returns: Section 189 lists the persons who are required to keep accounts and records, and provide to the chief executive such returns and information as may be required by or under regulations made under this Act. This section includes holders of fishing permits and holders of high seas fishing permits. No additional persons are required to complete returns under this proposal.
- 100 **Section 296** – Section 296 of the Fisheries Act 1996 (the Act) allows the chief executive to approve the electronic transmission of returns. Any such approval is subject to such conditions and other provisions (if any) as may be set out in regulations made under s 297(1)(u) or determined by the chief executive.
- 101 **Section 297(1)(u)** of the Act allows for the promulgation of regulations setting out conditions and other provisions that apply to approvals given under section 296 of the Act for the electronic transmission of accounts, records, returns, transactions, information, notices, objections, requests, applications, or other documents.

Other Management Issues

- 102 Aside from the proposed changes in this FAP, MFish is not proposing to make any changes to the legislative requirements e.g. those relating to retention or making returns available for inspection as outlined in the Reporting Regulations.

Appendix 1 – process overview: electronic catch effort reporting



The following paragraphs provide a ‘High Level’ overview of the CE EDT process. For ease of understanding, the CE EDT process has been ‘chunked’ into a number of consecutive but distinctive groups. It must be noted however that there is a degree of interaction that exists between the various workflows.

Request CE EDT registration form (E1):

This business event begins when an interested party wants to obtain an approved CE EDT Registration Form. It finishes when the client receives a copy of the registration form.

General:

Applicants will be able to access FishServe CE EDT registration forms via either the FishServe Website, e-mail or telephone request to Client Services, FishServe. Upon request, a paper or PDF registration form will be forwarded to the applicant. The form will allow a permit holder to apply to register for Catch Effort EDT or to change (add/remove) vessels or authorised users on their existing registration. The process is deemed to be finished when a registration form has been received by the applicant.

Registration (E2):

This business event encompasses the whole of the administrative process carried out by FishServe on receipt of a CE EDT registration form. It includes the assessment of the form and entering of data into the CE EDT system. The stage concludes with a notification of acceptance to use the CE EDT Application being forwarded to the permit holder and authorised users (including software and hardware package).

General:

The form will allow a permit holder to apply to register for CE EDT or to change (add/remove) vessels or authorised users on their existing registration. All permit holders will be required to complete the CE EDT registration form to a standard that has been determined by MFish. This will include full details of all authorised users along with the vessels they are authorised for. It will require a signed acceptance by the permit holder that they understand and acknowledge all conditions contained

within the application form.

Registration data will be transferred from FishServe to MFish via Web services.

All nominated Authorised users will be required to provide proof of identity and their details will be entered into the CE EDT System along with the vessels they are authorised for.

The registration process will include the set up of USB tokens for each Authorised user. The token will incorporate data disclosed from the applicants registration form.

The stage finishes when a permit holder has been approved and notified of such by letter. An approved Start up pack, that includes their personalised USB token will then be forwarded to the permit holder. Permit holders will be responsible for distributing USB tokens to their authorised users. A 'Start Up date' to commence CE EDT will be determined by the permit holder, following approval. Individual start up PIN numbers will be separately forwarded to each authorised user.

Registration and Cancellation of CE EDT (E3)

Cancellation:

This Business event begins when a permit holder notifies FishServe by letter or e-mail of their intention to stop using CE EDT. A minimum of 2 weeks days notice will be required before a permit holder can stop using CE EDT. It finishes when FishServe notifies the Permit Holder that they have received the notification and all issued USB tokens have been returned. At this stage the permit holder will cease to be an authorised CE EDT user.

Registration:

The process begins when a permit holder who has been previously CE EDT approved wishes to re-commence using the CE EDT system. They will obtain and complete a registration form as per the 'Registration process '. A minimum of 2 weeks will be required to complete the registration process and commence CE EDT.

General:

All permit Holders who apply and become approved to carry out CE EDT will have the option to revert to the manual (paper) process. Although it will be possible to move between the two processes it should NOT be open to abuse or available to manipulation by users to avoid legislative requirements or hinder compliance investigations. As such the process to register will follow the Registration process and is seen as arduous enough to prevent ad hoc registration and cancellation practices by the permit holders.

Installation of CE EDT software (E4):

This business event begins when the permit holder receives their start up package. They will then follow the application instructions to install the CE EDT Application and will conclude when they activate their system and "Go Live".

General:

In order to carry out CE EDT it is important that all authorised users are issued with and understand the importance of their USB token and PIN. The security of the process and the ability to validate all authorised users is essential to the

implementation and continued use of this process. Furthermore, all software applications must be approved by MFish and capable of interacting with all FishServe applications.

The permit holder will have the option to personalise their installation e.g. (Permit holder Number, Vessel Numbers, favourite form, favourite method etc). This can be assisted by using the USB token to provide information to the CE EDT Application on setup and initialisation. This business event finishes when the CE EDT product has been successfully installed.

Data Entry / Review– FishServe Catch Effort (E5):

This business event will enable an authorised user to access the CE EDT Application on board the vessel. As soon as a return is created it will be allocated both a unique self generated identifying number and a unique readable form number issued by FishServe. The authorised user will be able to select from the choice of 18 Catch Effort return forms, complete it to the required standard and safely store the data for submission. This data can be re saved, updated and/or amended until ready for submission. All data must be digitally “signed” by an authorised user before it can be submitted to FishServe. All changes made to a CE EDT form after it has been created will be logged and fully accountable as separate iterations of that form.

General:

Fishers are currently required to complete some Catch Effort Returns on a daily basis whilst engaged in fishing activities. The process must therefore allow full and unlimited access for authorised users to fulfil all relevant Legislative requirements.

This business event ends when the authorised user has entered data onto a Catch Effort return; an authorised user has checked its content and digitally “signed” it as correct. At this point they have acknowledged that they are responsible for the CE return and are ready to submit the form. At this stage the first version of the form is created.

A record of all data entry activity will be recorded both before and after a return has been digitally signed and a fully auditable form history ‘identified as Iterations’ will be available on the local database of the machine on which returns have been created or amended.

Catch Effort Compliance Management Tool (E6):

This business event begins when a form has been created using the CE EDT application and a MFish Fishery Officer (FO) needs to view and copy form data while in the field, on a vessel, or at a business premises. The event ends when the FO has successfully copied and saved both the form and all related iterations and been able to view the same.

General:

This business event extends the ability that FOs currently have with paper forms to CE EDT forms, by enabling them to copy, store, and view CE EDT form data and form history information in an easy to use application.

It will be a requirement that when a form is created a full log of events, individually referred to as Iterations will be commenced and stored on the local machine in which the form is saved. Fishery Officers will be able to export all CE EDT data from the local machine onto a storage device such as a USB. They will be able to then transfer

the data onto their Compliance Management tool to view all form iterations and Versions.

Submit to FishServe (E7):

This business event begins after the required data on a CE EDT form has been entered and digitally signed. The authorised user will be able to electronically transfer data, as and when required by legislative obligations, directly to FishServe.

All authorised users will be able to access the system in a secure manner by using a personally issued USB token and PIN. Following the identification/authentication of the user they will be able to submit their completed CE EDT form/s.

General:

Upon receipt by FishServe the content of the form is validated and stored within the CE EDT System.

This business event ends when the CE data has been received by FishServe and an acknowledgement of receipt issued to the Permit holder and authorised user.

Export Forms (E8):

This business event begins when an authorised user wishes to copy, export or import CE EDT forms to another device.

General:

The authorised user may need to transfer their completed CE Returns to another device. This may include but not be limited to: a Head Office for review, transfer data to an external source for 'back up purposes' or to enable FOs to access data for viewing, copying or transferring. It is essential therefore that the format in which this data is presented is both in a readable form and consistent with existing FishServe design.

The data presentation/format will also need to meet MFish standards with regards to the data being used for prosecution purposes.

This business event ends when CE EDT data has been securely transferred from one source to another in a readable, agreeable format that meets all customer and client needs.

Scanned Paper Forms (E9):

This business event begins when FishServe receives a new (not a corrected form) completed paper return from a fisher and uses a combination of scanning hardware/software and operator validation to generate electronic data from the paper form and store the data in the CE EDT System.

General:

This event will closely mirror the current CE data entry system. The paper form will be scanned and lodged as per business as usual processes. Instead of all the information on the paper form being manually data entered into the CE system, software will be used to recognize information on the form. This information will be manually validated, and completed if necessary, and stored in the FishServe CE EDT database along with the form image. This event ends when the data is available in the FishServe CE EDT database and is ready to be transferred to the MFish CE System via web services

Transfer CE EDT Data to MFish (E10):

This business event will allow for the transfer of all completed and validated EDT and scanned paper form Catch Effort data to MFish via a secure, fully automated mechanism using Web Services.

General:

The requirement to transfer completed CE information to MFish is consistent with current obligations under the existing manual based paper process. This data will be transferred overnight (every 24 hours)

The business event is complete when MFish have received and stored the CE EDT return and form image from FishServe, stored the CE EDT return in the CE System, and the data has been removed from the FishServe CE database within timeframes specified by MFish.

Send-Back of Errors (E11):

This event begins when a form error is identified by the MFish CE system, and ends when the form has been corrected, returned to FishServe, and entered into the MFish CE system.

Send back of errors will follow current businesses as usual processes until such time as an electronic means of Send-Back is developed and implemented.

Allocation of CE Form Numbers (E12):

This business event begins when a permit holder has been approved for CE EDT and has installed their CE EDT Application. Following approval, batches of sequential form numbers will be allocated to each CE EDT application by form type as and when they are initiated via an internet connection. Each batch will be issued to individual permit holders and vessels (for most form types) by the MFish CE system via a web service prior to being allocated to a CE EDT Application.

The CE EDT system will monitor the use of form numbers and will issue (via the MFish web service) and allocate further batches of form numbers as and when required via an internet connection.

The business event is a reoccurring process that is determined according to the frequency of return submissions by the permit holder.

General:

A fundamental requirement of this process is that the user has an internet connection. Batches of form numbers will be issued (the same as paper form numbers) via an MFish web service and will be allocated to individual CE EDT applications when they initially start up for CE EDT. Thereafter the form numbers will be assigned to forms when they are created.

Through monitoring returns FishServe will be able to determine when an authorised user is nearing a point that they will need more form numbers and then issue and allocate a further batch by internet connection.