



CCSBT-TCWG/1910/05

Indicative costs for an eCDS using the TUFMAN 2 platform

Background

The Secretariat is using TUFMAN 2 as the foundation for the Secretariat's database upgrade work. The use of TUFMAN 2 for upgrading the Secretariat's database enables considerable savings to be made by the CCSBT in terms of both time and expense. The TUFMAN 2 software has the added benefit that it will support the development of online data systems, including an electronic CDS (eCDS) if required.

The CCSBT has signed a Letter of Agreement (LoA) with the Pacific Community (SPC) which provides CCSBT with access to the core code of TUFMAN 2 that was developed and is being maintained by SPC. The current version of the LoA with SPC was signed on 7 August 2018 and is valid for 5 years after this date. At the end of the current term, the LoA will be jointly reviewed by SPC and CCSBT and extended by mutual consent. If the agreement is not continued, or if CCSBT's access to the code maintained by SPC is revoked, the CCSBT may continue to use the version of the TUFMAN 2 core code that it has at that time, so that its system can continue to be used and further developed.

In October 2018, the Extended Commission (EC) agreed to a proposal from the Secretariat to develop on-line data submission/data access tools for CCSBT Members using TUFMAN 2 as the platform for this development. For 2019, it was agreed that development would include: implementation of essential prerequisite elements and on-line submission and access to monthly catch reports and authorised validators. For 2020, it was agreed that development would involve on-line submission of authorised vessels (both single and bulk upload); an automated reminder system; maintenance and bug fixes; and a move to cloud-hosting of the database.

The development work proposed for 2019 has progressed well and the on-line data submission/data access tools for monthly catch reports and authorised validators should be available for testing by Members by the end of 2019. The Secretariat has been encouraged by the progress made to date and has requested that the developer (Shore Informatics) provide cost estimates for developing an eCDS using the TUFMAN 2 platform.

Development of an electronic Catch Documentation Scheme (eCDS) for the CCSBT

The Secretariat has obtained cost estimates from Shore Informatics for development of an eCDS for the CCSBT. Estimates have been requested for the CCSBT's current CDS and for the draft new CDS proposed in 2016.

The cost estimates assume that Shore Informatics would be conducting the work and that the contract for development of an eCDS would be on the basis of hours worked¹ instead of a fixed price quote. A fixed-price quote would be more expensive because the contractor would bear most of the risk. In addition, a fixed-price quote would require detailed specifications to be developed and agreed prior to provision of a formal quote. Furthermore, any development work required outside of such specifications would be an additional cost above that of the quote.

¹ Payment per hour is the basis of the current contract for development of on-line data submission/data access tools.

The following development work has been costed for both the draft new and current CDS²:

- Update CCSBT database tables to be TUFMAN 2 compliant;
- Create TUFMAN 2 code for the relevant data, displaying all data, including for editing, in the TUFMAN 2 web interface;
- Electronic CDS forms to be developed would include the Catch Harvest Certificate, Export Certificate, Farm Stocking Certificate, Farm Transfer Certificate and Catch Tagging Certificate (CTC);
- Basic automated data quality checks would be implemented for incoming data;
- A processor would be developed to allow CTC Excel files, to be imported by the logged-in user to the TUFMAN 2 web interface via drag-and-drop
- Create a mobile application (Android, or Windows laptops) for entry of catch harvest data and export data; and
- Create mobile application (Android, or Windows laptops) for validators, including interfaces to TUFMAN 2 and the data entry application.

The cost (in Australian dollars) for developing the above elements is estimated to be about \$66,000 plus GST for the draft new CDS. This does not include development of administration tools, detailed business rules, complex integrity checks and reporting. The Secretariat suggests that any planning for an eCDS assume that at least another \$50,000 plus GST would be needed to develop these components which are required for a fully functional system. So, the total eCDS cost is expected to be about \$120,000 plus GST.

The cost for developing the above elements for the current CDS is estimated to be about \$75,000 plus GST. The Secretariat suggests that for the current CDS, an additional \$75,000 plus GST could be required for administration tools, detailed business rules, complex integrity checks and reporting as these are more complex in the current CDS than in the draft new CDS. The total eCDS cost based on the current CDS is therefore expected to be about \$150,000 plus GST.

It should be noted that development costs estimates mentioned above assume that CCSBT will be able to negotiate a second LoA with SPC to enable CCSBT to access SPC's mobile application framework (called "Gizmo") for development of the mobile apps. Discussions are underway to investigate the possibility of an agreement. In the absence of such an LoA, it would cost an additional \$44,000 plus GST to develop the necessary code if the mobile applications were considered necessary.

The above costs do not include documentation, training of users or risk management in case the main developer becomes unavailable. To help mitigate risks, the CCSBT database manager could work closely with the main developer to develop documentation for the system and assist with system development. The CCSBT database manager would also conduct training of users.

Regardless of whether an eCDS is developed on the basis of the draft new or current CDS, the development costs, when using the TUFMAN 2 platform are quite low and manageable. In fact, it might be possible to run this project from the Secretariat's cash reserves and other sources without additional contributions from Members.

If Members can agree to form designs for an eCDS, the work detailed above (excluding the administration tools, detailed business rules, complex integrity checks and reporting) could potentially be completed for demonstration at the October 2020 annual meeting if requested by the Extended Commission.

Prepared by the Secretariat

² The names shown for CDS forms are for the new CDS not the current CDS, but costings have been developed for the equivalent forms in the current CDS.