

First TUFMAN Training Workshop (TTW-1)  
3-7 December 2012  
SPC, Noumea, New Caledonia

## **Session 7.4**

# **TUFMAN Linking of other Data to Licenses and the National Fleet**

## **WHAT LINKING IS AND WHY WE NEED IT**

Linking of data refers to the matching of logsheet and other data to a license or to the national fleet. Each logsheet, unloading, port sampling, vms trip etc can therefore have a link to a specific license or national fleet entry, or both, or perhaps even none.

Linking of data is essential for reporting. Reports are generally by nationality of catch, which is derived from the nationality of the company holding the license, or is a report for the national fleet. Both of these rely on the linking, if the link is not there then the logsheet will not be assigned a nationality or will not be identified as being in the national fleet, so it won't be included in the report output.

Linking is not only to licenses and the national fleet though. TUFMAN also matches logsheets to unloading, port samples, etc, so that all of the data are linked to the other. This allows data to be reconciled against other types of data, for example verifying the logsheet catch figures against the corresponding unloading, which can even lead to 'raising' of the logsheet data to match the unloading if the logsheet catch is under-reported. There are a number of reports in TUFMAN that combine different data types in this way and this is achieved by the linking of the data. These reports will be discussed in more detail in another session of the workshop.

### **How is the linking done?**

TUFMAN has a specific process to match logsheets and other data to licenses and the national fleet. The exact process is quite complicated and won't be described in full, but is basically just a matter of matching the trip dates from the logsheet, unloading etc to the start and end dates of the license or national fleet. Generally it is the start of the trip that is matched, and it isn't possible to match a logsheet to more than one license. If a logsheet is not matched to a license or national fleet then it means that there is no license or national fleet entry for that vessel whose dates overlap with the logsheet dates. There can be several reasons for this which will be described below.

## **WHEN AND HOW TO DO IT**

Linking should be done before any reports are run and after new data have been entered. At the moment the linking isn't done automatically, although it will be automatic in the future, so it has to be done manually. To run the linking processes, first go to 'reporting->post-entry processing':

Next, you can either click on each of the buttons under 'linking processes' individually, and then the buttons under 'generate estimates', or to make life easier you can just click on the 'RUN ALL PROCESSING JOBS' button to run all of the processes. This process can take a while depending on how much data is in your system.

## HOW TO CHECK IF IT HAS BEEN DONE

There is a way to check whether the linking has been done before you run a report. Look at your logsheet summary list for the gear of the report, e.g. 'logsheets->longline'. Change the 'sort by' to 'Entry Date', which shows the most recently entered logsheets at the top. If the top records have 'Lic link' and 'Nat flt link' of 'Yes' then you know that these logsheets have been linked.

| Vessel                    | Batch          | Year From  | To        | Records entered today | Apply filter             | Reset Filter |          |              |       |         |
|---------------------------|----------------|------------|-----------|-----------------------|--------------------------|--------------|----------|--------------|-------|---------|
| Licensed All              | Nat. fleet All | Chk All    |           | 2011                  | <input type="checkbox"/> |              |          |              |       |         |
| <b>Sort by Entry Date</b> |                |            |           |                       |                          |              |          |              |       |         |
| Longline trip summary     |                |            |           |                       |                          |              |          |              |       |         |
| Vessel name               | Departure date | Start date | End date  | Return date           | Departure Port           | Return Port  | Lic link | Nat flt link | Batch | Checked |
| ▶ TW VESSEL 35400         | 07-Oct-12      | 08-Oct-12  | 29-Nov-12 | 29-Nov-12             | GUAM                     | TAIWAN       | Yes      | No           |       | Chk     |
| TW VESSEL 35400           | 26-Aug-12      | 27-Aug-12  | 01-Oct-12 | 02-Oct-12             | GUAM                     | GUAM         | Yes      | No           |       | Chk     |
| TW VESSEL 25569           | 01-Dec-12      | 02-Dec-12  | 19-Mar-13 | 20-Mar-13             | GUAM                     | TAIWAN       | Yes      | No           |       | Chk     |

However, it is recommended to run the linking processes anyway to be certain that it has been done.

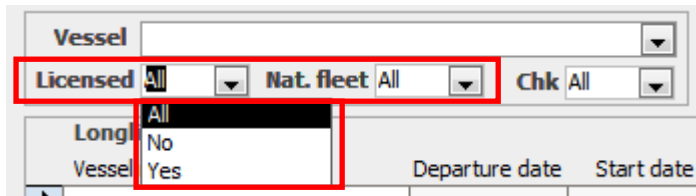
## WHAT PROBLEMS CAN OCCUR

The linking process in TUFMAN is pretty reliable, but there are times when a logsheet or other data are not linked due to problems with the data. This section will discuss common problems with

logsheet data linking, but note that this applies exactly the same to other types of data as well, such as unloading and port sampling.

## How to identify non-linked logsheets

There are a couple of ways to identify logsheets that aren't linked. The first way is to use the logsheet summary list. When viewing the summary list, there is a filter for 'Licensed' and 'Nat.Fleet'.



The options for these filters are (e.g. for 'licensed')

- **All** – display logsheets regardless of license link
- **No** – only display logsheets which are not linked to a license
- **Yes** – Only display logsheets that are linked to a license

The fishing activity in your country will determine how to use these:

- **All countries** – If you filter for 'Licensed=No' and 'Nat. Fleet=No' then you should get no logsheets. Filtering in this way means showing logsheets that are not linked to a license and not linked to the national fleet, and you should have none of these
- **If all vessels should be in the national fleet** – Filter by 'Licensed=All' and 'Nat Flt=No', there should be no logsheets without a link to the national fleet.
- **If all vessels should be licensed** – Filter by 'Licensed=No and 'Nat Flt=All, there should be no logsheets without a link to a license.

To run the filter, click on the 'Apply filter' button, and the list will be filtered by the criteria you selected. Pay attention to the 'year from' filter, in some cases you may want to clear this so you can check all logsheets, not just for recent years. You could then save the list to Excel (by copying and pasting the entire list) and then work through each of the logsheets to resolve the linking problem.

| Vessel                |                | Batch      |           | Year From To |                | Records entered today |          | Apply filter |       |
|-----------------------|----------------|------------|-----------|--------------|----------------|-----------------------|----------|--------------|-------|
| Licensed              | All            | Nat. fleet | No        | Chk          | All            |                       |          |              |       |
| Longline trip summary |                |            |           |              |                |                       |          |              |       |
| Vessel name           | Departure date | Start date | End date  | Return date  | Departure Port | Return Port           | Lic link | Nat fit link | Batch |
| ▶ CN VESSEL 33133     | 28-Dec-12      | 29-Dec-12  | 09-Jan-13 | 09-Jan-13    | POHNPEI        | POHNPEI               | Yes      | No           |       |
| CN VESSEL 33129       | 28-Dec-12      | 28-Dec-12  | 09-Jan-13 | 09-Jan-13    | POHNPEI        | POHNPEI               | Yes      | No           |       |
| CN VESSEL 33505       | 26-Dec-12      | 27-Dec-12  | 01-Jan-13 | 02-Jan-13    | POHNPEI        | POHNPEI               | Yes      | No           |       |
| CN VESSEL 33506       | 24-Dec-12      | 25-Dec-12  | 02-Jan-13 | 02-Jan-13    | POHNPEI        | POHNPEI               | Yes      | No           |       |
| TW VESSEL 29843       | 22-Dec-12      | 23-Dec-12  | 01-Mar-13 | 02-Mar-13    | GUAM           | GUAM                  | Yes      | No           |       |
| JP VESSEL 19067       | 21-Dec-12      | 22-Dec-12  | 17-Jan-13 | 18-Jan-13    | GUAM           | GUAM                  | Yes      | No           |       |
| TW VESSEL 35309       | 20-Dec-12      | 20-Dec-12  | 16-Mar-13 | 17-Mar-13    | TAIWAN         | GUAM                  | Yes      | No           |       |
| TW VESSEL 34263       | 12-Dec-12      | 19-Dec-12  | 14-Feb-13 | 15-Feb-13    | GUAM           | GUAM                  | Yes      | No           |       |
| TW VESSEL 33714       | 04-Dec-12      | 05-Dec-12  | 17-Feb-13 | 18-Feb-13    | TAIWAN         | GUAM                  | Yes      | No           |       |
| TW VESSEL 25569       | 01-Dec-12      | 02-Dec-12  | 19-Mar-13 | 20-Mar-13    | GUAM           | TAIWAN                | Yes      | No           |       |
| JP VESSEL 12914       | 23-Nov-12      | 24-Nov-12  | 19-Dec-12 | 21-Dec-12    | GUAM           | GUAM                  | Yes      | No           |       |
| TW VESSEL 23846       | 16-Nov-12      | 16-Nov-12  | 28-Jan-13 | 29-Jan-13    | TAIWAN         | TAIWAN                | Yes      | No           |       |
| JP VESSEL 19067       | 13-Nov-12      | 14-Nov-12  | 17-Dec-12 | 18-Dec-12    | GUAM           | GUAM                  | Yes      | No           |       |
| JP VESSEL 33524       | 09-Nov-12      | 10-Nov-12  | 28-Nov-12 | 29-Nov-12    | GUAM           | GUAM                  | Yes      | No           |       |

The second way to identify linking problems is to run Data Quality report #1 ('Vessels with LOGS/UNLOADINGS/PORT SAMP that are not licensed').

| <b>Data Quality Reports</b> |                                                                 |
|-----------------------------|-----------------------------------------------------------------|
| 1                           | Vessels with LOGS/UNLOADINGS/PORT SAMP that are not licensed    |
| 2                           | Reconciliation - Trip Log/Logsheet/Unloadings/Port Sampling     |
| 3                           | Reconciliation - Logsheets with Telex Reports                   |
| 4                           | Reconciliation - Logsheets with VMS                             |
| 5                           | Annual Vessel Activity (Source : Logsheets)                     |
| 6                           | Position Conflicts - Logsheet and VMS Data                      |
| 7                           | Reconciliation - All Species Catch - Logs/Unloads/Port Sampling |
| 8                           | Vessels with duplicate FFA VIDs in one year                     |
| 9                           | Annual Vessel Activity by Flag (Source : Logsheets)             |

A sample of the report output is shown below:

**Vessels with LOG SHEETS - UNLOADINGS - PORT SAMPLING that are not licensed**

| Year | Vessel Name     | Gear | Period not licenseD or linked to the NATIONAL FLEET |            |       | Data Type    | Problem           |
|------|-----------------|------|-----------------------------------------------------|------------|-------|--------------|-------------------|
|      |                 |      | From                                                | To         | Trips |              |                   |
| 2007 | FM VESSEL 80885 | S    | 7/09/2007                                           | 14/01/2008 | 2     | log_trips_ps | Not in NAT. FLEET |
|      | JP VESSEL 17079 | S    | 29/06/2007                                          | 19/07/2007 | 2     | log_trips_ps | Not licenseD      |
|      | JP VESSEL 28373 | S    | 7/05/2007                                           | 7/05/2007  | 1     | log_trips_ps | Not licenseD      |

The key columns on this report are:

- Vessel name
- Gear
- Dates from and to
- Data type – this will be 'log\_trips' for logsheets, 'unloadings', or 'samples'
- Problem:
  - Not in NAT.FLEET – the flag of the vessel has been identified as national, but the data does not match a record in the national fleet list
  - Not licensed – there is no matching license. Note that this could be correct if you have vessels in your national fleet that don't have a license (e.g. if they fish outside of your zone).

As with the first method of detecting non-linked records, it depends on your country's fishing activity as to what results you look for in this report. If all vessels should be in the national fleet then you will want no 'Not in NAT. FLEET' results, and similar for licensed vessels. Note that this report is essentially the same as using the first method.

**License linking problems**

Here are the most common reasons why a logsheet is not linked to a license when it should be:

- The post-entry processing hasn't been run

- Resolution – run the post-entry processing
- The license has not been entered
  - Resolution – enter the license
- The license dates or logsheet dates are incorrect
  - Resolution – correct the dates
- There is a duplicate of the vessel with the logsheet entered for one vessel, the license entered for the duplicate (see below)
  - Resolution – combine the duplicate vessels into one record, this needs to be done with assistance from SPC
- The vessel is not actually licensed

## National fleet linking problems

Here are the most common reasons why a logsheet is not linked to the national fleet when it should be:

- The post-entry processing hasn't been run
  - Resolution – run the post-entry processing
- The vessel has not been entered into the national fleet list
  - Resolution – add the vessel to the national fleet list
- The national fleet dates or logsheet dates are incorrect (often the national fleet dates have not been extended to the end of the year when it's a new year)
  - Resolution – correct the dates
- There is a duplicate of the vessel with the logsheet entered for one vessel, the national fleet entered for the duplicate (see below)
  - Resolution – combine the duplicate vessels into one record, this needs to be done with assistance from SPC

## Vessel duplicates

Duplicate vessels can cause a number of problems in TUFMAN, including linking problems. A vessel duplicate is where a certain vessel has been entered twice into the TUFMAN vessels list. This can occur for a couple of reasons:

- The spelling of the vessel can vary and be quite different, e.g. for Taiwanese vessels:
  - CHIN SHEN = JIN SHEN, there are many variations
- There are additions to the name in one record but not the other, such as 'maru', 'no.', '#'
  - ASAHI 1 = ASAHI MARU 1 = ASAHI NO. 1 = ASAHI #1

If you have a vessel duplicate then the following can occur:

- License entered for one record, e.g. ASAHI 1
- Some logsheets entered for same record, ASAHI 1
- Some logsheets entered for the duplicate, ASAHI MARU 1

In this case the ASAHI 1 logsheets will link OK to the license, but the ASAHI MARU 1 logsheets will not, since the linking is done by vessel (the internal vessel identifier, not by name, and these will be different for the 2 duplicate vessel records).

These linking errors are not so easy to find. If you have a linking problem to resolve and the solution is not simple, then always check for a vessel duplicate. Look at the name of the vessel on the logsheet and then go to the vessel list to check for duplicates, check the license list for licenses for a vessel of a similar name.

### How to avoid vessel duplicate problems

These problems can generally be avoided with care, i.e. if the vessel doesn't appear to exist in the database then check very carefully the vessel list to make sure that it doesn't, before adding it as a new record. This includes looking at the names of the vessels, the IRCS, registration number, and FFA VID. To do this you would sort by the appropriate field and then search the ordered list, e.g. for FFA VID:

| Vessel list |          |                                |                 |         |                 |      |          |  |
|-------------|----------|--------------------------------|-----------------|---------|-----------------|------|----------|--|
| Vessel name | Gear     | Flag                           | Vessel category | FFA VID | Registration no | IRCS | Inactive |  |
| FM VESSEL 1 | Longline | Federated States of Micronesia |                 | 1       | REG1            |      | No       |  |
| FM VESSEL 2 | Longline | Federated States of Micronesia |                 | 2       | REG2            |      | No       |  |
| FM VESSEL 3 | Longline | Federated States of Micronesia |                 | 3       | REG3            |      | No       |  |
| FM VESSEL 4 | Longline | Federated States of Micronesia |                 | 4       | REG4            |      | No       |  |
| FM VESSEL 5 | Longline | Federated States of Micronesia |                 | 5       | REG5            |      | No       |  |
| FM VESSEL 6 | Longline | Federated States of Micronesia |                 | 6       | REG6            |      | No       |  |

So the best way is to be really careful when adding vessels, to make sure that it doesn't already exist. We also recommend adopting a standard naming convention, for example at SPC we never add extra information in a name such as 'maru', 'no.', '#', etc. So for the vessel name variations ASAHI 1, ASAHI MARU 1, ASAHI NO. 1, ASAHI #1, we would only enter ASAHI 1 as the name.

There is a data quality report to help you find vessel duplicates, report #8 'Vessels with duplicate FFA VID's in one year':

| Data Quality Reports |                                                                 |
|----------------------|-----------------------------------------------------------------|
| 1                    | Vessels with LOGS/UNLOADINGS/PORT SAMP that are not licensed    |
| 2                    | Reconciliation - Trip Log/Logsheet/Unloadings/Port Sampling     |
| 3                    | Reconciliation - Logsheets with Telex Reports                   |
| 4                    | Reconciliation - Logsheets with VMS                             |
| 5                    | Annual Vessel Activity (Source : Logsheets)                     |
| 6                    | Position Conflicts - Logsheet and VMS Data                      |
| 7                    | Reconciliation - All Species Catch - Logs/Unloads/Port Sampling |
| 8                    | Vessels with duplicate FFA VID's in one year                    |
| 9                    | Annual Vessel Activity by Flag (Source : Logsheets)             |

This report will list pairs of vessels that have the same FFA VID during the same year. This may be valid if the vessel changed name during the year, otherwise it could indicate a duplicate vessel record. This report won't help identify domestic vessel duplicates if they have no FFA VID, nor will it help if FFA VID's aren't entered into the database.