

CSIRO Marine Debris Inaugural Newsletter

Global Plastics Project – August, 2018

Welcome to the first edition of the Marine Debris Newsletter, which will be distributed to our partners and collaborators on a rolling basis. We aim to use this communicate to keep you informed of our activities, changes or improvements to methodologies, and to show how your efforts are being used in our research. If you have any news or photos you would like to share, we welcome your contributions. Please email MarineDebrisAdmin@csiro.au.

Team news and activities

Project Launch

The project got off to a fantastic start in June 2017, with an initial training session organized by Dr Sunny Hong and her team in South Korea.



Sunny and Won Joon show local hospitality!

CSIRO's Chris Wilcox and TJ Lawson ran a 5 day workshop which started with presentations from partners, discussions about terminology, the scope of the marine debris problem, legislation and policy around marine debris, and managing marine debris. There were rich, vibrant discussions where issues and challenges were discussed, before the team moved on to the 'nuts and bolts' of learning about site selection, field survey protocols, equipment required, and all the parts that go along with field sampling. The whole team, including partners from South Korea, Taiwan and mainland China, Bangladesh, and Vietnam went out on the boat to learn about sea surface trawl sampling.



Sea surface trawl training with the whole group.

It was a valuable learning period, and we're pleased that all partner countries involved in the initial workshop have maintained their interest in participating in the project.



Chris Wilcox and crew practise coastal debris transects.

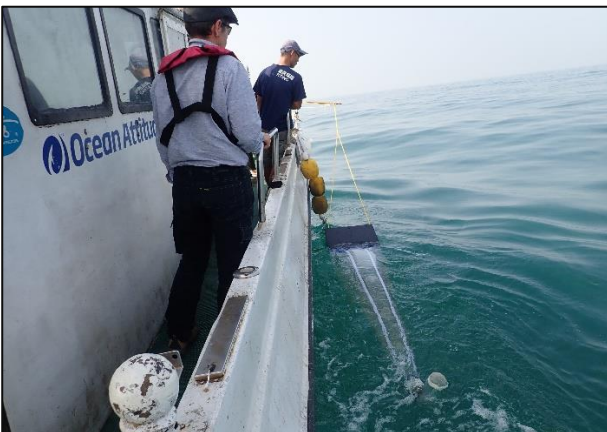
Kaohsiung, Taiwan

In November 2017, TJ travelled to Taiwan to deliver global plastics training to the Society of Wilderness and their volunteers in the Society's headquarters in the city of Kaohsiung. Sixteen volunteers and four staff attended a four day training session, conducted both in the classroom and in the field. TJ stayed in Kaohsiung for nine days leading the training and helping out with the initial surveys. During this time the fantastic group of staff and volunteers completed 22 coastal surveys, 26 river surveys and a massive 47 inland surveys. They also conducted sea surface trawling, completing and sorting 12 stations, where each station has 3 tows. This was an enormous achievement. It was such a pleasure to work with this dedicated group. TJ also thoroughly enjoyed the warm temperatures and the awesome food that was served!



Enthusiastic survey participants in Taiwan; a snapshot of the beautiful countryside around Kaohsiung

This training was followed up in early May with a full day videoconference session with Chris and Qamar, who stayed on home soil. Chris and Qamar explained how we analyse river, coastal, and inland data using the R package software. Please contact us if your team is interested in learning more about the analysis side of things!



Running a surface trawl for marine debris; and painstakingly sorting through the results.

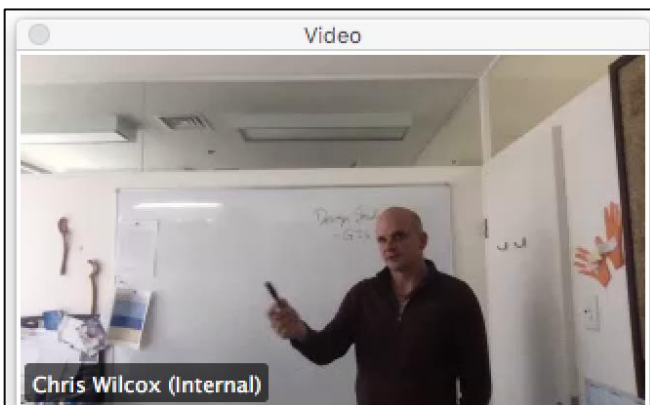
Busan, South Korea

Also in November 2017, TJ travelled to Mokpo, near Busan in South Korea, to work with our partner coordinator group OSEAN – the wonderful Sunny and her fabulous team. Some of the local university students also joined in the training and helped out with the surveying. It was very cold in South Korea making the fieldwork difficult, but the team pulled together and completed an impressive 31 coastal surveys, 34 river surveys and 34 inland surveys. The team also braved the cold to conduct sea surface trawl sampling and managed to complete 10 stations. All samples were sorted as well. It was really great to see Sunny and her team again and the hospitality shown to TJ was second to none. Again the food was incredible and the company was excellent. It is my understanding that OSEAN has secured some funding and have carried out another round of surveys. Well done team!



TJ dressed and ready for a day at the beach; and warming up indoors with the team.

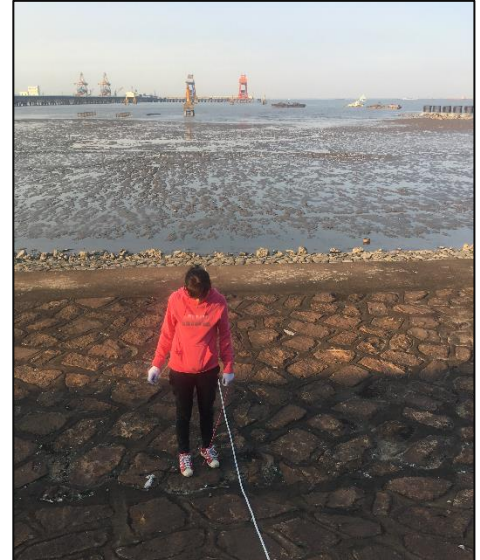
In addition to this training on the ground in South Korea, OSEAN also participated in the analytical training session via Skype in early May, with Chris and Qamar. We are currently working with the South Korea data to come up with an estimate of debris in the Yeongsan area.



Chris sharing his analysis skills via Skype

Shanghai, China

In late April 2018, Denise and TJ travelled to Shanghai, China to work with partners Rendu Ocean. There were an impressive number of volunteers that showed up for intensive training, with participants from all over the Shanghai area. After an initial day spent with Rendu staff to explain the project in further detail, the CSIRO team ran two full days of global plastics field survey training for volunteers, followed by two full days of in-field training where inland and river sites were surveyed. Denise headed off with two Rendu staff to carry out the coastal surveys, while volunteers spread themselves around the Shanghai area to collect data from inland and river sites. TJ was based in the 'command centre headquarters' to answer questions from people in the field, as there were up to 8 teams out and about doing survey work in any given day. Getting around the city to reach many of the sites was tricky, but nonetheless, the field teams collected data from a fantastic 24 inland sites, 15 river sites, and 16 coastal sites. Around 35 volunteers and NGO staff have developed the skills and knowledge required to continue this important work. Well done Rendu staff and volunteers!



Rendu staff conducting a coastal transect in the Shanghai municipality.



An impressive group of Rendu staff and volunteers, ready to hit the city and survey the sites!

Ha Phong, Vietnam

After visiting Shanghai, Denise and TJ travelled on to Ha Phong, Vietnam, in May 2018 to work with Green Hub volunteers to provide training and conduct fieldwork. We started with two full days of in-house global plastics field survey training, followed by two full days of in-field training for the Green Hub staff and their army of volunteers. After this, the survey work commenced, and the teams collected data from 26 inland sites, 29 river sites, and 24 coastal sites. A smaller team carried out surface trawl sampling – and some learned that being on a boat is not their favourite activity!



**Above: Denise and volunteers conducting a riverside survey in Vietnam;
Below: enjoying all that the experience has to offer!**



Lessons learned

After conducting training and surveys in a number of different countries, we have seen that there are lots of different models for selecting volunteers and participants by our in-country partners. These range from using existing NGO volunteers, having all surveys carried out by paid staff, and having a rigorous selection process to ensure volunteers are engaged and committed. No single approach will be applicable to every country, but we found that having a competitive selection process helped to ensure a motivated and committed cohort.

Whilst in China our team trialled a central command centre for the first time. In this model, rather than joining one team in the field or running from team to team, one CSIRO staff member remained in a central location. This meant there was a CSIRO person on call to answer questions and provide support remotely via telephone and video calls to ALL field-based teams. While it is preferable to have hands on training, in cases where sites are widely spread or logistics prevent direct supervision of all teams, this is a great option.

Other Events

Five members of the CSIRO Marine Debris team attended the Australian Marine Sciences Association conference in Adelaide, South Australia in the first week of July. All members gave presentations on the work we have been doing, all of which were well received. Information about the conference, including speakers' abstracts, can be sourced here:

<http://amsa18.amsa.asn.au/conference-handbook/>

Collaborations

To date, CSIRO have trained staff and worked with volunteers in Busan, South Korea; Cape Town, South Africa; Shanghai, China; Kaohsiung, Taiwan; Ha Phong, Vietnam; and Bali, Indonesia to conduct field surveys identifying plastics and waste in the environment. We have visited over 300 inland, river and coastal sites. Have we mentioned how much the CSIRO team have appreciated the warm welcome, incredible hospitality (and amazing food) in the places we've visited? Thank you everyone, it has been a privilege and a joy to spend the time getting to know you and your cities and surrounding areas.

Looking ahead, we have firm plans to visit Peru this October for more field surveys and training!

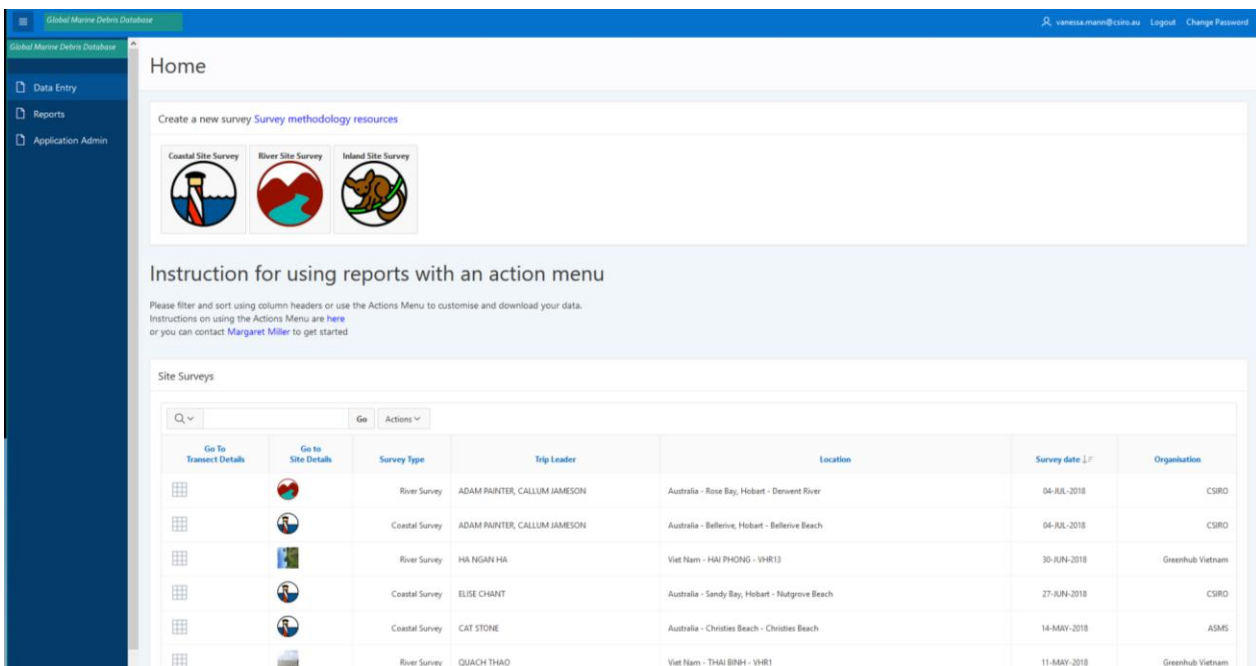
We are also currently making plans to meet with partners from Bangladesh to conduct survey methodology training and are hopeful this will occur during the latter part of 2018, or very early in 2019.

Data and Updates

Marine Debris Database

Our database is now live! All our partners can now enter survey information, photos and collections data directly into our online database. You must be a registered user to access the site. Email Qamar.Schuyler@csiro.au, Vanessa.Mann@csiro.au, or TJ.Lawson@csiro.au to register.

The link to the database is <https://marine-data.csiro.au/global-debris> and an example of how it looks is shown below.



New Datasheets

We have recently released a new version of the data sheets, Version 1.3 (June 2018). Please use these data sheets if you are conducting any further surveys. There are mostly minor changes, we have added an additional category for plastic bags to avoid confusion between thin film carry bags and other types of bags, and we have combined “Appliances” and “White goods” to one category.

We have also recently updated the survey manual to correct some page numbering and formatting errors. The latest version is available on Dropbox and the CSIRO Marine Debris website.

All our datasheets have now been translated into Chinese, Korean, Vietnamese and Portuguese. These translated versions are available on the Partners Dropbox folder.

Soon there will be a new code on the data entry portal page where you can choose the datasheet version you are using. This will allow data entry to be easy and more consistent.

Dropbox folder

We have created folders for each individual country in the Dropbox. We have included a sub-folder for photos, and would love it if country partners could upload photos from the training and surveys. We especially would like group photos, and pictures of the fun and memorable times of the participants.

If you haven't uploaded your transect photos directly onto the database, you can also include survey photos in this folder as well.

Completed Datasheets

In addition to having the data entered into the database, we would also like to maintain a library of the filled-in datasheets to refer to in case of any questions about the data. If you have digital or hard copies of completed datasheets that you haven't sent us, could you please either post them to us at the following address:

Marine Debris Team
CSIRO Oceans & Atmosphere
GPO Box 1538
Hobart, TAS 7001
Australia

or send scanned copies via email to marinedebrisadmin@csiro.au. Please scan before you send anything via the post. You can also upload to the Dropbox folder which may be easier than email, if internet speeds are slow where you are.

I know we've said it already, but please remember to upload and/or send us your photos of the start and end points of every transect onto the database if you haven't already!

If you have any news or photos you would like to share in our next newsletter, or if there is anything in particular you'd like to read about, please let us know!

Contact us at MarineDebrisAdmin@csiro.au.