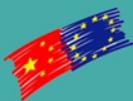


# Sustainable Ship Recycling by Adopting Integrated Waste Management Approaches in China



A project funded by the European Union.



EU-CHINA Environmental Sustainability Programme

## Newsletter

4th Issue | October 2015

### Content

- Editorial
- 1<sup>st</sup> stakeholder workshop
- 1<sup>st</sup> and 2<sup>nd</sup> training on hazardous waste classification and management
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- Master thesis on IHMs
- Sardinia Symposium
- Upcoming events

### Editorial

Distinguished Readers,

The ship\_rec project has entered the 5<sup>th</sup> semester, so there is less than one year to go.

The project is approaching its final phase and several issues are going to be tackled. On the one hand the project team is working on the sustainability assessment of ship recycling facilities. Indicators are currently being developed and discussed internally before “going out” with this information directly to the Chinese recyclers. The proposed indicators will be presented and discussed at the 2<sup>nd</sup> stakeholder workshop in November 2015.



### Editorial

Before this the ship\_rec team will conduct an Advisory and Supervision mission, visiting ship recyclers in the provinces of Zhejiang and Guangdong. One topic during the mission will also be the present situation for Chinese yards, which is difficult as they have problems in acquiring ships for recycling.



An important issue in the last year will be the policy dialogue as well as policy recommendations, this is also supported by the ESP team who hold their first policy conference at the beginning of November.

Interested parties are welcomed to participate in the stakeholder workshop in November, further information is given in the related section of the newsletter.

We hope that this newsletter supports you in your daily work, kind regards and enjoy reading,



Mr. Roland Ramusch



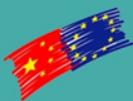
中国资源综合利用协会  
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### 1st Stakeholder Workshop

The 1<sup>st</sup> Stakeholder Workshop of the ship\_rec project took place from 13 to 14 April 2015 at the Hotel Nikko Wuxi in Wuxi, Jiangsu province, China. In total 33 stakeholders, both Chinese and international, participated in the workshop.



Participants at the 2<sup>nd</sup> stakeholder workshop in Wuxi

Beside the ship\_rec partners, Mr. Gerhard Aulbert from the classification society DNV-GL, Mr. Jiejun Chen from the China Classification Society and Mr. Xiaofeng Lan from NSWMC (National Solid Waste Management Centre of China) presented insights and current problems Chinese ship recyclers are facing and showed possible solutions. It was stated that due to the international market situation and national steel prices the Chinese ship recycling facilities (SRFs) face serious problems in acquiring ships for recycling from the international market. The project coordinator (University of Natural Resources and Life Sciences, Vienna (BOKU)) provided input with two presentations dealing with (a) experiences from Europe concerning the waste management and (b) indicators suitable for the performance assessment of SRFs. Following the presentations, a discussion with the workshop participants took place and views and opinions on indicators suitable for a sustainability assessment of Chinese SRFs were discussed.

1. **Mr. Gerhard Aulbert** of the classification society **DNV-GL** (<http://www.dnv.de>) held a presentation on green ship recycling with focus on the EU Shiprecycling Regulation (SRR). He further presented statistics on hazardous wastes generated due to ship breaking activities and underlined the importance of correct waste management practices in order to comply with the SRR.

2. **Mr. Xiaofeng Lan** of **NSWMC** gave an update on the import of end-of-life ships in China and the relevant management issues. He also addressed a number of indicators that NSWMC is applying for the performance assessment of the existing ship recyclers that are qualified to import ships for recycling.

3. **Mr. Roland Ramusch** of **BOKU** explained the importance of performance assessment systems and the design of key performance indicator (KPI) systems. After the presentation, participants discussed how the project could develop KPIs applicable in the Chinese context.

4. **Ms. Margarethe Staudner** of **BOKU** talked about waste management relevant issues contained in the EU Shiprecycling Regulation and the EU Waste Framework Directive. In addition she gave an insight into the experience from Austria concerning the responsibilities of companies that generate waste and success-factors for sustainable waste management.

5. **Mr. Jiejun Chen** of **CCS** (China Classification Society) gave a presentation on environmental management in ship recycling, on the implementation requirements for the Hong Kong Convention and the EU Shiprecycling Regulation and on the related services provided by CCS.

6. **Prof. Zhang Mingshun** of **BUCEA** presented the Waste Tracking System for Ship Recyclers (s-WTS) as well as the outcomes of the material flow analyses on hazardous and non-hazardous materials from ship recycling conducted within the ship\_rec project.

7. On behalf of **Mr. Ma Hongchang** of **CARCU** Prof. Zhang also presented the ship\_rec results on pre-cleaning Technologies and Third Party Inspection of Green Ship-dismantling.



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### 1<sup>st</sup> training on HW classification & mgmt.

The 1<sup>st</sup> training course on hazardous waste (HW) classification and management was offered by NSWMC, with supports of the ship-rec partners and Qingdao Environmental Protection Bureau. The course aimed at imparting participants knowledge and skills on

- (1) Understanding China's new environmental protection law, with focus on HW classification;
- (2) Understanding the new categories of HW in China;
- (3) Identifying HW, in particular by applying new HW codes; and
- (4) Getting more clear understanding of requirements of both MEP and China Customs on waste management in waste-importing activities. A total of 111 participants attended the course. The participants were mainly from waste-importers and traders, including waste-ship importers, local waste institutes and waste disposal companies from the ship\_rec target provinces of Shangdong, Jiangsu, Zhejiang, Fujiang and Guangdong and the City of Tianjin.



The opening session was chaired by Mr. Lingjiang, director of NSWMC. The director of Qingdao EPB gave a welcome speech during the opening session.

The main presentations of the course included:

- (1) Understanding China's New Environmental Protection Law, with focus on HW management, by Lingjiang, Director NSWMC;
- (2) New environmental management and requirements for waste importing, including waste-ship importing;
- (3) Requirements and regulations for the Chinese customs in checking waste-ship importing;
- (4) Introduction to the existing legal inspection system and the fighting against criminals who conduct illegal waste importing in China; and
- (5) Methodology and practice of identifying HWs.



### 2<sup>nd</sup> training on HW classification & mgmt.

The 2<sup>nd</sup> training course on hazardous waste (HW) classification and management took place in Nanjing Jiangsu Provincial Conference centre from 23-24 September 2015. The course was offered by NSWMC and other Chinese ship\_rec partners. 108 participants attended this course. The main contents of this course were similar to the 1<sup>st</sup> training course on hazardous waste (HW) classification and management that took place in Qingdao in 21-22 May 2015.



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### Project update

#### 1) Sustainability Assessment

The final project year of the ship\_rec project focusses on the development of a system for the sustainability assessment of Chinese SRFs. For this task, a number of indicators related to occupational health and safety, environmental protection and resource efficiency will be developed. For compiling the indicators, the following two methods are used:

1. Use of information available from the s-WTS (the waste tracking system for ship recycling) as well as from the material flow analyses (MFAs) conducted within the project. These contents can be used for indicators focusing on general specifications of the ship recycling facility itself (size, implemented certifications, facilities, ...) as well as on the management of hazardous and non-hazardous wastes (amounts, treatment methods, documentation, ...).
2. Literature research on indicators used in ship recycling or similar industrial sectors for assessing occupational health and safety and environmental protection.

The combination of the indicators obtained shall form together the complete set of Sustainability Indicators suitable for assessing procedures at SRFs. A first draft of the set of indicators was prepared by BOKU and sent to the Chinese partners in order to allow a thorough discussion of the indicators with the Chinese ship recycling facilities in order to be able to integrate their comments and suggestions in the final set of indicators.



#### 2) Preparation meeting for the EU-China Environmental Sustainability Programme (ESP) - National Policy Conference

The ship\_rec project attended the preparation meeting for the ESP National Policy Conference on 16 July 2015. During this pre-meeting, professor Zhang Mingshun, on behalf of the ship\_rec project, presented the key outputs achieved:

- (1) Best practices in ship recycling in EU and China;
- (2) Screening of ship recyclers and material flow analyses (MFAs) from 8 top recyclers of China;
- (3) Developed pre-cleaning guidelines;
- (4) Developed materials & waste tracking system; and
- (5) Third Party Inspection System (TPIS), application of new HWs categories.

Professor Zhang also discussed with the expert team invited by the ECD Beijing on the issues of policy/tools testing, policy dialogues and recommendations. The following challenges that the ship\_rec project is facing have also been addressed in this meeting:

- (1) Delay of the publication of EC's technical guideline on ship recycling;
- (2) Declining of ship recycling in China;
- (3) Competition in Asia, as more end-of-life ships are sold to other Asian countries.

The expert team invited by the ECD Beijing has made the following suggestions to the ship\_rec project:

- (1) Eco-design of ships;
- (2) Polluter pays: customers should bear the environmental costs;
- (3) Focus on the development of local regulations/standards for the sector, as it is a small sector not in the government agenda; and
- (4) Focus on international implications of the project, especially for the Asian counterparts.



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### Master thesis on IHMs

Within the first two years of the project, a number of important links with relevant stakeholders could be formed – one of them being the collaboration of BOKU with the classification society DNV-GL concerning the management of hazardous materials from ship recycling. Within the framework of this collaboration, Mr. Thomas Nigl, a master student at BOKU University, did an internship at the DNV-GL office in Hamburg in order to study the currently available information on hazardous materials in inventories of hazardous materials (IHM). The IHM is a rather new development in the field of ship recycling. It has been introduced by the Hong Kong Convention in 2009, where it is obligatory for new ships and also to a certain extent for old ships, as the Hong Kong Convention, however, did not yet enter into force, the IHM was – until recently – only a voluntary documentation on the hazardous materials present in a ship that only very few ship owners compiled. With the adoption of the EU Shiprecycling Regulation in 2013, this is going to change. The EU Shiprecycling Regulation requires ships calling EU ports to have an IHM on board – however still with an ample transitional period. Nevertheless, a number of responsible ship owners already started to prepare IHMs for their ships in order to be prepared for the entry into force of the Hong Kong Convention and the end of the transitional period of the EU Shiprecycling Regulation. In his internship Thomas Nigl statistically analysed the available IHMs and showed that the amount of hazardous materials listed in an IHM differs significantly according to the IHM development method used and the person conducting the analyses. Thus he recommends standardising both the procedures for the IHM development as well as the training for the IHM experts in order to achieve more comparable results.

### Sardinia Symposium

From 5 to 9 October 2015 Roland Ramusch and Margarethe Staudner participated at the 15<sup>th</sup> International Waste Management and Landfill Symposium in Santa Margherita di Pula (CA), Sardinia, Italy. Margarethe Staudner gave a presentation on “Waste Management Challenges in Ship Recycling with Special Focus on China” in the session on disaster waste management chaired by Roland Ramusch on Friday, 9 October 2015. In the same session, the project team of the Costa Concordia Dismantling Project gave an insight on the current developments in waste management concerning the recycling of the cruise ship Costa Concordia that capsized before the small coastal town of Giglio (Italy) in January 2012 and is currently being dismantled in Genoa (Italy). Thus an information exchange concerning the experiences with waste management in ship recycling in the EU and in China took place from which both sides profited.



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### Upcoming events

#### 1) 1<sup>st</sup> National Policy Conference of ESP

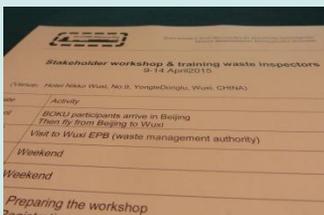
The first National Policy Conference of ESP will be held on 3 November 2015. It is one of the milestone events for ESP on which the policy progresses of ESP will be disseminated nationally and internationally. Chinese partners of the ship\_rec project will attend the meeting. Besides, on the meeting there will be an exhibition area for each project where ESP projects can introduce their projects, enlarge the dissemination and enhance the communication among participants. The ship\_rec project will be present with posters and newsletters on the conference.

#### 2) 3<sup>rd</sup> Advisory and Supervision Mission

The third A&S mission will take place in third week of November 2015. The third A&S mission will visit ship recyclers located in Fujiang, Zhejiang and Guangdong provinces. During the mission, the ship\_rec project team will discuss with local ship recyclers various issues of promoting sustainable ship recycling in China.

#### 3) 2<sup>nd</sup> Stakeholder Workshop

The second stakeholder workshop will take place in Guangzhou in Guangdong Province on Friday, 20 November 2015. The main content of the 2<sup>nd</sup> workshop will be similar to the 1<sup>st</sup> stakeholder workshop that took place in April 2015.



#### 4) Ship\_rec Networking Event

The 2015 ship\_rec networking event will take place in Beijing in the third week of December 2015. This event will be combined with the national annual networking event of China Environmental Science Association, which is one of the biggest national associations in China. The following participants will be invited to attend the 2015 ship\_rec networking event:

- (1) representatives of ship recyclers,
- (2) national and local waste management authorities;
- (3) national and local public institutes who are working in the field of waste management;
- (4) relevant academic institutes, e.g. universities; and
- (5) relevant environmental NGOs.

### 20 November - save the date

The ship\_rec team invites interested stakeholders from Europe and China to participate in the 2<sup>nd</sup> stakeholder workshop on Friday, 20 November 2015 in **Guangzhou** (Guangdong province).

Participants will be mainly from ship recycling companies and waste management authorities of the provinces of Zhejiang, Fujian and Guangdong. A main focus of the workshop is put on how to “recognise” hazardous wastes and on sustainability assessment of SRFs.

Stakeholders who would like to deliver a presentation at the workshop are invited to contact the ship\_rec project team as soon as possible in order to facilitate the programme arrangement.

Contact: Margarethe Staudner,  
[margarethe.staudner@boku.ac.at](mailto:margarethe.staudner@boku.ac.at)



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### Upcoming actions

#### 03/11/15: 1st ESP National Policy Conference

At the conference the policy progresses of ESP will be discussed and disseminated..

#### 16-19/11/15: 3rd Advisory & Supervision Mission

Visit of ship recyclers located in Fujiang, Zhejiang and Guangdong provinces .

#### 20/11/15: 2nd Stakeholder Workshop

The workshop will take place in Guangzhou of Guangdong Province.

### Contact

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### Project Partners



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Solid Waste and Chemicals Management Center of MEP (SWMC)

China Association of Resource Comprehensive Utilization (CARCU)  
<http://www.carcu.org>



#### Associated Partners

Chinese National Ship Recycling Association  
Ministry of Environmental Protection of P.R. China  
Jiangsu & Guangdong Provincial Solid Waste Management Centre



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