

SAFE AND ENVIRONMENTALLY SOUND SHIP RECYCLING IN BANGLADESH – PHASE I

PUBLIC SUMMARY

The International Maritime Organization (IMO) and the Government of the People's Republic of Bangladesh are jointly implementing a project entitled "Safe and Environmentally Sound Ship Recycling in Bangladesh – Phase I" (in short SENSREC Project – Bangladesh).

The project, aimed at improving the safety and environmental standards within the country's ship-recycling industry, consists of five work packages covering the following:

- two studies assessing the economic and environmental impact of the ship recycling industry in Bangladesh;
- an assessment of the prevailing conditions and needs for environmentally sound hazardous waste management, including the compilation of a hazardous waste inventory, hazardous waste assessment report and the preliminary infrastructure design and site selection for a hazardous waste storage, treatment and disposal facility;
- recommendations on strengthening the Government's One-Stop Service, in which all the various ministries with a responsibility for ship recycling (e.g. Industries, Environment, Labour, Shipping) offer a single point of contact for related matters;
- a review and upgrade of existing training courses on occupational health, safety and environmental issues, and piloting of the new training material; and
- the development of a detailed project document for a possible follow-up project to implement the recommendations of phase I.

A detailed overview of the work packages is set out in the annex to this summary.

In the long term, the project will assist the industry to eventually meet the requirements of the Hong Kong International Convention on the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention), so that the Government of Bangladesh may be in a position to accede to the Convention.

The principal funding for the project comes from the Norwegian Agency for Development Cooperation (Norad), while the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS)¹ also supports the project having mobilized some EU funding towards the work package related to the management of hazardous materials, which is partly being implemented by BRS.

The project is expected to be managed within a budget of US\$1,516,275 commencing January 2015 (phase I) for a period of 24 months. This amount includes the BRS funds of US\$273,603.

¹ Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998; Stockholm Convention on Persistent Organic Pollutants, 2001.

The project is being executed by the Marine Environment Division of IMO, in partnership with the Ministry of Industries of Bangladesh. The Bangladeshi ministry coordinates the input from the different stakeholder ministries within the country, while IMO also collaborates with other relevant UN agencies including BRS, the International Labour Organization (ILO) and the United Nations Industrial Development Organization (UNIDO) to ensure the successful delivery of the project.

A local project management office, responsible for the day-to-day implementation of the local project activities, is hosted within the premises of the Ministry of Industries and is staffed with a National Project Manager and an Administrative Assistant.

IMO, the Government of Bangladesh, Norad, and BRS have been working towards the establishment of this project for a number of years. It demonstrates a major commitment from the Government of Bangladesh to improve safety and environmental standards within this vital industry.

ANNEX

DETAILED DESCRIPTION OF THE WORK PACKAGES

Work package 1:

Economic and environmental impact of ship recycling industry in Bangladesh

This can be a wide-ranging topic and needs some boundary definitions. The scoping of a study on the impact of the industry requires some preparatory work and it was therefore decided to split this work package into three separate studies with a preliminary scoping study followed by the economic and the environmental impacts. Hence, a scoping study is to be carried out initially, intended to ensure that the subsequent elements of this work package are appropriately devised and targeted to the needs of the current project. Some similar studies have been published already in this area and a review of these is necessary to gather any lessons learned from them, relevant data and study design issues.

The two components following from the scoping study will take the form of authoritative studies to improve the understanding of and evaluate specific economic and environmental impacts of the ship recycling industry in Bangladesh.

The industry confirmed their wish to include an assessment of the environmental impact the industry has experienced in Chittagong. Also, it was generally accepted that a study on occupational health in the recycling industry was probably beyond the capacity of this work package.

The economic study will identify the key benefits of ship recycling including direct and indirect employment; proportion of national steel demand met and economic benefits to the country from savings accrued from the utilization of scrap steel from ships in comparison with the input of raw materials and alternative methods of steel generation; trade generated through the second-hand market for parts, equipment, fittings and machinery; reconditioned second-hand machinery and income from taxation.

The environmental impact study will identify the environmental factors that contribute positively and negatively to key impacts of the ship recycling industry. This may include impacts on fisheries, air, land, and water pollution.

Work Package 2:

Plan the management of hazardous materials

A key requirement of both the Hong Kong Convention and the Basel Convention is the environmentally sound management of hazardous materials. Under the Hong Kong Convention, recycling yards must ensure that hazardous materials are:

- removed from a ship in a safe and environmentally sound manner; and
- all hazardous materials detailed in the ship's inventory of hazardous materials are identified, labeled, and packaged at the yard in a safe and environmentally sound manner.

Waste management and disposal sites must be identified to provide for the further safe and environmentally sound management of materials. In phase I of the project, practical ways of meeting the above requirements for the different identified waste streams will be evaluated. This information will be used so that the ship recycling industry and the Administration can consider and decide how best to proceed, on the basis of understanding the facts and the costs associated with the different options.

The following step-by-step approach is to be used in planning for the management of hazardous materials:

- identify the priority waste streams (determined, for example, by the inventory of hazardous materials) - both within the ship recycling industry and other local industries in the Chittagong region.

Of the priority waste streams established:

- which wastes can effectively be managed in-house by the yards (including, what pre-treatment of wastes can be managed on-site);
- which wastes need to be managed off-site through treatment at disposal facilities;
- which hazardous wastes need to be dealt with at specialized facilities;
- detail what infrastructure currently exists and what is required to "fill in the gaps";
- determine what is required to establish the waste and hazardous waste infrastructure;
- identify availability of and needs for "competent persons" (both within the recycling yard and downstream) to manage the wastes/facilities;
- where the infrastructure exists, assess what should be done to develop/strengthen the linkages between the yards and downstream facilities; and
- evaluate the potential for the yards to collaborate (such as in Turkey), to establish a unified solution for downstream management of wastes. This could include development of a "central depository" (temporary storage) for certain waste streams shared between the yards and the establishment of a collection and transport mechanism to the downstream facilities.

BRS shall fund and manage part I of this work package which will include data collection, the compilation and analysis of this data and development of a hazardous waste assessment report. This report will outline the current situation with respect to hazardous waste arising in the ship recycling industry and other local industries, as appropriate, and the requirements to fill the gap in terms of downstream waste management infrastructure. Stakeholders from government² and industry will be consulted on the findings of the report at a dedicated workshop. Also, a cost benefit analysis of the different storage, treatment and disposal options for priority hazardous waste streams will be undertaken and recommendations will be provided as to the type of infrastructure which should be developed.

Part II of the work package is intended to initiate infrastructure design. This will include design option selection, preliminary design and site selection to allow detailed planning and design to be carried out in phase II of the project, including identifying funding partners for infrastructure detailed design and build. Preliminary studies have already been undertaken for persistent organic pollutants (POPs) waste related (polychlorinated bi-phenyls (PCBs)) management in collaboration with UNIDO. It is anticipated that UNIDO will participate in an advisory capacity for this part of the project.

Work Package 3: Refinement of Government One-Stop Service (GOSS)

The concept of a Government One-Stop Service (GOSS) is consistent with the Single Contact Point referred to in the Hong Kong Convention, with relevant ministries represented (Industries, Environment, Shipping, Labour, Commerce, etc.) co-operating on the issues

² The Ministry of Environment and Forest is anticipated to play a key role in the implementation of this work package.

enumerated in the Convention. The purpose of a GOSS is to provide the government with a focused and knowledgeable service that will be able to implement improved safety and environmental standards in the yards in a cost-effective and in a socio-economically appropriate way. This way, the government will be able to regulate and monitor the industry in an expert manner and the industry will be able to benefit from having rational and understandable requirements. This arrangement is already foreseen in new rules gazetted by the MoI, Bangladesh, and will be established with a new Act, to formally constitute the Ship Building and Ship Recycling Board (SBSRB).

The work package component is therefore about providing assistance to refine the current arrangements, drawing on experience gained elsewhere such as in Turkey. It is not about developing a new concept.

Under this activity, Turkish authorities would be requested to invite government officials and ship recyclers from Bangladesh for discussions and a technical visit. The purpose of this task is for Bangladesh authorities to learn from Turkey's experience and success (e.g. Turkey solved the problem of competing jurisdictions a few years ago and its ship recycling industry currently enjoys a clear regulatory system which ensures high standards and also provides the industry with a streamlined system that yields competitive advantages). Taking into account any input from MoI, the observations and conclusions made will be compiled in an expert report that will guide the refinement of the GOSS concept being implemented in Bangladesh.

Work Package 4: Development of training for health, safety and environmental compliance

During phase I of the project, training on occupational health, safety and the environment will become necessary in order to assist the implementation of requirements that have been imposed on the ship recycling industry by decisions of the honorable High Court.

The ship recycling industry through the BSBA, is in the process of implementing training materials making use of those developed by ILO (through the SAFEREC project). Some generic courses have already been developed and executed by one training provider. In collaboration with MoI, these courses need to be reviewed with the current curriculum and extended as necessary to fully address the requirements of the High Court and of the industry. For example, it is anticipated that in addition to training for workers and foremen, specific modules may need to be developed for managers and supervisors of ship recycling yards. Modules will also need to be tailored for training of specific worker groups³. Moreover, provisions will be made for capacity building for Inspectors of Factories and Establishment for inspection and certification of heavy equipment and for personal protective equipment used in ship recycling yards.

BRS has developed guidance and train-the-trainer materials on the environmental compliance aspects of ship recycling, which are tailored for use by managers and supervisors at ship recycling facilities and competent authority(ies) which assume regulatory oversight of the industry. These tools will also be made available in support of this work package.

Resources budgeted for phase I of the project involve upgrading, extending or developing additional training modules and piloting the suite through train-the-trainer sessions to assist in refining the content, materials and delivery methods. Some training delivery is also envisaged.

³ The amended training package (as far as safety and health is concerned) will take into account the guidance of the "Safety and health in shipbreaking. Guidelines for Asian countries and Turkey", ILO, 2004. This work will also take into account the experience gained by the TVET-Reform project, currently being implemented in Bangladesh (Ministry of Education/ILO/EC-Commission).

The output of this activity is expected to be finalized during phase II of the project to fully address the requirements of the Hong Kong Convention.

**Work Package 5:
Prepare Project Document for phase II of the project**

It is envisaged that successful completion of phase I and its results will identify the need for appropriate infrastructure which may be further developed as phase II of the project. Phase I itself, is not concerned with the development of infrastructure except for preliminary design. In view of the limited timescale of this phase (24 months), any scaling-up of the training delivery is also envisaged for phase II.

Preparation of a project document for implementation of phase II is included as part of phase I.