Out of sight – out of mind

The shipbreaking industry in Chittagong, Bangladesh

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Abstract
The shipbreaking industry in Chittagong, Bangladesh is a matter of environmental injustice due to the export of environmental problems and risks. This thesis fills the current gap in research regarding qualitative material concerning the shipbreaking industry. Currently, one of the most important voice has not entered the academic discourse – the voice of the individuals living in the communities surrounding the industry. The empirical material was gathered by conducting semi-structured interviews during a two months field study in smaller communities around the shipbreaking yards. The result displays the respondent’s views on the industry, and show how they are affected by it. A clear pattern emerges and embodies the theories showing how risk and environmental problems are exported, these are then absorbed by individuals in the periphery. Export of environmental problems, poverty and increasing risks constitutes a causality and creates environmental injustice.

Keywords
Bangladesh, Chittagong, Shipbreaking, Risk, Environmental problems, Environmental justice, Hazardous waste, World system theory.

Sammanfattning
Shipbreaking industrin i Chittagong, Bangladesh är i huvudsak en fråga om miljörättvisa på grund av exporten av miljöproblem och risk. Föreliggande examensuppsats syftar till att fylla bristen på kvalitativ forskning kring ämnet. För närvarande har en av de viktigaste rösterna inte varit en del av den akademiska diskursen – rösten från individer som bor i områdena kring industrin. Det empiriska materialet samlades in med hjälp av semi-strukturerade intervjuer under en två månader mindre fältstudie i samhällena som ligger kring industrin. Resultatet synliggör respondenternas syn på industrin och visar hur de är påverkade av den. Ett tydligt mönster framträder ur materialet och förkroppsligar teorierna som visar hur risk och miljöproblem exporterats från center, dessa absorberas sen av individerna i periferin. Export av miljöproblem, fattigdom och ökade risker utgör en kausalitet och skapar miljörättvisa.

Nyckelord
Bangladesh, Chittagong, Shipbreaking, Risk, Miljöproblem, Miljörättvisa, Farligt avfall, Världssystemteori.
Acknowledgement
Two months in Bangladesh has gone by, and it has been a very interesting and, sometimes, emotional journey. This story would not have been possible without the support of certain individuals that helped us along the road. We would especially like to thank all the employees of our contact organisation, YPSA, and in particular our contact person Muhammed Ali Shahin, for introducing us to the culture of Bangladesh in general, and the shipbreaking industry in particular. Further, we are deeply grateful to all the respondents that took their time and effort to tell their stories, most of them which are painful to tell. Thanks to our friend, Joynul Abedin, who helped us plan the trip to Bangladesh and gave us advice on the culture of Bangladesh – we did not use shorts. The support from our supervisor Ebba Lisberg Jensen during authoring of this thesis has been appreciated. The financier, SIDA, whom granted the scholarship, should also be mentioned. Thanks to all of you – we owe you all so much!
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List of abbreviations and definitions

NGO – Non Government Organisation.
YPSA – Young Power in Social Action, an NGO in Chittagong, Bangladesh.
TBT – Tributyltin, chemical compound.
PCB – polychlorinated biphenyl, persistent organic pollutant.
LDC – Least Developed Country, a term used for countries considered to be in need of development and foreign aid the most.
FOC – Flag of convenience, registering a ship in a country chosen for its lack of legislation and lower taxes to avoid costs.

Shipbreaking is the dismantling of end-of-life vessels carried out mainly in India, Bangladesh and Pakistan. It is done by beaching the ships and then dismantling them on the beach without handling the toxic and hazardous materials in a safe way and without proper equipment. There are different words used when reading about this depending on who the author is, and their views on the industry is reflected on what term they use. When writing about the process, dismantling has a more developed industrial cling compared to shipbreaking or demolition. Although different words are used they all refer to the same rudimentary activity. This can be seen in reports from The World Bank (2010), NGO Shipbreaking Platform (2015) and Greenpeace and FIDH (2005).

End-of-life ship is a ship at the end of its intended time of use. An end-of-life ship is no longer intended to be used for the purpose it was constructed for, in this report this refers to ships that will no longer be used commercially but are still sold as functioning ships despite the fact that they are meant to be broken down and sold as scrap. However, to circumvent legislation banning movement of waste/hazardous waste they are instead sold as functioning ships.
1. Introduction

The starting point of the field study in Chittagong

It is early morning when our alarm clock rings, our bodies ache due to the night in the uncomfortable beds. Thin mattresses is not what we are used to back home in Sweden. We are right now in YPSA’s guest house in Chittagong R/A (Residential Area) in Bangladesh. Still a bit tired from the jetlag, we head downstairs to the common area to eat breakfast. Today we are about to visit the area around the shipbreaking industry for the first time. Downstairs, we meet the office manager at YPSA that will take us there by car. We are excited about the trip and ask him if we can bring our DSLR camera: ‘’You can... but it is unwise, the area is not safe for westerners, not even during day time’’, he says and continue: ‘’It will cause unwanted attention’’. We decide to leave the camera at home, well, our temporary home for the next two months. When we have finished our breakfast we go out to the garage where a car is waiting for us. We drive down one of the main roads, CDA Ave, towards the GEC circle, where most of the shopping complexes lies, when we see a traffic jam ahead.

We were warned about the traffic situation in the country before arriving, but we could not imagine that it would be like this. At the backseat of the car we are experiencing the traffic, which can be generalised as a large entity, a mass that slowly moves as one. The traffic jam is so thick that pedestrians are climbing over the hood of the cars, trying to cross the street. The driver honks his horn frequently, as do all the other road users. The result is a less well composed symphony that seems to go on forever. We have moved forward maybe three meters for the last 15 minutes: ‘’This is usual, the traffic situation is terrible’’, says the office manager and laughs. Apparently, the different classes in the society can be seen by the choice of vehicle – if you are poor, you either walk or take a rickshaw, the middle class make their way by a CNG (small three-wheeled Compressed Natural Gas vehicle), and lastly, the more well off people are sitting in the backseat of a car with a private chauffeur in the front seat. After two–three hours the traffic jam clears, and we continue our trip to the Chittagong–Dhaka highway. It is along this highway where the shipbreaking industry is concentrated.
The shipbreaking industry in Chittagong
It all began in 1960 when a ship was driven ashore by a cyclone around the sea shore of Sitakunda Upazila in Faujdarhat, approximately 20 km south-west of Chittagong (Hossain & Islam, 2006). Four years later a steel company bought the ship and started the process of demolish and recycle it. This was the starting point of the shipbreaking industry in Bangladesh as we know it today, with ships being bought and run ashore along the coastal zone of Chittagong facing Bay of Bengal.

The Chittagong–Dhaka highway makes this area good for transporting goods from the shipbreaking industry. Most of the re-rolling mills are located on the landside of this road, making the transport between the yards and the mills very short. It is also alongside this stretch of road where most of the workers and their families live. These residential areas lay right between the yards and the highway, exposed to pollution from both sides. The land is prone to flooding during the monsoon season and by removing all the vegetation to make room for the yards, this problem increases.

Due to the houses being located close to the highway there is never a quiet moment, but instead a constant noise from all the vehicles using their horns and stirring up dust. On the other side of the houses lay the shipbreaking yards, with constant noise from the ships being torn apart. Also, toxins from the ships are being dumped directly into the water, which during floods, ends up on land. Due to the lack of waste handling there is trash scattered all over the ground and a distinct smell of rotting garbage lays in the air. At a first glance the area looks like a huge dump stretching for miles, but at a closer look it is all organised with small shops specialised in certain items from the ships. One store specialises on fire extinguishers, while another one sells life boats, and so on (figure 1). The entire area has developed around the activities of the shipbreaking industry, and the fishing communities that used to dominate here are getting less and less space.
Today's industry in a global context – Underlying problems
Every year hundreds of ships face the end of their economic life. When this happens, and the ship is no longer required by its owner, it is likely that it will be sold to a scrapyard in the developing world. In 2014, roughly two-thirds (62.5%) of the total amount of all end-of-life ships ended up on tidal beaches in South Asia, a fifth (22%) of them in Bangladesh (NGO Shipbreaking Platform, 2014). The remaining ships are recycled in countries such as China, Turkey and in other countries in the EU where more sophisticated methods for dismantling and recycle ships are used. Thus, a better containment of pollutants, the use of heavy lifting equipment and the proper handling of hazardous wastes can be ensured in these countries. Overall, the industry in these countries are more technologically advanced.

At shipbreaking yards in developing countries, notably Bangladesh, India and Pakistan, all types of ships are simply run ashore on tidal beaches and the process of breaking them down begins (NGO Shipbreaking Platform, 2014). Almost everything is put to another use, from the hull to the machinery, including every fixture and faucet by the work of thousands of (mainly)
young men. Their profession as shipbreaking workers has been termed as one of the world’s most dangerous jobs (Gwin, 2014, May). Indeed, the numbers of causalities differentiates but is alarming. According to Shahadat Hossain, Chowdhury, Abdul Jabbar, Saifullah and Ataur Rahman (2008), more than 400 shipbreaking workers have lost their lives and another 6000 have been seriously injured over the last 20 years. Greenpeace and FIDH (2005) estimates the number of casualties to at least 1000. The uncertainty of casualties is due to the nonexisting official records. Further, the negative environmental impacts caused by the industry reaches beyond the yards with hazardous waste affecting people in the communities around it, for example fishermen who are depending on the ecosystem for their livelihood. The hazardous waste, such as asbestos, heavy metals, oil residues, TBT and PCBs all have the common denominator of being persistent and will affect future generations.

In contrast to this, the shipbreaking industry is important to the economy of Bangladesh. According to Shahadat Hossain et al. (2008) the shipbreaking industry employs about 50 000 workers and in addition 250 000 families earn their living from ship scrapping yards. Also, it supplies 60 percent of the total demand of iron of the country and it is also a source of revenue for the government of Bangladesh according to Shahadat Hossain et al. (2008). The World Bank (2010) estimates the output of iron from industry to be 50 percent of the demand. Despite uncertainties, it is clear that the industry is of economic significance for both the workers and their families, as well as for the country of Bangladesh. Despite this, the negative impacts caused by the industry cannot be ignored and different implementations to remedy the situation is urgently needed. On the whole, current situation is far from sustainable.

On an intergovernmental level this problem has been, and is still, discussed. The problem begins already during the ship's operational phase. To circumvent international maritime law FOC’s are used on vessels (Birnie, Boyle & Redgwell, 2009). This means that the ship is flying the flag of a state where the owner does not operate from, but instead has registered a shell company which allows it to register ships in that state. These states often lack the ability to conduct the inspections of ships registered under their flag as these ships seldom, if at all, enter their ports. Using a FOC also allows for less requirements regarding safety and structural standards of the ship. It also makes it possible to use crews that are not trained and can be paid far lower wages compared to the crews of ships flying the flag of a state following international treaties.
This does not just put the environment at risk but also the crew operating the ship, should an accident occur and there are no safety equipment nor trained personnel on-board to handle the problems caused by the accident. The lack of inspections and documentation means that there is no information about the presence of toxins or other hazardous materials when the vessel are beached and dismantled. The ships broken down on the beaches are bought mainly from European companies (NGO Shipbreaking Platform, 2013), against the principles of the Basel Convention's legal framework (UNEP, 1989). The Basel convention states that hazardous waste is not allowed to be shipped to less developed countries, but according to Hossain and Islam (2006) this is worked around through making the sale as a working vessel instead of an end-of-life vessel. Moen (2008) discusses the problematic case of The Basel Convention and its relation to the shipbreaking industry. A key concern is when a ship should be considered waste and when it should be considered a ship. Currently there are no laws that sufficiently prevents the damage caused by beaching in countries such as Bangladesh.

Most of the research accomplished so far on this topic is focused on the quantitative side of the problem (see for example Aktaruzzaman, Chowdhury, Fardous, Alam, Hossain & Fakhruddin, 2014; Hasan et al., 2013; Chang, Wang & Durak, 2010). This research focus on the toxic properties of the hazardous waste and its impact on the environment as well as its health effects. The only academic article we have come across which have an interdisciplinary approach is Shahadat Hossain et al. (2008) study. Shahadat Hossain et al. (2008) article focus on the workers at the actual yards and presents the worker's job situation and propose measures to remedy the problems caused by the industry, both from a health- and environmental perspective. However, the results from their interviews are presented in a quantitative form. Unlike Shahadat Hossain et al. (2008), we intend to go more in depth when presenting our results by giving room for the thoughts and feelings of the individuals being interviewed, and not just present them as a statistical number. Further, Shahadat Hossain et al. (2008) writes that:

The extent of damage caused by the scrapping of ships to the environment, to the livelihoods of the fisher folk and peasants that share the environment, and to the lives and health of the workers is not exactly known to this day. Absence of data however does not mean the absence of a problem. It just means that neither these communities, nor the workers, nor other authorities are serious about the problem, and are not prioritizing the issues (Shahadat Hossain et al. 2008, p. 377).
In the light of this quotation our angle in this thesis is to focus on the local communities in and around Chittagong, notably those alongside the Dhaka–Chittagong highway, due to the lack of research within this area. As previously mentioned the voice of the affected people in the communities is important in the process of finding a solution, and by doing this study their voice enters the academic discourse.

**Research purpose**
This thesis focuses on how people in the communities around the shipbreaking industry in Chittagong, Bangladesh, view the industry in relation to economic, social and environmental aspects and how their everyday lives are affected by the industry. The purpose of the study is twofold:

A. To give a voice to people who in various ways are affected by the shipbreaking industry and lift how they experience it.

B. To fill the gaps regarding qualitative material and provide a more nuanced view of the issue.

People living in the communities are both directly and indirectly affected by the industry, and we feel that their voice is lacking in the academic discussion. These people are affected by different decisions that is taken in order to try to solve the problems posed by the industry. To optimise possible solutions and give a nuanced view of the situation these people’s voices needs to be a part of the process, which is not the case today. If the discussion is not being held on a grass root-level together with the surrounding communities there is a risk of failure within implementation processes. As Lidskog and Sundqvist (2011) put it: ‘‘In short, if one should understand and address environmental problems, one have to realise that environmental problems arise in society and therefore its solution exists within the society’’ (Lidskog & Sundqvist, 2011, p. 11).
2. Bangladesh and Chittagong – entering the field and its social environment

Bangladesh

Bangladesh is situated in South Asia with borders to India and Burma, with its coastal zone towards Bay of Bengal (figure 2) (Utrikespolitiska Institutet, 2015). Bangladesh is one of the world’s most densely populated country with a population of 156 million spread on 147 570 km², equal to almost one third of Sweden’s surface for comparison. A large part of the country consists of a delta landscape. This delta landscape, some of the lowest-lying on this planet, is punishing. From the Himalayas, billions cubic meters of water and sediments runs into the country by the Ganges and the Brahmaputra. In addition, cyclones and tidal waves, accompanied by torrential rains, swamp the seaboard of the Gulf of Bengal. Together this creates annual floods, resulting in several deaths every year.

Bangladesh was previously a part of East Pakistan but became an independent state with the help of India in 1971. Since the beginning of the 1990’s the country has been ruled by two political parties, Bangladesh Nationalist Party (BNP) and Bangladesh Awami League (BAL), taking turns as the ruling party. The elections has since 2008 been boycotted by BNP and its supporting parties due to allegations of electoral rigging and widespread corruption. This has caused the participation in elections to plummet from 88% in 2008, to 22% in 2012. The political situation has a big impact on the society, and even though things might seem calm it can quickly turn violent as groups from different parties clash on the streets. This is something we were warned about and could read about daily in the news. Long strikes are held in the transport sector and people ignoring this has been victims of petrol bombs, assaults and vandalism which has caused numerous deaths around the country. These strikes have also affected the price on certain commodities, causing them to skyrocket.
Bangladesh is considered a LDC, with approximately 47 million people living below the poverty line (United Nations in Bangladesh, 2013). Most of the labour force are involved in low-income jobs or informal jobs and the education level is low as well as the quality of the existing education system. The government's vision is to become a middle income country by 2021 and Bangladesh has had an economic growth due to its textile industry and other export industries during the last decade. By achieving this, the goal is also to improve the educational system and increase the living condition of its population.

The relocation of the shipbreaking industry
Industries such as the shipbreaking industry is common in countries that are considered as LDC, sometimes also referred to as pollution havens. When speaking of the shipbreaking industry, The World Bank (2010) writes that it has undergone a profound relocation from East Asia to South Asia during the last 25 years. By the year 2000, South Asia (India, China, Bangladesh and Pakistan) captured almost three-quarters of the global shipbreaking market in terms of dismantled tonnage. Japan and Taiwan experienced a wholesale exit from the industry and the relocation of the industry is explained by lowering of labour costs, differences of environmental regulation and the demand of recycled materials that downstream industries use as inputs in these countries. Overall, the emphasis is on the domestic demand of the ship breaking industries outputs, notably relatively low-grade mild steel bars and rods for use in constructions. Bangladesh geographical location is also important; a long coastline with beaches and tidal water made the industry well suited in the country.

Chittagong – the field and its problems
This field study focuses on the city of Chittagong and in particular the housing areas around the shipbreaking industry. The city of Chittagong is located in the shallow coastal area of Bangladesh and has a population of approximately 2.6 million (Utrikespolitiska Institutet, 2015). The shipbreaking industry is spread out across the coast with the Chittagong–Dhaka highway running alongside it, creating an easy route to move goods in and out of the area which is also the main port of Bangladesh. Along this highway a large number of living areas consisting of small sheds are located, housing the workers of the shipbreaking industry and other low-income households such as textile workers and fishermen.
The shipbreaking industry is complex and has several different stakeholders on different levels. These different stakeholders affect the lives of the individuals interviewed directly by creating part of their social environment the people we interviewed have to negotiate. Therefore it is important to give a presentation of these stakeholders in order to put their views in the right context, thus creating an understanding of how we got access to different individuals, and why they were willing to talk with us.

**YPSA**

founded in 1985 in Sitakund Upazilla under the Chittagong district in Bangladesh is a NGO for social development with their main focus in the Chittagong district (YPSA, 2015). Since 1985 the organisation has grown and is currently the largest NGO in the Chittagong district. They are working with the poor and vulnerable population towards a sustainable society through various programs such as general health, HIV prevention and poverty prevention programs. YPSA is funded by donations from various national and international organisations as well as the Bangladesh government, the organisation is not affiliated with any political party but remains neutral in their work towards a sustainable society.

**NGO Shipbreaking Platform**

founded in 2005 by several different NGO’s working on the shipbreaking issue is the largest NGO dealing with the issue and the only international one, with presence both in the different countries where the industry is based as well as in the consumer and owner end of the industry (NGO Shipbreaking Platform, 2015). The organisation's main objective is to prevent ships containing toxic and hazardous materials from being beached in developing countries. In their work towards this, the organisation has already had successes by blocking exports of ships from Europe in a few cases and is working closely with the European Union to create laws that regulate the export of these ships.

**Muhammed Ali Shahin** (further mentioned as Shahin) is employed by both YPSA and NGO Shipbreaking Platform as a local coordinator in Bangladesh and acted as our contact person during our stay in Bangladesh. Shahin has several years of experience from this field and monitors accidents and development in the yards, reporting these to NGO Shipbreaking Platform to make the information public, as well as helping injured workers get treatment and financial compensation when accidents occur. Further, he has been working together with organisations such as Greenpeace, The World Bank, FIDH as well as media from various countries.
**SIDA** works on behalf of the Swedish government with an aim to fight poverty around the globe guided by the Swedish foreign politics (SIDA, 2015). This is done by distribution of foreign aid and among other things by funding research done by students, like this report, that deals with development issues and is conducted in a development country.

**BSBA** is an interest organisation that works on behalf of the shipbreaking yards owners and promotes the industry, they describe themselves as:

> [...] an organization established for the welfare of ship recycling activities in Bangladesh. It safeguards the rights of its members and ensures and environment friendly ship recycling activities helps the industry to grow, develop and make Bangladesh as number one ship recycling nation in the world which we are since 2003. The president of the association along with its member are leading the industry to reestablish itself with improved infrastructure, better working standard and safety standards. The industry is committed to continual improvement in occupational safety, Health, environmental standards, monitoring & control process. The industry is vibrant and with the help of all stakeholders will come with a new look in coming years (BSBA, 2015a).

BSBA has hundreds of members in form of owners of different shipbreaking yards (BSBA, 2015b).

According to Bryman (2011) one of the most important and sometimes most difficult steps in a field study is getting access to the social environment where empirical data is obtained. In our case, Westerners are generally very rare in Bangladesh, and in particular in and around the communities surrounding the shipbreaking yards. But at the same time it cannot be regarded as a ‘‘closed’’ environment, to borrow Bryman’s terminology. Instead, our field and social environment should be understood as somewhat in between a ‘‘open’’ and ‘‘closed’’ environment. This is a consequence of the security issues that the area along the shipbreaking industry impose on researchers, among others. In other words, it is vital to know which areas/communities are safe, at what time and how to navigate between these communities without compromising our security. Further, finding persons of interest, i.e. workers and their family members and fisherman's, is also difficult without knowledge about where people live and if they can manage visitors. The language barriers is also of importance, it is not possible to simply ask for the direction because very few people that live in the area around the highway speak English. Therefore, it was almost impossible to have access to the social environment without the help from our contact person (Muhammed Ali Shahin), our
interpreter and two local guides. Even though we had the help of these persons some interviews were still interrupted due to the security situation changing. The people around the shipbreaking industry here are generally afraid to talk to outsiders due to stories told by the shipbreaking yard owners about a suffering industry under constant attacks from westerners who want it shut down, and if the industry goes – so does their livelihood. This became clear to us during our first time in the field when we were moving from one community to another along the highway: suddenly an older man with a knife confronted us, whom we later learned did not try to mug us but was telling us that foreigners asking questions were not welcome in this area.
3. Conducting a field study – obtaining empirical material

Our main collection of empirical data derived from semi-structured interviews, a method that we preferred because of its ability to generate information leading to new, different and/or more specific questions to be asked in the following interviews. In this way, our knowledge and understanding about the industry and the thoughts, feelings and opinions held by people in the surrounding communities’ continued to develop through the field study. This would not been possible with a more structured approach, for example a survey approach.

Since the communities are located around Bangladesh’s busiest road, the Dhaka–Chittagong highway, it is noisy and crowded. Our presence also created some complications; when we visited the workers and their families in their homes it sometimes got crowded with neighbours’ and people from nearby communities. These two circumstances sometimes made it impossible and useless to record the interviews. Our methodological approach regarding recording the interviews was therefore flexible. Sometimes we recorded our interviews with a voice recorder (when possible) and transcribed it afterwards, but at other times this was not possible because it was simply too noisy. In such circumstances one of us asked questions and acted as the interview leader while the other took notes by paper and pen. The notes were then re-written together with the interpreter directly after the interview sessions. Some of the quotes in this thesis has been subject to change for the sake of readability. The changes are made in a way that does not change the original meaning expressed by the respondents.

During the field study we conducted interviews with a total of 18 respondents, 3 of the respondents were women, and 15 were men. All of them have a direct relation to the industry: some as family members and some by profession. Two of the interviews were abruptly interrupted, and three completely cancelled, due to the security issues that characterises the area around the shipbreaking industry. However, all the interviews have been used in some way, those that were not included in chapter 5 were still very important for our understanding of the social context that our respondents live within. For example, an interview with a family was interrupted, but during our brief time with the family we got to see how they lived for the first time. This made us notice certain details we had not previously thought of, and that we later could include in our forthcoming interviews.

There are several cultural differences between Sweden and Bangladesh and to avoid questions being formulated in a way that could make the informants uncomfortable the questions were
proofread by the contact person before starting the interviews. The questions were also discussed with the translator to avoid any misunderstandings during the interviews. The interviews derived from a manuscript of questions divided into topics, where relevant issues were followed up and further elaborated. When we transcribed our empirical material patterns emerged and were then used to form the different themes in chapter 5. While analysing the empirical material an iterative process made the theories and empirical material work together and develop simultaneously, as the analysis proceeded.

Another source of empirical material was obtained by being present in the communities where we took pictures, asked our interpreter and guides questions, observed both objects and subjects and took notes: all of these activities gave us an imprint of the social context and stimulated our intellectual process and thoughts, as our understanding about the field and social environment incrementally increased. The two sources of empirical material (semi-structured interviews and ‘‘being present’’) worked together and created a deeper understanding about the empirical material as a whole. Combined, it provided us with a broader picture of the field. The observations was conducted in a limited number of areas and under a shorter time, not living in the areas under a longer period of time together with the individuals. While we used this method we faced the same obstacles as during the interviews, concerning security issues and access to the field which limited our movement in the area, as well as the ability to use cameras.

To work with an interpreter
This research would not be possible without help from our interpreter since none of our respondents speaks English. And as Wadensjö (1998) recognises, it can sometimes be difficult to work together with an interpreter, from the perspective of both the researchers and the interpreter. Indeed, it is without a question that some empirical data is filtered through the process of interpretation. This is a result of our interpreter not being a professional in the sense that he is fluent in the English language, but almost no one we met during our field study was. Regardless, working with an interpreter, professional or not, creates another interview dynamic: it is between our initial questions, the interpreter’s translation towards the respondent’s, their response towards the interpreter’s and his understanding of their response that he then translates into English back to us where our understanding of the respondents situation takes place. It is apparent that our initial question and the translation of our respondents answers by our interpreter changes the dialog to some extent, most likely
regarding phrasing. But this does not necessarily have a negative impact on our understanding of the respondent’s thoughts, feelings and experiences. Since none of us speak or understand Bengali it is impossible and useless to argue that the interpreter’s translation is incorrect. Instead, it is as Wadensjö (1998) writes, a matter of what is intended and perceived as translation of the people taking part of the conversation that matters. The dialogue starts from the participating entities perspectives, and it is also here that the understanding derives from. Even though the questions were discussed with the interpreter, misunderstandings arose during the interviews. This meant that in some interviews we could not ask the questions we intended, but had to rephrase them for the next interview. This is a part of creating a relationship with the interpreter and is not negative for the study, instead it created questions we had not thought of asking, but gave us answers that were of significance. As long as we understood how the questions were misinterpreted the information were still valuable.

**Ethical considerations**
All persons involved in this study partook by their own free will and was fully informed of the purpose of the study and that the interviews were being recorded as well as promised anonymity due to the risks involved with participation if anonymity had not been used. Bryman (2011) describes an ethical approach to research as research that does not put the participants at risk or cause problems for them in the future, as well as freedom to at any time decline questions or to not be a part of the study. Within the shipbreaking industry the employment is insecure and if the worker’s names had been published they might lose their jobs. The employers sometime pay for medical treatment and access to injured workers in need of medical care had not been possible without anonymity since revealing those workers names might put an end to the employer’s financial support.

In Bangladesh individuals have previously been arrested for speaking against the government online and even beaten to death while under arrest (Freedom House, 2014). The government is by law allowed to monitor all communication, including voice and internet without a court order and has sentenced individuals to death for anti-government comments on Facebook in the past. To further avoid risks for the participants, some interviews were held in facilities provided by YPSA. When presenting our empirical material fictive names were used to make the text easier to grasp, the only real name used in our material is that of our contact person, Shahin. The names used were selected among the most common names in Bangladesh.
4. Theoretical framework – tools for understanding

During our study in Bangladesh we have met different groups of people who are affected by the industry. However, in this study we chose to focus on those who are directly affected; the workers, the injured/former workers and the fishermen. The different groups of people are affected in different ways. The workers are exposed to work-related risks on an everyday basis, the fishermen are exposed to a risk of losing their jobs and the injured workers are at risk of facing absolute poverty. But all of these different groups of people share the same underlying problem: the activity of the shipbreaking industry, which in turn is a result of an underlying pattern that can be explained through Wallerstein’s (2007) *World system theory*, as well as *environmental justice*. Further, we will explain how their *risks* are manifested and perceived within their respectively *social contexts*. Within their respectively social contexts, there are other actors and people that affect their perception of their situation. At this point, a key concept is *power*.

**World system theory**

According to World system theory (Wallerstein, 2007), the modern world system is, and has always been a world economy. A capitalist world system in a modern sense is characterised by a system that prioritises endless capital accumulation. That is, humans and corporations accumulate capital with the intent to accumulate even more capital, a process which is contentious and endless. The world system theories core argument is that economic growth can be understood both historically and at present as uneven power and trade relations between core areas, semi periphery and periphery.

World system theory emphasises the relation between different *production processes*, not the countries or states itself (Wallerstein, 2007). To understand this, Wallerstein (2007) argues that profit is directly linked with the degree of monopolisation. The centre-like production processes is basically quasi monopolistic in its structure, whereas the periphery-like production processes is the truly competitive. An example of a centre-like production process is research and development, and a periphery-like is low-skill and labour intense production, such as the shipbreaking industry. When an exchange between these production processes takes place, the competitive production-processes ends up in a weak position while the quasi-monopolistic ends up in a strong position. The result of the exchange between these two production processes is a continuous flow of value from the periphery to the core, which
reinforces the relationship between core and periphery. This pattern is what is meant by *unequal exchange*.

In our case, instead of a continuous flow of value from the periphery and semi periphery to the core, the shipbreaking industry is a matter of export of objects (i.e. ships). These ships are no longer considered as valuable in the core areas and therefore exported to the periphery and semi periphery. But the export is not solely a matter of export of ‘‘non-valuable’’ ships, but also an export of risk where the workers at the yards, the surrounding communities and the environment are the biggest losers. The shipbreaking industry is not the only manifest of this pattern, Dicken (2014) shows the examples of used clothing and electronic waste. Dicken (2014) writes that there is a global shift in waste, instead of dealing with the waste domestic, it is exported to *pollution havens* such as Bangladesh. This reversed process, is in line with Wallerstein’s (2007) theory since both processes emphasise on the continuing flow of *value* from the periphery to the core. Exporting toxic ships, clothing and electronic waste are all exports of non-valuable, from the cores’ perspective, objects to the periphery where the objects are valuable. In other words, it is much cheaper for the core to export these instead of dealing with the waste domestic, thus creating a profit. Wallerstein’s (2007) theory together with Dicken’s (2014) ideas on waste illustrates a two-way process, importing (natural) resources on the one hand, and exporting waste on the other, both at the expense of the periphery and for profit in the core.

Hornborg (2010) expands Wallerstein's *unequal exchange* with a focus on technology, *the machine*. He argues that technological improvements (development) must be available to the society in order to achieve anything at all. But in order to function, technological improvements are in need of resources, resources which in turn are extracted from the less developed part of the world. The world market is in this context the machines platform, the ‘’food source’’ that enables and provides the machines with natural recourses. It is obvious that technology, formulated this way, should be understood as exclusive and reinforces unequal trade and exchange in the world. The global balance of trade is asymmetric because the core is the global importer of products and resources, and the periphery is a global exporter of time consuming (in the form of labour) and space consuming (in the form of land areas) commodities. Technology is based upon this global zero sum game, and that is why satellite images of the earth shows the lit up techno mass in the western part of the world, whereas it shows the opposite in the developing part of the world.
To understand why the shipbreaking industry is located in Chittagong, Bangladesh, World system theory will be used in our analysis. Hornborgs (2010) discussion will be used to shed light on the shipbreaking industry as both a time and space consuming industry, with profits being accumulated in the centre. Leaving the periphery exploited and used as a dumping ground.

**Environmental justice**
To create functioning welfare states the division of labour has spread like described by World system theory, where capital is accumulated in the centre, creating a periphery of poverty (Bonnedahl, 2012). The word poverty does not just mean the economic inability to feed yourself and shelter for the night in this context, but also the inability to freely choose what environment the individual is exposed to and what risk that brings.

When a corporation places their production in the periphery due to the lack of environmental regulations and to obtain cheap labour, a short term economic growth will take place at this location (Wallerstein, 2007). The positive effects of this growth will disappear once the negative effects of the industry outweighs the gains. In the centre, states are expected to prevent these problems with legislation and bans, which in many cases work (Bonnedahl, 2012). In the periphery there is no strong state in place to deal with the problems and maintain a protection for its population, instead, the state often finds itself in a position where corporations and states with a large amount of capital exerts power over them. According to Walker and Burningham (2011) there are two central questions when it comes to environmental justice, what social inequalities exists in relation to the issue being examined and how are these produced, for example who is responsible and what policy decisions are making them possible. It is important to not just focus on the patterns but to understand what causes these patterns. This will make it possible to understand why capital has been able to accumulate in some places and environmental problems and poverty in others (Hornborg, 2010; Walker, 2009).

Environmental justice will be used in our analysis to show how some environmental problems are produced in relation to the shipbreaking industry. It will also help to explain how these unjustly affect certain groups of people and what makes this possible.
Social context, risk and power
Lidskog and Sundqvist (2011) discuss how individuals perceive environmental problems within the social context, and underlines that there is no such thing as an autonomous, rational individual which can act freely without being affected by one’s surroundings and interaction with other people and groups. It is within this interaction with the environment that the individual’s thoughts, feelings and wills are developed. What is seen as an (environmental) problem is therefore contextual and can differ from country to country and even within subcultures within a culture. Since our purpose of this study is, to possible extent, present people’s worldviews in relation to the industry, it is important to have in mind which social context the individual is living within. Further, Lidskog and Sundqvist (2011) discuss that people sometimes do not have control over their situation, and therefore their intention and will to act environmentally friendly is disqualified by external barriers, such as poverty.

According to Shahadat Hossain et al. (2008) the communities in- and around Chittagong consists of low-income households. For our study it is very important to understand that these individuals mandate to act environmentally friendly is limited. All these actions then affect other individuals’ options when making their decisions by setting their conditions, for example level of income (Lidskog & Sundqvist, 2011). This in turn creates a society divided into different classes where money and other valued attributes allows an individual to climb the ladder, and by doing so gain access to other alternatives then the ones further down. For example residential areas less prone to flooding and landslides, making these risks a social construction. Douglas and Wildavsky (1982) writes about risks that are involuntary. Some classes of people in the society face more and greater risks than others, and these risks are involuntary in a way that they might not accept them if they could. Poorer people are sicker, die earlier and have more accidents compared to rich people. This is a result of the particular social context (or even country) that the person in question is living within. In other words, some social systems give people a harder life, hence a greater exposure to risks that are involuntary. When talking about risk in this study it is this view we will be using.

By creating a hierarchy within society allows for the individuals at the top to exercise power over the ones further down by limiting their alternatives. This forces the ones further down into undesirable situations, where their options are limited and they are forced into making decisions that they would not have taken if they had other choices. This exposure occurs both by living in areas prone to flooding and landslides and by working under dangerous
conditions, for example at the shipbreaking yards. Both of these would have been avoided if there had been alternatives in the society. To explain how this is a part of the power network Börjesson and Rehn (2009) uses the example of a boss refusing to bring an issue onto the agenda, thereby preventing a decision to be made as a way of exerting power over the individuals wanting the issue dealt with. In the same way companies use a middleman to sell ships to avoid being the ones actually selling them for scrapping, they are exerting power to make someone else do the “dirty work” for them. This way they get their will done by making someone else do it for them, which is just as bad as doing it on their own, but this way it is not their name on the paperwork. By exerting this power to enable the industry, the decision makers are also contributing to create risks for the individuals on the lower end of the hierarchy ladder within the industry, as well as the ones affected in close proximity to the industry, such as fishermen. Within the concept of power, we will also use the ideas of Kronlid (2005), who discusses environmental ethical theory as a contribution that can help our understanding about our own moral, as well as what happened to other people. He uses concepts such as structural oppression, marginalisation and powerlessness and puts these into a justice perspective. Kronlid (2005) writes that structural oppression is maintained within social structures that regulates conditions between different social groups. It is different norms and practices in society that systematically and unjustly affect certain groups of people in the society. With the concept marginalisation, Kronlid (2005) draws attention to individuals or social groups that are incapable to change their lives for the better on their own. These individuals or social groups might also be subject to paternalistic, patronising and disparaging treatment and attitudes. Further, Kronlid (2005) discuss individuals who are marginalised because the job market cannot, or will not, make use of them. As a consequence, these individuals become dependent on society’s safety nets (if any exists) as well as deprived of their ability to develop themselves, their resources and their life in a societal acceptable way. This means, to some extent, that they become powerless.

Social context, risk and power are closer to our empirical material and are used in our analysis to display and understand the social environment that our respondents are living within. However, their social environment and all of Chittagong is affected by trade with foreign countries – therefore, on a global level, it relates to both World system theory and environmental justice.
5. The lives we live – the voice of the people of Chittagong

The underlying problems and the context of the shipbreaking industry is on an intergovernmental level, with winners and losers in different parts of the world. The big winners, even though jobs are created and therefore injects capital into the local economy, is still companies as well as countries in the west. On the other hand the losers, even though the industry contributes to global problems, are the local population. Our theoretical framework was chosen to explain this development and bring the point of view of the people living in Chittagong into the academic discourse. The cost of the industry is environmental degradation and a lower quality of life, in some cases even to the extent that the industry causes poverty, injuries and sometimes even death.

Working on the beach
The most common phrase from workers when we asked about why they work in the shipbreaking industry was “to maintain my family’s needs”. This describes the workers situation very well, they do not have any other alternatives but to work in the shipbreaking industry in order to survive financially. There are no other jobs available and the level of education is generally low, sometimes below elementary school. In other cases, the (mainly) young men are forced to take a job because a family member is sick or injured, or micro loans to a NGO must be repaid, or the family cannot afford the rent or to feed all family members. All of them share one thing in common, the desperation and need to have a job and income for the sake of their livelihood. As a result of their situation, they will take any job, even if they know that it is dangerous.

At our first visit to one of the communities we conducted an interview with a worker and his family, and got a glimpse of how a typical worker lives: in small, simple sheds that are located close to each other consisting of mostly wood and steel plates (figure 3). In the middle of the yard there is a black water tank, across the yard hangs clothes lines. We step inside and see the small one room where Zahir, Rima and their daughter live. There is just enough room to fit all six of us and we sit down on the only bed. The walls are covered with old newspapers, old pots and other utensils hang on the walls and stand on the ground. The cooking is done with a portable stove and the ceiling is coloured black by the smoke from the open fire. It is hot and sunny, and we can imagine that the temperature inside the shed must be unbearable when cooking.
Zahir and Rima moved to this place from another area when they got married a year ago. They tell us that this area has better opportunities for them, such as cheaper rent, lies closer to the work, better environment and are overall more secure. This is hard for us to understand, the shed lies just 10 meters away from the Chittagong–Dhaka highway, one of Bangladesh most busy roads. Neither running water nor electricity is available. Garbage is scattered all over the ground and the traffic emissions are huge, not to mention the traffic insecurity. Also, the traffic whirls up a cloud of dust that lies thick in the air.

Despite their precarious economic situation we are offered something to drink and some sliced green apples. Zahir tells us that he has been working in the shipbreaking industry for 18 years, first as a helper to a cutter-man and later on as a cutter-man. As a cutter-man your job consists of cutting ships apart with a torch from the inside and out, in his case for about 500 BDT (about 52 SEK) a day, since he is experienced. 18 years is a long time considering the physical conditions that the industry impose on workers, and he feels lucky not to have suffered any major accidents and injuries. “I do not like his job because it is too dangerous”
says his wife, and continue: ‘‘There is no future in the shipbreaking industry for us, but we have no other alternative. Otherwise we would not survive economically’’ (Rima, 2015-04-12). She works in the textile industry as a garment worker, and their wish is to support their daughter in the future by putting her in school. Right now she is too young to go to school. To do so, they have to save money, and a job in the shipbreaking industry is not enough to accomplish this. Even though the salary in the shipbreaking industry is higher compared to other low-income jobs, the physical conditions that workers experience in the industry results in frequent visits to doctors and costs for medicines. Due to this, the seemingly higher income becomes a lower income with less money over for household expenditures and to save money for the future.

Reza, another of the shipyard workers we meet, lives in an area that we cannot move around in and therefore we interviewed him at YPSA’s guesthouse. He describes the environment at the yard as dystopian, as do many other workers. Reza’s first contact with the shipbreaking industry was through his uncle. He was unemployed and desperate for work, when his uncle slipped and broke his leg at the yard. This might sound surreal, but his uncle's misfortune gave him an opportunity to obtain employment as a cutter-man’s helper in the shipbreaking industry. Desperate as he was, he accepted. This happened 8 years ago, and he has been working in the shipbreaking industry ever since.

Reza’s first impression of the industry was good, he was impressed by the large ships and felt excited to be one among all the other workers. But this changed quickly. He describes the working conditions at the yard as very-very bad, and shake his head. He tells us that the work at the shipbreaking yard is hard: heavy lifts in high mud, under the scorching sun. When he feels thirsty there is no access to clean water, it is coloured red and have a distinct taste of iron. Contaminated water, coming from the yards could be seen flowing past the communities (figure 4), though this is not water used for drinking. Reza tried to talk to the shipyard owner to tell him about the iron in the water, but got no response. “The shipyard owners do not care about us” (Reza, 2015-04-17), he says over and over again.
There are sharp pieces of iron and broken glass hidden in the mud, and he often cuts his feet: ‘‘When I cut my feet, I sometimes visit the pharmacy to get medicine, so that the blood stops’’. They have no access to safety equipment and the air is heavily polluted. When asked why he does not use boots he says: ‘‘There is no idea to wear boots when walking around in the mud, it is too high’’.

Sometimes Reza removes oil from the ships, and throws it directly into the sea. He has heard that the fumes from the oil as well as the asbestos is bad for his health, and that he will suffer various types of problems in the future; tuberculosis, asthma and various types of cancer. But as many others, this is something he has to accept. He has no higher education and because of this there are no other jobs available. When he will have children, he dreams of putting them in school. But it is not possible right now, Reza has no money saved and does not own any land. When reflecting on his future he feels hopeless. Reza wants to see changes in the industry, he mentions rest houses, paid vacation, medical facilities and trade union, among others. And he thinks that this is possible, he sees the shipyard owner opening new yards and

*Fig. 4. Photo showing a dog tearing up garbage in a stream of red water coming from one of the yards. Photo by authors.*
earning a lot of money, so there must be money over to implement improvements. At the same time he is afraid that he might lose his job if he argues with the owner. And he does not, under any circumstance, want the industry to shut down: ‘‘If the industry is shut down, where will we go? What will we do?’’, he asks us.

**Used and forgotten – Injured workers and their families**

In the early stages of our field study we conducted an interview with an injured worker at Chittagong Medical College Hospital. Our contact person, Shahin, called us urgently Monday morning (2015-04-13): ‘‘Sorry for not showing up at the meeting yesterday, but a worker got severely injured so I helped him at the hospital’’, he says and continue, ‘‘He is ok now and I have arranged so that you can visit him’’. During the evening we meet with our interpreter and take a CNG to the hospital. When we arrive at the entrance of the hospital our first view is an old and large grey/white building, with people standing outside it. Our interpreter instructs us not to take pictures inside the hospital, and that voice recorders will cause negative attention. We step outside the CNG, and walk behind our interpreter who walks towards the entrance and begins to talk with two policemen. After their discussion, he tells us that one of the policemen is his relative, and that is why we are allowed to enter the hospital.

We step inside, following our interpreter and his relative, the policeman. The hospital stands in complete contrast to hospitals in Sweden, patients is lying on thin mattresses on the floor where there is room, some directly on the floor. Others lays on old hospital bunks. The environment at the hospital makes us feel miserable and there is a smell lying in the air that cannot be described. Even though there is a large amount of people it is surprisingly quiet and most of the people consist of patients and their relatives, very few doctors and nurses are seen during our visit. The rooms with hospital bunks for the patients are painted in dark colours with windows leading out to hallways. Very little light comes in from the windows and the rooms are poorly lit up with lightbulbs giving off a weak yellow light. Some fans are running slowly in the ceiling and creates a buzzing sound. We take the elevator to the third floor, stepping outside and then to the left. The policemen seem confused, talk for a short while on Bengali with our interpreter and then turns back. ‘‘This is the wrong section’’, our interpreter tells us. We walk for a couple of minutes and then enter a big room. Here, all patients are lying on old hospital bunks. We walk in the corridor of the room, with people lying to our right and left. Our presence causes attention, it feels like everybody is watching our moves. In the middle of the corridor we take to the left. Our interpreter tells us to wait a little bit. He
begins to talk in Bengali with a man who is lying in a bed covered with a blanket from the waist down. He is the injured worker, Hasan. The interview begins.

Hasan was employed as a cutter-man and was working as usual when suddenly an item from the ship fell on him, particularly on his left leg, which crushed his leg from the knee down. He also suffered injuries to his head. When we met him his condition was stable, but his leg could not be saved – the doctor had to amputate it. In addition, his right eye is severely injured, to the extent that he might lose his eyesight. His wife is there with him, standing next to the hospital bunk. He says that the owner of the shipyard visited him at the hospital. Primarily not to check on him, rather to inform him that he should not, under any circumstances, talk with NGOs, human rights people, activists or foreigners. If so, the owner would cut off the payment for the initial medical treatment, leaving him with medical costs that he cannot cover. Because of the threats from the shipyard owner, our presence is worrying him: ‘’Because you [the interpreter] came with two foreigners this news will reach the shipyard owner’’ (Hasan, 2015-04-13). The policeman ensured our translator that no problems will occur, he will stop the owner if he comes to the hospital and tries to talk with the injured worker or the hospital staff. This makes us feel uncomfortable, how can the policeman ensure that our presence and interview will go unnoticed? This information was not given to us in advance, instead the interpreter told us this after the interview was conducted. Therefore we decided to use the empirical material since using it will not cause any further problems. It was our presence at the hospital that could cause issues, and there is nothing we can change about that at this point.

When reflecting on his current situation and the future, Hasan is worried and afraid: ‘’How will my family’s needs be provided now when I cannot work’’. He is also afraid that he will not be compensated for his injuries. If so, this will leave the family in a desperate situation because the main provider, economically speaking, will not be able to work in the future. ‘’I lost my leg forever, what will I do now?’’, he says. He has no idea what to do when he leaves the hospital.
Another victim of the shipbreaking industry is Kunwar. He is currently living in a fishermen’s village (figure 5) nearby the shipbreaking yards together with his family. The community is like the others we have visited, with its many sheds. But the environment is different, the community lays 10 minutes by CNG from the highway and is surrounded by green open spaces and small agricultural fields. The noise from the highway is not that noticeable here, it can almost be described as quiet. It rained last night and the ground is muddy. Inside the yard, on the ground, lays Styrofoam pieces that are enclosed with fishing nets. Nets also hang along the sheds. When we arrive to the community our presence creates a fuss, a crowd is following and watching us as we walk through the community. We arrive at Kunwar’s and his mother Dhara’s shed. Once inside we see images of Hindu gods hanging on the walls. Dhara brings us three chairs, we sit down, and the interview begins.

Kunwar is married and his wife works at a textile mill, where she earns about 2000 BDT (about 208 SEK) a month. Her income alone cannot cover all their expenses, particularly not since they also have a three year old daughter to feed. Before the accident Kunwar was
employed in the shipbreaking industry for two years as a labourer, which is a kind of multi-purpose profession at the yard. Sometimes he moved dismantled iron pieces from the ships to the trucks, sometimes he tried to remove oil, etc. Basically he was a helper to all the other workers. Kunwar’s father also worked in the shipbreaking industry, as a labourer, but died in an accident four years ago. Now it is Kunwar’s main responsibility to support the family’s financial needs. But seven months before our interview Kunwar slipped at work and fell from a ship, landed on his arm, and broke it. His mother talks with our interpreter and takes out a binder and hands us pictures from the x-ray. His arm is entirely broken above the elbow. There was no access to medical treatment at the yard, not even a first aid kit. At the scene of the accident, only workers came to his rescue. Later on, his mother and cousin took him to Chittagong Medical College Hospital where he was hospitalised for seven days. He did not receive any compensation, either for medical treatments nor any indemnity from the shipyard owner. ‘‘Who paid for the one week treatment?’’, we ask:

My mother in law, she paid for everything. But after one week we could not afford any more medicine or treatment. Ever since, the treatment and medicine has stopped. Currently I have a lot of pain in my arm, and I do not know what will happen to it (Kunwar, 2015-04-24).

His mother who thus far has been standing next to us, begins to talk: ‘‘I have gone to the shipyard owner a lot of times bargaining to him, to get compensation. But he does not care about us! Leave this place! Leave this place! He says to me’’ (Dhara, 2015-04-24). Her voice is filled with anger and sadness, and illustrates a kind of hopelessness and despair. She says that the first time she went to the shipyard owner after the accident, he promised her that he would take full responsibility for her child’s accident, paying full compensation. But after a while, when no money arrived and Kunwar had to borrow money from his mother in law to cover the medical expenses, she went to the shipyard owner yet again. This time his attitude was reversed, and he declared that no compensation would be given at all. This made her angry, and she told the owner that she would take citizen action against him. As soon as she said that, the owner replied: ‘‘Are you threatening me!!?’’. After a spiteful argument she left, but as she is a stubborn woman, she came back at other times. During her attempts to get justice and compensation, the owner got tired of her and called some of the workers who confronted her and told her to leave the owner alone, and to leave the scene, or else something bad would happen to her.
When asked about why they think that the shipyard owner refused to give them compensation, Kunwar’s answer is: “I am Hindu, and that is why the owner does not take any responsibility. If I would become a Muslim, then the shipbreaking yard owner would be more concerned about me”. Kunwar and Dhara explains that most of the workers in the shipbreaking industry are Muslims, and when accidents occur the Muslims are united and tries to put pressure on the shipyard owner to take responsibility. But since Hindus represent a minority of workers they cannot get any power and unite as the Muslims do. This is also the case regarding work task and employment, Hindus tend to get the lowest rank and are hired as labourer, which is, as written before, a helper to all the other workers. Kunwar is deeply concerned about the future of the family, he expresses a kind of guilt since he is by culture the one responsible for supporting the family’s financial needs. If he loses his arm he does not know what to do: “How will my family survive?”.

When we had been in Chittagong for a little more than one month, we interviewed a family whose son died while working at a yard, along with three other workers when a gas cylinder exploded. It is afternoon when we, yet again, take a CNG from Chandgaon R/A (Residential Area) to the area around the shipbreaking yards. We are driving on a bumpy dirt track when the driver tells our interpreter that this is the place. We step outside the CNG and look around, a wide green field is the only thing we see between where we stand and the ocean, where we can see the beached ships. We walk for two minutes and come to a shed where the family we are about to interview lives. This place is not like the other communities where the sheds lies wall to wall. Instead, this shed lies a longer distance to the closest neighbour and is surrounded by green fields. In the backyard we see a cow and some chickens.

We step inside and meet the father, Jewel, who looks old and tired. He says something in Bengali to his wife Amina, and she comes in to the room, helping their son Abir who lies down on the bed. Our interpreter begins to talk with them for a short while in Bengali, and then asks us if we are ready to begin. We nod and the interview begins. 1 year ago an accident happened at a shipbreaking yard where Jewel’s and Amina’s two sons worked as cable/wire workers. The incident happened when a gas cylinder exploded and filled the space they were working in with carbon dioxide which killed four workers, and injured three. One of the dead workers was Jewel’s and Amina’s son Apon, and one of the severely injured was their other son, Abir. Apon died on the spot while his brother was rushed to the Al-Amin Private Clinic by the help of co-workers. At the scene of the accident, the gates to the yard were closed on
the instructions of the shipyard owner, no one was allowed to enter. During the whole interview Amina’s voice is filled with sadness, a heavy, almost sepulchral atmosphere fills the small and dark room. She tells us that Apon was married, and that his wife was pregnant when the accident occurred. Right now, his child that he never got to see is without a father, six months old. When asked about how they got to know that there had been an accident, and that their sons were involved, Jewel’s voice changes and starts to quiver, and then he cries, as he talks with our interpreter. We say to the interpreter that we understand that it must be hard for them telling us their painful experience and that we completely understand if they wish to end the interview. He nods and speaks with Jewel and Amina, then turns to us and says that they wish to continue. Jewel tries once more to answer our question: ‘’Some of the workers called me by phone. They said that an accident had happened and that my children [both Apon and Abir] was at Al-Amin Private Clinic, please come quick!’’ (Jewel, 2015-06-05).

As yet they have not received any compensation from the shipyard owner for Apon’s death or Abir’s injury. They have gone to the shipyard owner a lot of times to get compensation, without any success. Instead, the family is left with a microloan to a local NGO in order to cover for Abir’s treatments cost at the hospital, as well as the current costs for his medicine. The total cost for the treatment amounts to 50 000 BDT (about 5292 SEK). In addition, Abir is not physically fit to work at all which means that his father has to maintain the family’s financial needs by his own, which is worrying him:

He [Abir] cannot perform any work, so I have to work a lot to maintain my family’s needs. And I am getting older, day by day. I am very concerned about the future, what will happen? […] I earn money but it is not enough to maintain my family’s needs. I cannot manage like this much longer, what will happen next? (Jewel, 2015-06-05).

Jewel works as a day labourer, which means that he works when and where there is work that needs to be done. He mostly works with various types of road repairing activities. As a consequence, when there is no work that needs to be done: there is no income at all either. And sometimes he has to work when he is feeling sick.

The situation for the family is severe, as there is no safety nets within the society at situations like these. At the shipyard where the accident occurred, it is business as usual. No government officials nor representative from the shipyard have come to visit and talk with them to give
them support in this tragedy. When the interview is over, and we are about to leave, Jewel
says something in Bengali to our interpreter. ‘‘What did he say’’, we ask the interpreter. ‘’He
is asking if you guys can help them somehow’’.

We also talked to Masud, who is lying on a bed in a small shop on the roadside next to the
highway, paralysed from the breast down. He says: ‘‘The mentality of the owners seem to be:
out of sight – out of mind’’ (Masud, 2015-05-11). He was injured at the yard when a wire on a
crane broke, causing a 300 tonnage iron plate to fall on his back. He was rushed to the
hospital by the help of co-workers and reached the hospital in one hour. He has been lying in
that bed next to the highway ever since the accident, which occurred in 2007. His father died
in 2012, and right now his mother is the only one taking care of him. She works as a helper to
another family, and cannot afford the medicine that he needs for his pain. At the end of the
interview, he says something that makes us question the reason why we are here and what
difference we can make: ‘‘Ever since the injury a lot of foreigners came to visit me, but only
to write reports in newspapers, not to help me’’.

Analyzing the injured workers situation
Hasan, lying injured in the hospital bunk, is worried about what could happen to him if the
owner finds out that we visited him at the hospital. Even though the owner, who is a man of
power, warned him about speaking with foreigners, he decided to talk with us. Kronlid (2005)
discusses the concept structural oppression. To talk about structural oppression, Kronlid
writes, there is no need for neither the social group being subject to the oppression, nor the
social group that exerts the oppression, to be conscious about their respective categories. In
this case, we have identified two social groups; the workers and the employers/bosses, who
both are aware of their respectively social group. Before Hasan entered the hospital he was at
constant risk due to the working environment in the industry. The shipyard owner deprived
Hasan his right to his own body every time Hasan went to work. And when the accident
occurred, the owner claimed the right to his voice, to speak about his case. He is marginalised,
to borrow Kronlid’s terminology, because he is excluded from his former category as a
worker because of the injury. Also, the injury is severe enough to exclude him from the job
market, both now, and most likely in the future. He is at risk of losing the possibility to get
compensation and the medical costs covered, something his health, as well as his future,
depends on. He is as Douglas and Wildavsky (1982) puts it, in a situation where he is exposed
to involuntary risks. Risks that he would rather avoided, if given an option. The consequence
of the risk is also irreversible, he cannot go back to the physical state that he was in before the accident. His body is violated in a manner that deprive him from his power over his own life, his living space. And since he is by culture the main provider for his family, the whole family is at risk of facing poverty since he is out of the job market in the future. In other words, the risk he is exposed to is transferred to his whole family. This illustrates how the industry affects workers and their families, to the extent of facing poverty.

This short analysis of Hasans situation can also be applied to the other injured/former workers: Kunwar, Abir, Apon and Masud. The difference is that these are not given the opportunity to get their medical costs covered or to get compensation. The boss is ignoring them completely. It can be understood with Börjesson and Rehn (2009) example of a boss refusing to bring an issue onto the agenda, and therefore preventing a decision to be made as a way of exerting power over the individuals wanting the issue dealt with. In this case, preventing a decision to be made is done in a more crude way. They are threatened with violence if they do not leave the owner alone. And since they all sees the owner as powerful, and their own situation as powerless, it is hard for them to get their will, and thus justice through. Masud explains it very well: ‘‘The mentality of the owners seem to be: out of sight – out of mind’’ (Masud, 2015-05-11). This quotation can be applied on both a micro and macro level. When the ships are exported together with their environmental problems and risks they are out of the companies and the owner's responsibility, and when the workers are injured and no longer useful for the owners, they are out of their responsibility. Masuds faith illustrates the powerless situation they risk ending up in if they get injured. It is as Hornborg (2010) and Kronlid (2005) says, a matter of ignoring and hiding both the ships and the workers. Their existence is only important when it comes to making a profit.

A lost heritage – the fishermen
Another group of people affected by the shipbreaking industry is the fishermen in Chittagong, who live and work directly next to the yards along the coast, separated only by a high wall with barbed wire running along the top. The shipbreaking industry makes a lot of noise, cutting and moving metall. This noise travels with full strength to the community next door making it a bad place to sleep and even conduct interviews in. We meet up with Abhra, a 45 year old fisherman who has been living of this profession since the age of 7. This meant that he never got the opportunity to go to school, they were a poor family and everyone needed to
pull their weight. Abhra works on a boat with four other fishermen that fish as close to their home as they can, although most of the time they are forced further away by the ship owners who does not want vessel's operating in what they claim to be their area. During the fishing season they get about 40 kg of fish on the boat each day, on the off season only about 5–6 kg.

During his 38 year long career as a fisherman Abhra has witnessed the fish getting smaller and smaller in size and the variety of species decrease. In some areas close to the shipbreaking yards only one type of fish is able to live, and they often see dead fish covered in oil floating in the sea when they sail out to their fishing areas. One of Abhra's colleagues, Ishan, tells us about something they have seen on Discovery Channel “If there is water there is supposed to be fish, but that is not the case here, why!?" (Ishan, 2015-05-11). They think it is created by the different industries located in connection to the sea polluting the waters they use for fishing.

Sometimes when ships are beached they destroy the nets placed in the sea. When this happens they try to get compensation for the damages, but the owners does not listen to them. Arnav says: “The owners of the various industries are very powerful and we are only simple fishermen” (Arnav, 2015-05-11). They have tried contacting the government about these issues, without any luck. When trying to solve the issue with the owners by themselves, the situation turned violent and they got threatened. The situation escalated further and shots were fired. Now they have nowhere else to turn regarding their problems.

The fishermen we speak to all come from families where their fathers and their fathers, and so on, were fishers. It is a profession they are proud of but it is getting harder for them to keep doing it due to the lack of fish, decreasing their income. They all tell stories about seeing dead fish floating around and oil spills around the ship breaking yards, about relatives or neighbours who have been injured working in the industry and the lack of help when accidents occur. They have trouble sleeping due to the constant noise and can feel the pollution in the air they breathe. Still, after telling us all this, they say they wish to work in the yards as well, because they need money to provide for their daily expenses, something that becomes harder and harder.
Even though they are proud of their profession they do not wish that their children keep the tradition alive. Instead, they want their children to get an education, something they were not able to do as they started working very young. With an education other job sectors opens up, which in turn enables a higher and more stable income and overall, a chance of a better life. It is easy for the yard owners to find labour and the fishermen says it is because of this they cannot get jobs within the yards, they are old and not fit enough to perform that kind of work. The industry rather employ younger men and to a certain extent even children.

**Analysing the fishermen’s situation**
The high walls separating the fishermen's living area from the yards where ships are being broken down is a clear sign of how the industry tries to keep unwanted attention away. The interest from international media has increased in the last couple of years, something that the owners seem to fear since it might hurt their business.

![Fig. 6. Photo showing how close the yard is from the waters the fishermen use. Poles mark the border which turns into barbed wire on land. Photo by authors.](image)

The same reasons are behind the control they try to uphold on the waters outside of their yards. From a boat it is possible to see the working conditions and environmental effects the yards create. This is shown in figure 6, where the border between the two areas can be seen. It is by boat most journalists are traveling while covering the industry, so did we while conducting this study. When we were in Chittagong a French TV team was filming from a boat when another boat showed up and intercepted them and the crew, tying their boats
together to prevent the TV team from leaving, acting hostile. If they dare treat international journalists like this, journalists that they know can damage their business, then where do they draw the line when it comes to dealing with workers who speak up.

The land used for shipyards is in most cases owned by the government, but in Bangladesh money equals power which becomes very clear during our interviews. With money you can conduct your business the way you want without consideration of environmental laws and other regulations, as long as there is no coverage of your misconducts in the media which will force the authorities to act. This is shown in how workers and fishermen gets ignored by officials when making complaints after being subjected to injustice. This shows a hierarchy like the one Lidskog and Sundqvist (2011) writes about which grants different classes access to different alternatives. It is here that environmental justice plays a role as well. Bonnedahl (2012) talks about it as a periphery of poverty when talking about it on a global scale. When examining it closer on a local level there is also big differences, as in the exposure to pollution and noise. Every community in Chittagong is exposed to noise and pollution from the traffic, but not everyone lives next to a yard and is by their level of income forced to stay there. Walker and Burningham (2011) mentions two important questions for understanding why these inequalities exists: who is responsible and what makes it possible. In this case there are laws and policies in place to prevent the problems, but due to corruption these are bypassed. This means that the officials are highly responsible as well as being the ones making it all possible, at least in the eyes of the fishermen. On a larger scale responsibility can be traced back to the ones profiting from the ships while in use, or even to the consumers for buying services where the ships were needed, thus creating the initial profit. So by exporting these vessels to the periphery, local people are exposed to several risks, including, but not limited to, physical harm and poverty due to a lower income.

**Trying to make a difference – the social worker**

As our stay in Bangladesh was nearing its end we still had one interview left, with Shahin who had been helping us during our stay and without whom the study had not been possible. Shahin has been working with both NGO Shipbreaking Platform and YPSA for several years and has a good insight into both the shipbreaking industry and the different social issues the people face in the Chittagong district. According to Shahin the main concern in Chittagong is currently the floods that regularly occur because of the lack of sufficient sewage and water systems. Due to the city being located right by the ocean at low altitude in an area frequently
exposed to heavy rains the streets often get flooded, causing damage to buildings and sometimes even deaths. But there are several other problems just as important to deal with in Chittagong. Shahin mentions the shipbreaking industry, air pollution, poverty and law and order, among others. These problems are all linked together: the industries cause excessive pollution since both the government and the owners ignore environmental laws. As a consequence of the industry’s expansion, areas of vegetation is removed to provide space for new yards. The vegetation was planted by the government in order to protect the city from floods from the ocean during the monsoon season. This clearly shows the government’s inability to act against the industry.

None of these problems have an easy fix but requires change on multiple levels in society as well as a changed mind-set. To create change, Shahin works with YPSA to educate people about social issues and give guidance. One of the groups involved are volunteers who respond after disasters to help government personnel recover missing people caught in landslides or fallen houses. YPSA provides them with training and they then assist when needed. Volunteers are also trained in social rights and then spread this knowledge in their communities and act as activists during different events. Most of these volunteers are students with different backgrounds looking for ways to change the current situation in Bangladesh. The communities most affected by the floods and landslides mostly consists of people working in the garment industry or industries such as the shipbreaking industry, according to Shahin. At the same time the entire society are affected by floods shutting down roads and halting movement, but not everyone is affected by water coming into their homes. Most of the high risk areas are slums consisting of people from all over Bangladesh who moved to Chittagong to get a job, a lot of them from the northern regions where agriculture is the main source of income, but where jobs are scarce at the moment. These individuals then head to the large cities, mainly Chittagong and Dhaka in search for a job and a better life, but ends up as exploited and underpaid labour says Shahin. It is also among these workers where cancer is the most common, not just from exposure at work but also because their homes are often located next to major roads, Chittagong has the highest concentration of cancer cases in Bangladesh.

Overall environmental conditions are not good, nobody is following to control the traffic pollution and when we go on the roads and the kids go we always have to use masks. People living on the roadside is also the ones with the highest rate of cancer (Shahin, 2015-05-18).
Shahin goes on to explain that the major challenge within the shipbreaking industry from YPSAs point of view is the lack of safety measurements for the workers. They have nothing to prevent accidents or to protect them from being exposed to hazardous materials while they work. Had action been taken by the owners to allow for a safer workplace a lot of accidents could have been avoided, and the severity of the ones that still occurred could have been lessened. The industry is controlled by 15–25 people but consists of roughly 100 yard owners according to Shahin. Shahin also told us about the owners other professions, a lot of them being politicians far up in the government or close relatives to politicians. To strengthen this claim he took out a list from the owners association and put it next to a list of newly elected officials, showing that the owners of yards in many cases also hold high political positions. The beaching of hazardous ships is illegal in Bangladesh, but the government officials in charge of enforcing the law are not preventing the illegal activities. Shahin says this is a result of the relationship between owners and officials, which in some cases are the same person or a relative. He says this is the reason behind the high corruption, though he remains hopeful about change within the industry and says:

As long as there is at least one voice raised in favour of the workers on national or international level there is a chance for change, and we find so many good voices on the international and national level [...] there are two big parties fighting for power in Bangladesh and ideologically they are the same, they will not improve the environment or the working conditions unless there is a big accident and they get pressured from the international community (Shahin, 2015-05-18).

There are publications saying that the shipbreaking industry provides the country with 80% of the steel consumed every year, a number Shahin claims to be false:

They say that the industry contributes with 80% of the total consumption of steel and provides employment for 200 000 people but those statements are not true, it is only around 30% of the consumption and they only employ 20 000–30 000 workers (Shahin, 2015-05-18).

This is one way for the industry to avoid legislation changes, to claim that they are important to the society. That way, they can claim that if they are forced to make changes they will have to shut down and that will have huge effects on other sectors as well, Shahin explains. Shahin goes on to explain that the number of workers the shipbreaking industry claims to employ is greatly exaggerated, it employs far less. He then says that changes affecting the shipbreaking
industry itself might not cause other companies to go out of business, for example truckers would still be needed if the industry were to slow down and break ships in a safe manner, as import would go up and movement would still be needed. Shahin then talks about how the industry puts up a front, claiming to have made improvements for the workers and environment. This is to ease the sellers’ conscious in order to justify the sale of a ship, and for the seller to claim that they did not know about the issues caused by the sale. On his last visit to the yards he estimated that 30% of the workers were children, previous reports have used the number 5–25%, but since there are no registers it is hard to tell. However, Shahin does say that the number of children working in the yards is rising.

**Analysing the local situation from the view of a social worker**

Shahin talks about the air pollution and how everyone needs to use masks when traveling around the city. One thing that is clear is that this is a problem for everyone, but especially the individuals living right next to the sources of pollution, the poor. By moving means of productions to states with less regulations or regulations that are ignored, companies can avoid high costs of making factories live up to stricter environmental laws in other parts of the world. At the same time they find cheaper labour since labour rights often follow environmental laws. This way of moving production follows Wallerstein’s (2007) World system theory and creates a periphery of poverty and environmental degradation like Bonnedahl (2012) describes. The environmental degradation is obvious to everyone, Shahin describes how the yard areas used to be used for recreational activities and how you could swim in the ocean. Now the areas are closed and the beach that is left can be visited, but the water is too polluted to swim in. The people living in the middle of all this has not chosen to do so, but are forced too since other options are not available due to financial issues. Douglas and Wildavsky (1982) describes this situation as exposure to involuntary risks, risks that the affected individuals would rather have avoided if given an option.
6. Understanding the industry

The situation in Bangladesh can be understood with the help of both Wallersteins (2007) World system theory and Hornborgs (2010) expansion of it, the western part of the world need Bangladesh to stay as a part of the periphery to have access to cheap natural resources and labour in order to create profit. The shipbreaking industry in Bangladesh is a manifest of a global trend where Bangladesh and other LDCs, act as pollution heavens. If Bangladesh and LDCs all over the world would be technologic developed, they too would be in need of cheap resources, and if such scenario would match the present, the western part of the world cannot import their cheap natural resources, exploit cheap labour and export their non-valuable objects. If this would happen, the unequal exchange would be replaced with production processes competing on the same level.

During our stay in Chittagong, Bangladesh, very few peoples used the environment for recreation. The ocean close to the communities are closed for outsiders. The open areas, on the other hand, requires access to transportation to reach, and are polluted to a degree of which makes them unattractive. It is almost as if the beach along the Chittagong–Dhaka highway does not belong to the people of Bangladesh. Instead, this area is occupied by an industry that imports waste from mainly the western part of the world. This in turn can be interpreted as if western countries own this part of Bangladesh as its external waste area, where core areas can dump non-valuable objects. In this relation lies what Hornborg (2010) describes as: “Those who generates abundance should be grateful for the crumbs that will be given to them.” (Hornborg, 2010, p. 16). In the case of the shipbreaking industry it creates job opportunities and supplies Bangladesh with steel, which, in this context, should be understood as the “crumbs”.

The issues caused by the industry are being kept out of sight from the public. The less information there is, the more ships they are able to import to the yards, since the sellers can keep claiming that they did not know what would be done to the ship after it was sold. The purpose of this study was to give a voice to the people that are on the losing end of the industry, whom have yet to be heard. As explained by environmental justice it is the poor that are affected the most by pollution and environmental degradation (Bonnedahl, 2012; Douglas and Wildavsky, 1982). In this case it is also important to see environmental justice as a part of
oppression from other countries, not just within the country itself. Shipping companies would
never get away with dumping their ships on a beach in the European Union. With that said,
this does not mean that there are no differences within Bangladesh as well, where money
matters when it comes to exposure to risk. In our case it is not just pollution and
environmental degradation that are affecting poor people the most, this also creates a greater
exposure to involuntary risk.

Considering the environmental degradation and the negative social impact the industry has on
Bangladesh, it is most likely that the costs overweighs the benefits. Put in the context of
sustainable development, as formulated by Our Common Future (WCED, 1987) it is hard to
imagine how this industry can develop and become sustainable in the near future. The
regulators and the owners are in this case the same individuals, thus creating a recipe for a
dysfunctional control organ. There is no monetary incentive for these individuals to change
their business because they do not have to obey the laws. This means that they can damage
the environment without any cost, these problems are instead transferred onto the society, a
society lacking the tools to deal with them. There is a will from the exporters in the west, as
well as from the shipyard owners to let things be as they are. This creates a deadlock, where
international treaties tries their best to solve the problems, without any luck, due to the
reluctances from the other parties involved. However, a rise in costs would not likely force the
industry to move, as The World Bank (2010) mentions, just cause the profits to decrease. This
as a result of the lacking capacity among the yards conducting shipbreaking in a safe manner,
such as the yards in EU, China and Turkey.

Exporting waste is not just an export of objects but also an export of risk and environmental
problems. Risk that is involuntarily, to borrow Douglas and Wildavsky’s (1982) terminology,
absorbed and manifested by individuals living in poverty, which our empirical material have
shown. When accidents occur people are left to their own faith, forcing them to sell almost all
their possessions in order to cover for unexpected costs. In some cases, it is evident that the
industry causes poverty when treatment costs and loss of income exceeds the family's
capacity to absorb them. They are left in a social and economic unsustainable situation,
outside the society, and maybe even as part of the growing group of homeless and
handicapped individuals living on the street. From one bad environment, the sheds around the
highway, to an even worse environment living on the streets. If these ships had been
dismantled in Europe there would have been laws preventing it from being done in such a
rudimentary and unsustainable way as in Bangladesh. Therefore it is easier to export the waste
and the risks involved with handling it, to a country where there are now laws to protect the
workers and the environment, or where the laws are ignored. The lack of laws, or obedience
of laws, makes this a lucrative business with profit to be made for both the exporters as well
as the yard owners. This is an example of the dichotomy between environmental protection on
the one hand, and economic growth, on the other. This is simply because economic growth
itself is based upon exploitation; to create profit in one place, another one needs to be
exploited, as pointed out by Wallerstein (2007).

Shipbreaking is an industry with very little insight, something the owners are trying to uphold
by keeping media out. Because of this it becomes impossible for consumers to make educated
decisions when buying services from shipping companies. This is shown not only by the large
walls created around the yards, but also in how the workers are threatened when accidents
occur and the owner’s suspect they will talk to media or human rights organisations. The wall
can be interpreted as a symbol of the whole industry, a kind of what happens in Vegas stays in
Vegas. This way, business as usual, continues.

The issues raised above are not random but instead very much connected. As Hornborg
(2010) and Wallerstein (2007) explains, development in one part of the world causes poverty
in another through unequal exchange. At the same time it makes export of environmental
problems possible, in this case end-of-life ships. Export of environmental problems, poverty
and increasing risks constitutes a causality and creates environmental injustice.
7. References


Fig 2. Map of Bangladesh. (Reviewed 2015-09-08) http://www.worldportsource.com/images/maps/bangladesh_sm00.jpg