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The Environmental Goods Agreement in the Context of Sustainable Development and Climate Change

A study of the EGA as a driving force for
reaching the new Sustainable Development
Goals and meeting environmental challenges

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Globalization

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PROBLEM DESCRIPTION

The purpose of the study is to explore the understanding of environmental goods within the EGA initiative, and compare it with concepts of green economy, production and products in order to evaluate the credibility of the EGA as a driving force on meeting essential environmental and sustainability challenges, especially the needs and aspirations of the new UN Sustainable Development Goals.

Main content:

- Introduction to the topic and review of relevant literature.
- Outlining of the concepts, definition and criteria for evaluation and comparing of EGA goods and green products.
- Develop a methodology for comparing EGA goods and green products based on criteria relevant for global environmental and sustainable development initiatives e.g UN Green Economy, IPCC, IPBES and SDGs.
- Outline the results regarding the compatibility of the intention of the EGA and the need for environmental friendly goods, according to the need and ambitions connected to the new sustainable development goals (SDG).
- If possible, give suggestions for changes to the EGA nomination process in order to increase the compatibility and credibility.

PREFACE

This thesis is the final result of the MSc in Globalization: Global Politics and Culture at the Norwegian University of Science and Technology, and is supervised by and produced for the Department of Industrial Economics and Technology Management during the spring of 2015.

The journey that led to this moment started as I entered the Norwegian delegation to the WTO in Geneva 1st of September 2014. The internship with the Permanent Mission took me away from the safe academic world of books and crammed study halls, and into a different reality of big politics, big people, and big words. My assignments at the Mission evolved around trade, development and environment topics, and I was given the opportunity to engage in the process of a newly established initiative for liberalizing trade in environmental goods and services – the Environmental Goods Agreement (EGA).

The experiences with the negotiations inspired me to write my internship report on the subject of the EGA and perceptions of credibility. Environmental credibility was a frequently used expression, and I found the mix of traditional trade interests and environmentally beneficial policy very interesting. In this thesis I have used ideas and material partly described in the internship report, and taken the analysis a step further to study the EGA as a driving force for meeting environmental and sustainability challenges.

Special thanks are extended to Kaja Edrén, Ingrid Jegou, Finn Katerås, Nina Vik, Anders Larsen and Haley Knudson for their contributions to the study. To the wonderful people at the Permanent Mission in Geneva, thank you for your warm welcome and farewell, and especially thanks to Monica Nagelgaard, Vegard Emaus and Hanna Bodsberg for sharing your knowledge and time, Berit, Nina, and Helle for some incredibly enjoyable moments, and my fellow interns for your entertaining company and sense of humor. I would like to thank John Eilif Hermansen, Associate Professor at IØT, NTNU, for his supervision and sincere interest and support this past year.

Thanks to all my classmates for keeping me company over the last two years, and specially Anne Ma for enduring some long days together this semester. Lastly, thanks for all love and encouragement from friends and family, helping me reach this goal.

ABSTRACT

2015 is the year of great decisions and efforts. Meetings on the UN post-2015 Sustainable Development Goals, the 21st Conference of the Parties (COP21) of the UN Framework Convention on Climate Change, and the 10th Ministerial Conference of the WTO will decide on the next steps in combating climate change and poverty. Influenced by the threats of climate change and environmental degradation, a small group of countries have come together to liberalize trade in environmental goods and services.

This paper provides a qualitative analysis of the environmental goods agreement (EGA) and related concepts of green economy, sustainable development goals, the IPCC and IPBES. Through analysis of semi-structured interviews and documents, the study identified nine themes concerning the research issue. These themes guided the analysis, and together with the theoretical framework of sustainability, green economy, international environmental agreements and credibility, some interesting results emerged on the relation between the EGA and international environmental agreements, SDGs, and the compatibility of the understanding of environmental goods in the EGA with needs and requests for green products and technology. According to the results, the EGA is compatible with international initiatives and the sustainable development goals (SDGs) to some degree, and has the potential to be a driving force for achieving positive impacts related to environmental and sustainability challenges. The understanding of EGs in the EGA is divided, and the initiative needs to incorporate environmental services and non-tariff barriers, as well as become more transparent, and create a strong connection and cooperation with other international initiatives such as the UNFCCC.

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ACRONYMS

APEC	Asia-Pacific Economic Cooperation
CBD	UN Convention on Biological Diversity
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCD	UN Convention to Combat Desertification
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change
DCs	Developing Countries
EGs	Environmental goods
EGA	Environmental Goods Agreement
EGS	Environmental goods and services
ForUM	Forum for Utvikling og Miljø
GATT	General Agreement on Tariffs and Trade
GHG	Greenhouse gas
Gt	Gigatonne
ICTSD	International Centre for Trade and Sustainable Development
IEA	International Environmental Agreements
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
MA	Multilateral Ecosystem Assessments
MDIR	The Norwegian Environment Agency
MFA	The Norwegian Ministry of Foreign Affairs
MEA	Multilateral Environmental Agreements
MFN	The Most-Favoured-Nation principle
NFF	The Norwegian Society for the Conservation of Nature
NGO	Non-Governmental Organisation
OECD	Organisation of Economic Co-operation and Development
OWG	Open Working Group on the Sustainable Development Goals
RCN	Research Council of Norway
R&D	Research and Development
SE4ALL	Sustainable Energy for All
UN	United Nations
UNCTAD	United Nations Centre for Trade and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN REDD+	Reduced Emissions from Deforestation and Forest Degradation
UN SG	United Nations Secretary-General
WTO	World Trade Organization
WWDR	World Water Development Report

1. INTRODUCTION

The international process of liberalizing trade in goods and services of environmentally beneficial character have been ongoing in the WTO since the launch of the Doha Development Agenda in 2001. Recently, several WTO members, among them the US and China, have arranged for the construction of an Environmental Goods Agreement, intending to accelerate the spread of environmentally friendly technologies and goods.

The backdrop for such an agreement as with many other environmental agreements, is the various possibilities and consequences emerging from the globalization of our world. A report on the UN Conference on Sustainable Development in 2012 (Rio+20) explains the main challenge emerging from the 20th century:

“The outstanding feature of this period is that we are witnessing the economic globalization of our planet at the same time as we are confronted by the limits of our planet in terms of available resources and ability of the ecosystems to absorb the impacts.” (Garcia et al., 2013:9)

The possibilities globalization has provided, have caused difficult problems for the world to solve. The international society has created institutions such as the United Nations and the World Trade Organization to organize trade and strive for peace. Multilateral agreements and initiatives such as the UN Framework Convention on Climate Change (UNFCCC) have been generated to avoid the devastating consequences of rising greenhouse gas emissions and biodiversity loss.

Climate change is the largest challenge of this time, and investigating the impact and contributions of measures set to provide positive solutions to counter climate change is essential for success. The purpose of this study is to explore the Environmental Goods Agreement in the context of achieving sustainable development and meeting environmental and climate challenges, with special concern to the needs and aspirations of the UN post-2015 Sustainable Development Goals.

In the following sections, essential background information on climate change and international cooperation, and on trade in environmental goods is presented. This introduction then leads to the concretization of the research issue and research questions, including a brief explanation of the structure of the paper.

1.1 BACKGROUND

Background on the topics of international cooperation on climate change and environmental goods are given to set the stage for the formulation of the research issue, and will be important to consider as the paper moves on to counter complex concepts and theoretical resources.

1.1.1 CLIMATE CHANGE AND INTERNATIONAL COOPERATION

In Rio de Janeiro in 1992, the Earth Summit, the United Nations Framework Convention on Climate Change (UNFCCC) were opened to signatories together with the UN Convention on Biological Diversity (CBD) and the UN Convention to Combat Desertification (CCD) (UNFCCC, 2014). The Earth Summit marked a huge step forward concerning reductions of greenhouse gasses (GHG) and the awareness of climate- and environmental challenges.

According to the 1992 UNFCCC report, the Parties to the Convention have decided that “Climate Change” should be defined as *“a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.”* (UN, 1992:3). The main objective of the Convention was to stabilize GHG concentrations “in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” (Ibid.:4). This should be done in a timely manner, so that ecosystems are able to adopt and food production and sustainable economic development does not suffer.

The UNFCCC is considered to be the most essential multilateral environmental agreement, and the regular Conferences of the Parties (COP) has gotten much attention in the last decade. The COP15 in Copenhagen in 2009 saw a massive amount of expectation and media cover. Unfortunately, the Conference was a let-down for many as the world leaders were unable to agree on legally binding emissions cuts and on its primary purpose, which according to Peter Christoff (2010:561) was *“to seal the deal on a timely, effective, binding agreement to reduce global emissions”*. He claims that the current pledges under the Copenhagen Accord, a non-binding political paper, will lead to a rise of 4°C above pre-industrial levels in 2100 and that the chance to prevent a climate disaster might have passed us by (Ibid.).

Climate change is now being recognized as a risk that the world has to face together, and nations are struggling to achieve progress on symbolic agreements as well as effective conventions to “save the world”. There are hundreds of multilateral environmental agreements and conventions already and the compatibility of these initiatives and the ideas they represent is at

the core of this study. Unfortunately, their combined impact is not sufficient to limit the average temperature rise to the agreed target of below 2°C “compared to preindustrial levels” (UNEP, 2014). Achim Steiner, UN Under-Secretary-General and UNEP Executive Director, states in UNEP’s (2014:xi) “Emissions Gap Report” that *“the associated “gap” in required emission reductions is growing, not closing.”*

World leaders prepare for the negotiations on a climate agreement during the COP21 in Paris in December 2015. In the Intergovernmental Panel on Climate Change’s (IPCC) fifth assessment report, the panel concluded *“with 95 per cent certainty that the human influence on the climate system is clear and is evident from the increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and understanding of the climate system.”* (UN, 2015d, IPCC, 2013). According to Nina Vik, Senior Advisor at the Norwegian Environment Agency (MDIR), the Intergovernmental Platform on Biodiversity and Ecosystems Services (IPBES) was established in 2012 with the aim to increase knowledge and create a forum for conversation between experts, researchers and decision makers. Through the creation of the IPBES Working Program, the members decide on the most important and relevant areas for further research and mandates the experts to investigate. The IPBES strives to include all sectors and parts of society into the process.

In the UN system, a post-2015 development agenda is constructed on the basis of the Millennium Development Goals (MDGs) expiring in 2015. The agenda following the enormously influential MDGs is the new Sustainable Development Goals (SDGs). This time the focus is on both developing and developed countries, with emphasis on sustainability (UN OWG, 2014). The importance of treatment, management and access water is reflected in the SDGs, and Goal 6 is devoted to water. The UN World Water Development Report (WWDR) (2015:2) explains how *“Unless the balance between demand and finite supplies is restored, the world will face an increasingly severe global water deficit”*.

The UN system embraces the green economy concept to enable a transition to sustainable development. A green economy should be low carbon, reduce pollution, socially inclusive, and prevent loss in biodiversity and ecosystem services (UNEP, 2011). Achim Steiner states that: *“Over the past two years, the Green Economy has gone from theory into practice... The inherent logic offers, perhaps for the first time, a sustainable growth paradigm that is as much a developing country agenda as it is a developed economy one”* (UNEP, 2010:3).

1.1.2 TRADE IN ENVIRONMENTAL GOODS

There is no universally agreed upon definition of what constitutes an Environmental Good (EG). This makes trade in EGs complicated, and is one of the issues discussed in this paper. Environmental goods and services was for the first time singled out for trade liberalization in the multilateral system during the Doha Round negotiations. Views of the definition is divided, and most WTO members and experts agrees either with perspective 1) *“as long as a certain good has an environmental application, however minor, it should be included for negotiations as the end-goal is environmental protection”*, or 2) *“if negotiations are to take place within the WTO’s Committee on Trade and Environment (CTE), goods at the HS 6-digit level should have solely or ‘predominantly’ environmental end-uses.”* (Sugathan, 2013). The US. Department of Commerce (2010:7) did research on the environmental goods industry, and consider a good to be “green” depending on its usage, not process of production or consequences of its disposal.

The International Labour Organization (ILO) (2011:8) recalls Eurostat’s (2009) description of the environmental goods and services sector as consisting of producers of: 1) ‘cleaner’ technologies that *“measure, control, restore, prevent, treat, minimise, research and sensitise environmental damages to air, water and soil as well as problems related to waste, noise, biodiversity and landscapes.”*; and 2) resource-efficient technologies that *“measure, control, restore, prevent, minimise, research and sensitise resource depletion. This results mainly in resource-efficient technologies, goods and services that minimise the use of natural resources”*.

Hamwey (2005) divides EGs into two classes: Class A and Class B illustrated in Figure 1. Class A includes industrial goods for limiting pollution to air, water and soil, and Class B includes industrial and consumer goods that are relatively better for the environment than similar products. The two classes are according to Hamwey “fundamentally different”, as class B EGs are “not necessarily used for environmental purposes. Rather, they are consumed by industry and consumers, producing a positive, or reduced negative environmental impact relative to identical use of a substitute good whenever, and for whatever purposes, they are consumed.” (Hamwey, 2005:2).

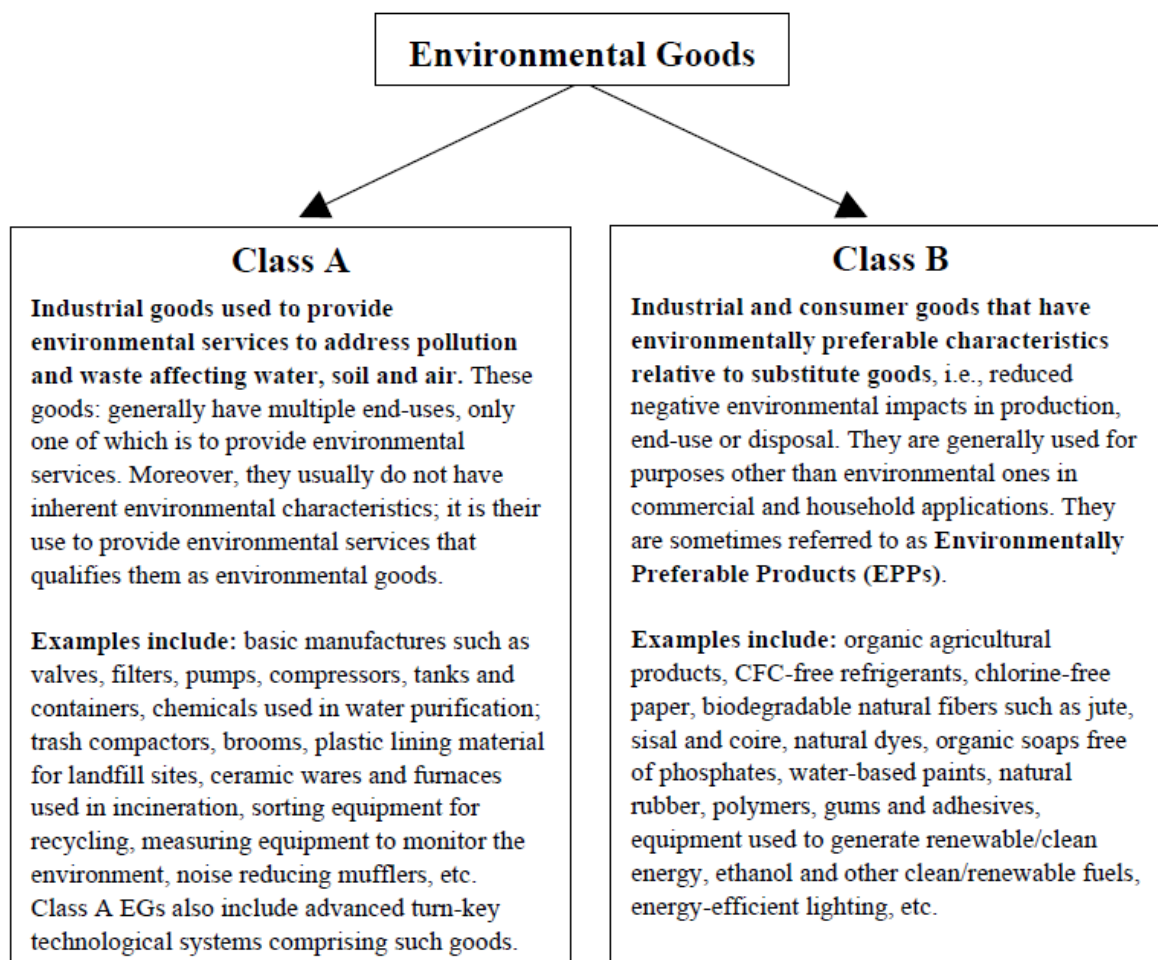


Figure 1: Classification of Environmental Goods (Hamwey, 2005:3)

In paragraph 31 of the Doha ministerial declaration the WTO members agreed to negotiate the relationship between the WTO rules and multilateral environmental agreements (MEAs) and to *“the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.”* (WTO, 2001).

Through the years, several lists composed of EGs intended for trade liberalization have been suggested by the OECD, the Asia-Pacific Economic Cooperation (APEC), WTO members, the World Bank and by the ICTSD (Sugathan, 2013). The OECD suggested a list of 132 goods using the Harmonized System (HS) codes for identifying products and their tariff lines (Hamwey, 2005). A comprehensive list was created by the group called “Friends of Environmental Goods”, comprising of Canada, the European Union, Japan, Korea, New-Zealand, Norway, Chinese Taipei, Switzerland and the United States (Ibid.). The list was a reduced list of the different submissions from the Doha Round, and totalled 153 HS-codes. In

2012, the APEC initiative agreed to reduce tariff rates to 5 % or below by 2015 on a list of 54 EGs (APEC, 2012). Balineau and de Melo (2013) describe the goods nominated using this ‘list approach’ as mostly reflecting the comparative advantages of the nominating countries.

Sugathan (2013:6) makes some interesting observations of the proposed lists of EGs. There is: 1) “Difficulties for tracking trade in the environmental end-use or green economy applications for a large number of products”; 2) “Dominance of manufactured products”; and 3) “Predominance of climate-friendly and low-carbon goods in WTO submissions”. Rasmus Reinvang (2014:5) from Vista Analysis AS prepared a report on the 54 environmental goods of the APEC initiative in February 2014, which found that the products covered by the HS codes in the APEC list “mainly consist of products that are not environmental goods”.

Developed countries have, according to Hamwey (2005), a significant self-interest in liberalizing trade in environmental goods and services. The UN member states must ensure that developing countries have access to the technology (Ban Ki-moon, 2014). These countries can then expand their exports and domestic production of EGs, allowing an “increased industrial diversification of their economies”, while trade between developing countries will benefit all of them (Hamwey, 2005:2). Hamwey requests a wide and selective approach to liberalize EGs. Wide in order to encapsulate developing countries export interests, and selective to ensure that products with “strong production and export interests, and which continue to require some tariff protection” are kept out (Ibid.). Developing countries should therefore pursue the WTO EGs negotiations if the final list is broad, varied, and include flexibility through special and differential treatment.

The World Bank (2008) writes that the removal of tariff and non-tariff barriers to trade in EGs could lead to greater diffusion of clean technology, which again can lead to high trade gains for developing countries who are high emitters of GHG. The transfer of environmentally sound technologies also help provide consumers with EGs to a lower cost (UNEP, 2013). In some cases, the HS codes of EGs might not be the most important aspect to consider, instead focus on non-tariff measures such as labelling requirements or technical standards might be significant (Sugathan, 2013).

There are several calls for the spread and increased use of environmental goods, especially concerning clean and energy efficient technologies. One initiative aiming at increasing access to sustainable energy, is the UN Sustainable Energy for All Initiative, launched in 2011 by Ban

Ki-moon, with voluntary commitments from NGOs and the private sector during Rio+20 in 2012 (Palmer, 2012). The initiative aims at reaching three objectives: 1) “providing universal access to modern energy services;” 2) “doubling the global rate of improvement in energy efficiency;” and 3) “doubling the share of renewable energy in the global energy mix.” (Sustainable Energy for All, 2013).

UNEP (2012:16) wrote in their fifth “Global Environmental Outlook” report that investments in green energy was reaching record heights, and new investments “in utility-scale renewable energy projects in developing countries surpassed that of developed countries” for the first time. They pointed at the need to reduce rising GHG emissions, as presented through the Kyoto protocol, by “the transfer of cleaner technologies” through trade (Ibid.). The thing standing in the way of this distribution was trade barriers. The International Energy Agency (IEA) (2014:4) calculate that “globally, wind power accounts for the largest share of growth in renewables-based generation (34%), followed by hydropower (30%) and solar technologies (18%)”. One of the most prominent issues to the African population who relies solely on biomass fuels, is health. IEA (2014:6) states that “*around 730 million people in the region rely on solid biomass for cooking, which – when used indoors with inefficient cookstoves – causes air pollution that results in nearly 600 000 premature deaths in Africa each year*”.

The World Resources Institute published their first Millennium Ecosystem Assessment (MA) in 2005, stating that technologies aimed at resource efficiency, reducing impacts of climate change and nutrient loading are essential “given the growing demands for ecosystem services and other increased pressures on ecosystems” (MA Board, 2005). According to the MA, several useful technologies already exist, and needs more promotion. These are technologies that: increase crop yields, restores ecosystem services, and increase energy efficiency and reduce GHG emissions without damaging effects on the surroundings.

1.2 PURPOSE OF THE STUDY

The purpose of the study is described in this chapter by explaining the research issue, the research questions, and the relevance and contributions of the study.

1.2.1 RESEARCH ISSUE

The purpose of the study is to explore the understanding of environmental goods within the EGA initiative, and compare it with concepts of green economy, production and products in order to evaluate the credibility of the EGA as a driving force on meeting essential

environmental and sustainability challenges, especially the needs and aspirations of the new UN Sustainable Development Goals.

1.2.2 RESEARCH QUESTIONS

The concretization of the research issue leads to the formulation of the following research questions:

- 1) What is the understanding of what constitutes environmental goods in the EGA initiative?
- 2) What are the needs and requests for desired production methods and green products emerging from the SDGs, the green economy concept, the IPCC and the IPBES?
- 3) Does the understanding of EGs in the EGA initiative correspond with the needs and requests for EGs identified in the SDGs, the green economy concept, the IPCC and the IPBES?
- 4) Is the EGA credible as a driving force on meeting essential environmental and sustainability challenges?

Through investigating the understanding of environmental goods in the EGA initiative, and identifying needed goods and products from essential environmental institutions and concepts, we can compare the two. Only through answering questions 1) and 2) can the questions 3) and 4) be answered.

1.2.3 RELEVANCE AND CONTRIBUTION

2015 is the year of milestones and action. The world leaders come together this year to discuss and agree on measures to combat climate change, to establish goals for the post-2015 development agenda, and “the scaling-up of the WTO Doha Development Agenda negotiations” (UNCTAD, 2015:1). The Environmental Goods Agreement is according to its members, an attempt to meet the climate challenges and contribute to the UNFCCC and climate mitigation process. The EGA represents one among many efforts to combine trade and environmental policy. The contribution of the negotiation is aimed at further the talks of liberalization of trade in environmental goods and services in the WTO.

Assessing the impact and credibility and identifying areas of improvements is a relevant and positive contribution to the process. This study can contribute to a more holistic approach to the themes of climate change, environmental issues, ecosystem services and biodiversity loss. Connecting the large international processes together is necessary because of the complexity of

the Earth System. We need to make sure that measures set in place to face *one* aspect, does not compromise the effectiveness and ability to counter *other* aspects.

Previous work on related issues have been conducted, among others, by researchers at the ICTSD (2005, 2013, 2014), Vista Analysis (2014) and UNEP (2007, 2009, 2010, 2011, 2012, 2013, 2014), and newly published master theses and research by Haley Knudson (Knudson et al., 2015, Knudson, 2014) and Line Hammeren (Hammeren, 2014) for the Department of Industrial Economics and Technology Management at NTNU have enlightened certain aspects of climate change and development issues relevant to the EGA. This study utilizes previous research as a foundation for exploring the EGA negotiations as they happen, and consider the position of the EGA initiative among a range of agreements and policy measures in the international arena.

1.3 STRUCTURE OF THE STUDY

The research issue and research questions are investigated and answered in this paper. The methodological framework is presented in Chapter 2 and includes choice of method for research, data collection and analysis. In Chapter 3, the theoretical framework explores essential concepts and theoretical resources related to the research questions, such as sustainability, green economy, international environmental agreements and credibility, while Chapter 4 outlines fundamental developments in the field of study. Analyses of documents and interviews is laid out in Chapter 5. The results of the analysis and theoretical resources regarding the research questions are discussed, and recommendations regarding the EGA process is offered in Chapter 6. Finally, a short conclusion presenting the findings and suggestions for further research is given in Chapter 7.

2. METHODOLOGICAL FRAMEWORK

Method development, identification of relevant literature, methods for data generation and data analysis approach as well as ethical issues, reliability and validity is explained in this chapter.

2.1 METHOD DEVELOPMENT

The method developed is based on the four research questions outlined in chapter 1.2.2, and consists of a qualitative approach using semi-structured interviews and documents analysis.

2.1.1 THE QUALITATIVE APPROACH

According to Bryman (2012:380), the qualitative research approach is distinguished from quantitative research by favouring words over numbers, having an inductive, constructivist view, an ‘interpretivist’ epistemological position where “*stress is on the understanding of the social world through an examination of the interpretation of that world by its participants*”. Among many possible research methods commonly used in qualitative research, this study consist of qualitative interviewing and qualitative analysis of texts and documents.

Figure 2 outlines one possible series of steps in qualitative research. Bryman (2012:387) mentions that “*two particularly distinctive aspects of the sequence of steps in qualitative research are the highly related issues of the links between theory and concepts with research data*”.

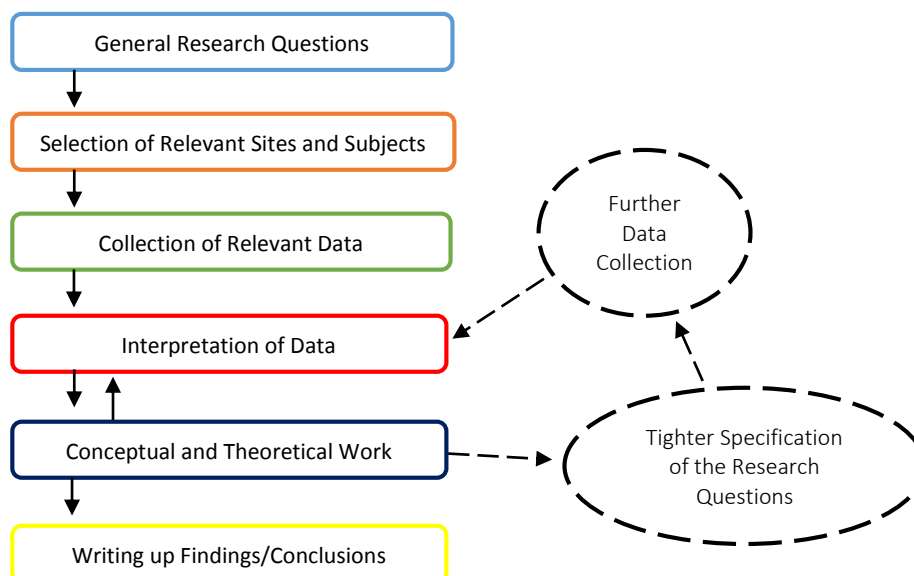


Figure 2: Steps of Qualitative Research (based on Bryman, 2012:384)

Identification and use of concepts is essential to qualitative research, and the development and employment differs from quantitative research. The concepts should not be fixed, but ‘sensitizing’ and “give a very general sense of what to look for and act as a means for uncovering the variety of forms that the phenomena to which they refer can assume” (Bryman, 2012:388). The analysis in this study employs a thematic approach, where themes and concepts emanating from the collected data is sorted as main themes and sub-themes.

2.1.2 RESEARCH MODEL

The methodological framework of this study is illustrated in Figure 3. The model is inspired by Duane Davis’ (1998) “Business Research for Decision Making”. The model explains the steps from observation of a situation to the conclusion and testing of results. The dotted arrows symbolize ‘Hypothesized relationships’ were relationships between concepts are considered. The lines represent relationships with reflections. Reflecting on the connections help better our understanding of how the different parts in the methodological framework relate to each other.

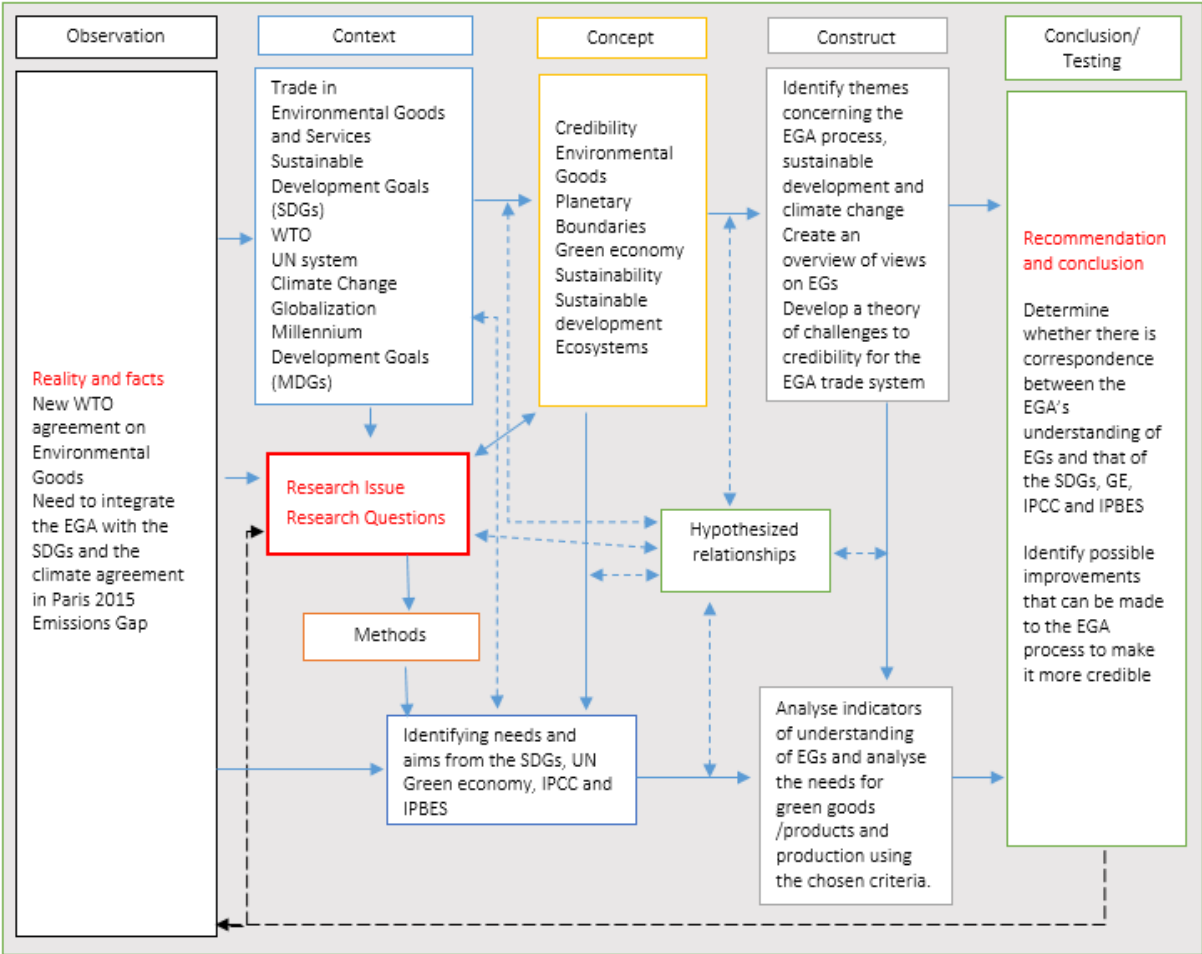


Figure 3: Research Model (based on Davis 1998:27)

Methodology, theoretical framework, concepts and results influence each other in this study. Because part of the objective is to create a method of evaluation, and the themes emerging from the analysis is closely connected to theoretical resources and observations, one research phase can affect another, as shown in Figure 2. It is therefore expected that the choice of research questions, scope of theoretical framework and themes change and adapt as the study progresses.

In the following sections literature, research method and analysing techniques are further elaborated.

2.2 LITERATURE

Issues such as different sources of information and their usability, as well as steps in the literature search are presented in this section.

2.2.1 SOURCES OF INFORMATION

Document analysis is an important contribution to this study. The range of documents and literary sources such as news articles, reports and government papers can be sorted by distinguishing between ‘primary’, ‘secondary’ and ‘tertiary’ sources by combining a timescale criterion with the ‘intended audience’ of the document (Burnham et al., 2008). Burnham, Lutz, Grant and Layton-Henry (2008:187) describe the difference:

“‘primary sources’ consist of evidence that was part of the event in question and that was intended for internal or restricted circulation only; ‘secondary sources’ include material circulated at the time or soon after and that was available to the public at the time of the event in question; ‘tertiary sources’ consist of all later work in the public domain offering a reconstruction”

To obtain primary sources can be difficult, as illustrated well in this study. The notes diplomats take, and the internal governmental reports produced to inform the ‘capital’ about the occurrences during the EGA negotiations are strictly confidential. As I myself attended two of the negotiations, my notes would make great primary sources for this study. Unfortunately, and understandably, in a situation with ongoing negotiations, those sources cannot be utilized.

Secondary sources such as official government publications can be found on some government’s official webpages, and are considered more reliable than the typical biographies and memoirs. Not all states have a tradition for openness, and Norway’s choice to publish quite a lot of information about their own position and nominations in the EGA is the exception

rather than the rule. The interviews conducted in this study (even though being a primary source or data from the researcher's perspective) contribute as secondary sources as they can give light to the importance of different personalities, major events, understanding the mood of events and establishing facts (Burnham et al., 2008).

2.2.2 LITERATURE SEARCH

Finding tertiary sources such as journal articles and political reviews to inform the chapters on theoretical framework and relevant initiatives, was done using several sources of information.

A great amount of research have been done on the issues of sustainable development, climate change and green economy by institutions in the UN system and observatory NGOs such as the ICTSD. For example, UNEP has a vast range of reports on the subjects. Much of my research and literature stems from the UN system. These reports, such as the UNEP (2011) "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication" and IPCCs "Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change" are fundamental pieces connecting the research of thousands of scientists from the entire world together.

When searching for relevant academic literature outside of the UN and WTO systems, the Scopus and ISI Web of Knowledge search engines, and occasionally Google Scholar and BIBSYS Ask was used. The most common search words were *sustainability*, *green economy*, *international agreements*, *credibility*, *environmental goods*, and *environment*. Below is an illustration of search processes from identifying search words to discovering relevant literature.

Examples of search words with Scopus:

1. (environment OR green) w/1 (goods OR products)
2. (sustainable development goals) AND (green economy)
3. (environmental w/1 goods) AND (agreement OR negotiation* OR initiative)
4. (International environmental agreements) AND (effects)

Examples of search words with ISI Web of Knowledge:

1. sustainable NEAR/1 development NEAR/1 goal* AND environment
2. definition NEAR/1 green NEAR/1 products

When searching for "(environmental w/1 goods) AND (agreement OR negotiation* OR initiative)" in Scopus, 95 results were found. By sorting by 'Relevance', B. Sinclair-Desgagné's

article “The environmental goods and services industry” emerged as number 10 on the list. Sorting the same result by ‘Date’ led to G. Balineau and J. De Melo’s article “Removing barriers to trade on environmental goods: An appraisal” at place number 9. The initial search for literature in Scopus and ISI Web of Knowledge did not provide a good number of relevant articles. This might have been because the issue I was investigating had not been sufficiently narrowed at that point in time. A later search for “(International environmental agreements) AND (effects)” in Scopus provided Bratberg, Tjøtta and Øines’ paper “Do voluntary international environmental agreements work?” as number 5 after sorting by Relevance.

Reference lists of journal articles, reports and book chapters often gather essential research on one specific topic and makes excellent sources of literature. In addition to search engines, many of the sources referenced in this paper were found in other relevant sources’ reference lists.

2.3 COLLECTION OF DATA

The main data sources for this study is documents and interviews and the data collection methods are presented in this section.

2.3.2 DOCUMENTS

Among the most important documents used as basis for analysis in this study are the joint statements of the EGA given in Davos and Geneva in 2014 (Appendix B and C), forming the official description of aims and approach of the EGA initiative (EGA, 2014a, 2014b). Other documents are the Open Working Group’s proposal for the new SDGs (UN OWG, 2014), the reports suggesting environmental goods for developing countries to nominate in the EGA (Knudson et al., 2015), and the Norwegian product nominations for the EGA found on ‘regjeringen.no’ (Appendix H) (UD, 2015a, 2015b, 2015c, 2015f, 2015g, 2015h).

Analysis of documents are conducted on the basis of the research questions and provide input in the comparison of the concepts and the EGA. This includes analysing the SDGs, the concepts of sustainability and green economy and other documents that can give an understanding about the needs and ambitions concerning goods and products needed to reach the goals and targets.

2.3.3 INTERVIEWS

The primary source of empirical data in this study is semi-structured interviews, used to capture opinions and attitudes among a diverse group of people with different perspectives. According to Bryman (2012:471), the use of this kind of technique emphasises “*how the interviewee*

frames and understands issues and events – that is, what the interviewee views as important in explaining and understanding events, patterns and forms of behaviour”. The qualitative interview is usually quite flexible, and the research might be pulled in one direction or another as answers bring light to new, significant issues (Ibid.). In semi-structured interviews, the researcher often follows an interview guide that cover specific topics of interest. This type of interview allows for the interviewee to elaborate on their thoughts and for the interviewer to rearrange the order or to slightly change the wordings of questions during the interview (Ibid.).

The interview guide in this study was made so that the most important themes and topics (that was relevant to ask the specific interview subject about) were accounted for. Some questions were repeated to all the interviewees, while others were made specifically for the individual based on their knowledge, or resulted from the conversation and emerging fields of interest.

The interviews were conducted at a place chosen by the informant, most commonly in their office of work. Data was recorded using a cell phone with a good recording function. All the interviewees agreed to be recorded. This made the interview more natural as I could concentrate on the interviewee and not on writing. The phone works well as a recording device in the calm setting of an office, and was not a disturbance. The sound quality was also good, even when interviewing two persons at the same time. One recording had quite a lot of noise as the interview took place on campus with people sometimes walking by.

2.3.4 DATA SAMPLING FOR INTERVIEWS

Interviewees were chosen depending to their knowledge and relation to the research issue. The ‘non-probability sampling’ method is a method suited to the kind of research undertaken by students, as it is easier to conduct when you have limited time and resources (Matthews and Ross, 2010). During the time working on the thesis, informants needed to be relatively close in proximity. I was able to meet with Kaja Edrén during a trip to Oslo. The meeting with Ingrid Jegou was particularly relevant for the study, and I met with her during her short visit to NTNU in April.

The method applied is “purposive sampling”, which is characterized by research designs based on “the exploration and interpretation of experiences and perceptions” (Matthews and Ross, 2010:167). The aim is not to get a statistically generalizable sample, but to choose informants “with purpose” to create theory and are selected “*on the basis of characteristics or experiences that are directly related to the researcher’s area of interest (...)*” (Ibid.).

The process of selection also corresponds to a so-called “convenience sampling” method, as the interview subjects were often chosen because of existing connections to the Department of Industrial Economics and Technology Management. The method of data selection can impact the ability of generalizing the study to fit the population, and makes the study first and foremost relevant to the EGA process.

The interviewees in the study have varying positions and fields of interest and therefore have different views regarding the EGA and other concepts in the study. This enables me to see the issue from different angles, and the subjects can give input or information about aspects of the study not sufficiently provided elsewhere. Having a diverse group of informants can contribute to interesting findings and a broader understanding. To include a sufficient amount of different perspectives, already established contacts were approached, and people and interest groups were contacted by email and invited to interviews.

The way the sample was chosen can, such as with a heterogeneous sample, result in the identification of cross-cutting themes (Matthews and Ross, 2010). The nature of the study makes a small sample possible, as the purpose is not to generalize to the population, and resources and time is limited. I estimate that the six informants I have sampled are sufficient to cover a range of views and give diverse insights into the research issue.

2.4 DATA ANALYSIS

Analysis of documents and interviews provide a good source of information on the research issue. This section concentrates on the data analysis of interviews, as they represent the main source of empirical data in this study and require further explanation.

2.4.1 THEMATIC ANALYSIS

Thematic analysis is a much used method of analysing qualitative data. This approach is based on identifying themes emerging from the data as you analyse it. The method does not consist of a step by step guide, and tend to vary with the researcher. Bryman (2012:580) states that the method “*does not necessarily tell the user how to identify themes, which (...) are likely to reflect the analyst’s awareness of recurring ideas and topics in the data*”.

Ryan and Bernard (2003:88) explain how themes can emerge “*both from the data (an inductive approach) and from the investigator’s prior theoretical understanding of the phenomenon under study (an a priori approach)*”. In this study of environmental goods and related topics,

some themes and concepts have been identified through exploring the theoretical framework. Themes identified before the data collection, together with the new themes emanating from the collected data, forms the themes for final analysis. The researcher’s chosen topics, the way of retrieving information and the interview guide is “a rich source of a priori themes” (Ibid.).

To identify themes from the data in the analysis, one should look for repetitions, indigenous typologies or categories, metaphors and analogies, transitions, similarities and differences, linguistic connectors, missing data and theory-related material (Ryan and Bernard, 2003). Using these identification tools can give a large number of codes or initial themes. According to Bryman (2012:580), identifying themes requires the researcher to work on the codes further and to “gain a sense of the continuities and linkages between them”.

2.4.2 ANALYSING INTERVIEWS

One way to analyse interview data in thematic analysis is to use a ‘Framework approach’. This method allows you to insert information or quotes into cells and sort them by themes and sub-themes. The approach was developed by the National Centre for social Research in the UK, and describes a “matrix based method for ordering and synthesising data” (Bryman, 2012:579). The matrix can contain themes and sub-themes, and Table 1 provides a simple illustration of one possible way of sorting.

Table 1: Illustration of Thematic Sorting

Main Theme		
	<i>Sub-theme 1</i>	<i>Sub-theme 2</i>
Interviewee 1	“quote”	“quote”
Interviewee 2	“quote”	“quote”

When inserting data into cells, the researcher should remember certain elements. First, one should “indicate where in the transcript the fragment comes from” (Bryman, 2012:579), practised in this study by marking the page number from the relevant transcript document for every quote in the Excel spreadsheet used for analysis. Second, the researcher should “keep the language of the research participant as far as possible” (Ibid.:580). The interviewees in the study are English and Norwegian speaking, and the quotes are therefore kept in the original language until the point where they are cited in the analysis Chapter. Third, Bryman warns the researcher not to insert too much material into the cells. I keep this in mind while plotting, but as my research and interview guides are sometimes seeking information about an organization, or allows participants to explain their views of concepts and themes quite freely, the cells

sometimes contain a large amount of data. Fourth, one is encouraged to use abbreviations to take up less space in the cells (Bryman, 2012). An overview of the step by step approach for use in the analysis of interviews follows:

1. Transcribe
2. Read through
3. Read through again and mark themes or concepts
4. Give a short summary of the main message and impressions
5. Collect and sort the themes and concepts so that the main themes emerge
6. In an Excel spreadsheet, plot the themes into the left side column and the informants into the top row.
7. Insert quotes from interviews that describe or fit within the themes
8. If new themes emerge while analysing, plot them into the themes column.
9. When finished plotting all interviews, compare the quotes to discover similarities, variations and special comments.

By conducting this step by step analysis of the raw data, I make sure that the method is equal for all interviews and improve the chances of a reliable and valid study.

Transcription

Transcription of the recorded tapes was conducted a short time after the interviews. Listening to the tapes at half speed was a good way of making the process more efficient. Bryman (2012) estimates that transcribing interviews takes almost six times as long as the actual recording. This estimation was quite accurate and the transcription process was a long research phase. Concepts, themes and answers to the research questions started emerging while transcribing, and was a good way of getting to know the data.

Coding

The tools described above was used for coding and placing descriptive words behind relevant sentences and paragraphs. The words represented part of themes and one sentence sometimes contained several topics or themes and codes. The main tools used for identifying themes was repetition, similarities and differences, and theory-related material. Repetition of words and themes occurred quite often, and many themes and concepts were extracted from the data.

2.5 ETHICAL ISSUES

Confidentiality and trust between the researcher and the interview subject is important in an interview situation. This was achieved by explaining the interview topic when inviting informants, and informing them of the possibility to end the interview or avoid questions if they

were uncomfortable, and by keeping the interview transcriptions private. The recorder was explained and I asked for permission to record the interviews. The interviewee should have the option of either refusing to record the interview or turning the recorder off at any time during the interview. The research issue of this study is not specifically sensitive to the interviewees on a personal level, but they might want to avoid giving away too much information on their own positions, especially those employed by the Norwegian government. Interviewees should be allowed to review the use of material they provided if requested. Except from the already mentioned issues, not many ethical considerations are needed for this kind of study.

2.6 RELIABILITY AND VALIDITY

Bryman (2012:715) defines ‘reliability’ as “*the degree to which a measure of a concept is stable*”, meaning that we should be able to measure the same thing multiple times and still get the same results. If this is not the case, you might be measuring different phenomena each time.

Validity is defined as “*the issue of whether an indicator (or set of indicators) that is devised to gauge a concept really measures that concept*” (Ibid:171). Validity and reliability is essentially tied together as “*validity presumes reliability*” (Ibid.:173). A result or measure cannot be valid if it is not reliable.

The nature of the EGA as an ongoing negotiation makes it difficult to engage key persons about specific positions among the member countries of the agreement. Details and sensitive opinions can be difficult to capture, because the parties involved in the negotiations are careful not to give away too much detail regarding other countries’ positions. They also want to maintain their own strengths in the negotiations and are cautious not to give anything away in their statements. It is therefore problematic to approach the members directly for answers.

Having attended two of the EGA negotiations in September and December 2014, my judgement and interpretation of sources and data might be affected by my impressions and understanding of the situation. As I collect data through interviews, the understanding I inhabit might translate into the research questions and interview guide. This might be good or bad, but it is an aspect of the research that is difficult to document, and replicate by others, and might affect the reliability of the study.

3. THEORETICAL FRAMEWORK

The most relevant theoretical resources and the theoretical framework for the analysis of the research issue are presented in this Chapter. The theoretical concepts discussed are sustainability, green economy, international environmental agreements and credibility.

3.1 SUSTAINABILITY: DEVELOPMENT OF CONCEPT AND DEFINITION

Sustainability is a key concept in international debate especially when discussing economic growth, climate change or environment. The UN (2015e) considers sustainability as calling for “*a decent standard of living for everyone today without compromising the needs of future generations*”. ‘Sustainability’ and ‘development’ is often combined, making up one of the most popular buzzwords of today: Sustainable Development. Like the term ‘globalization’, it can be difficult to pinpoint exactly what the concept entails. In this section, important developments and definitions of the concept of sustainability and sustainable development are explored.

There is no universally agreed upon definition of ‘sustainability’, but the 1987 World Commission on Environment and Development (WCED) outcome document “Our Common Future” (commonly known as the Brundtland report) developed a definition often used as a starting point when interpreting the concept (UNEP, 2011). The definition reads as follows:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of ‘needs’, in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs.” (WCED, 1987:41)

Economists commonly accept this definition as it is easy to identify economic indicators such as increased or reduced well-being dependent on the use of a fixed amount of capital (UNEP, 2011). However, the economic approach might not consider the composition of different forms of capital. If you for instance use too much natural capital today, it might be degraded irreversibly, and affect the well-being of future generations, as they do not have access to natural capital in their own time (Ibid.).

In 1991, the World Wide Fund for Nature, the International Union for Conservation of Nature (IUCN), and UNEP developed the definition one step further, interpreting sustainable development as *“improving the quality of human life within the carrying capacity of supporting ecosystems”* (Ibid.).

By developing this definition, the three organizations connected the well-being of humans to the capacity and state of ecosystems. A new definition of sustainable development was presented in “Nature” by Professor David Griggs (2013:306), Director of the Monash Sustainability Institute (MSI) in Australia, and his fellow writers. They consider the correct definition of sustainable development to be

“Development that meets the needs of the present while safeguarding Earth’s life-support system, on which the welfare of current and future generations depends.”

This new definition better captures the dependence of human welfare on its surroundings and includes the safety of both people and planet.

The identification of ‘planetary boundaries’ is related to Griggs’ definition of sustainable development. Johan Rockström (2009), Director of the Stockholm Resilience Centre, and his fellow writers explains how the Holocene, a period of over 10 000 years of stability in the Earth’s environment, may be threatened by impacts from a new era emerging ever since the Industrial Revolution: The Anthropocene. In the Anthropocene, *“human actions have become the main driver of global environmental change”* (Ibid.:472). To meet the challenge, and try to maintain the Holocene environment, Rockström et al. describes nine interlinked planetary boundaries, covering a range of processes and sub-systems, which define the “safe operating space” of human activities that should not be overstepped. A large part of the boundaries have clear and easily defined thresholds, but some boundaries are hard to define and may affect the risk of crossing thresholds in other processes. The nine boundaries are illustrated in Figure 4. Unfortunately, the three thresholds “climate change”, “rate of biodiversity loss” and “interference with the nitrogen cycle”, have already been surpassed (Ibid.).

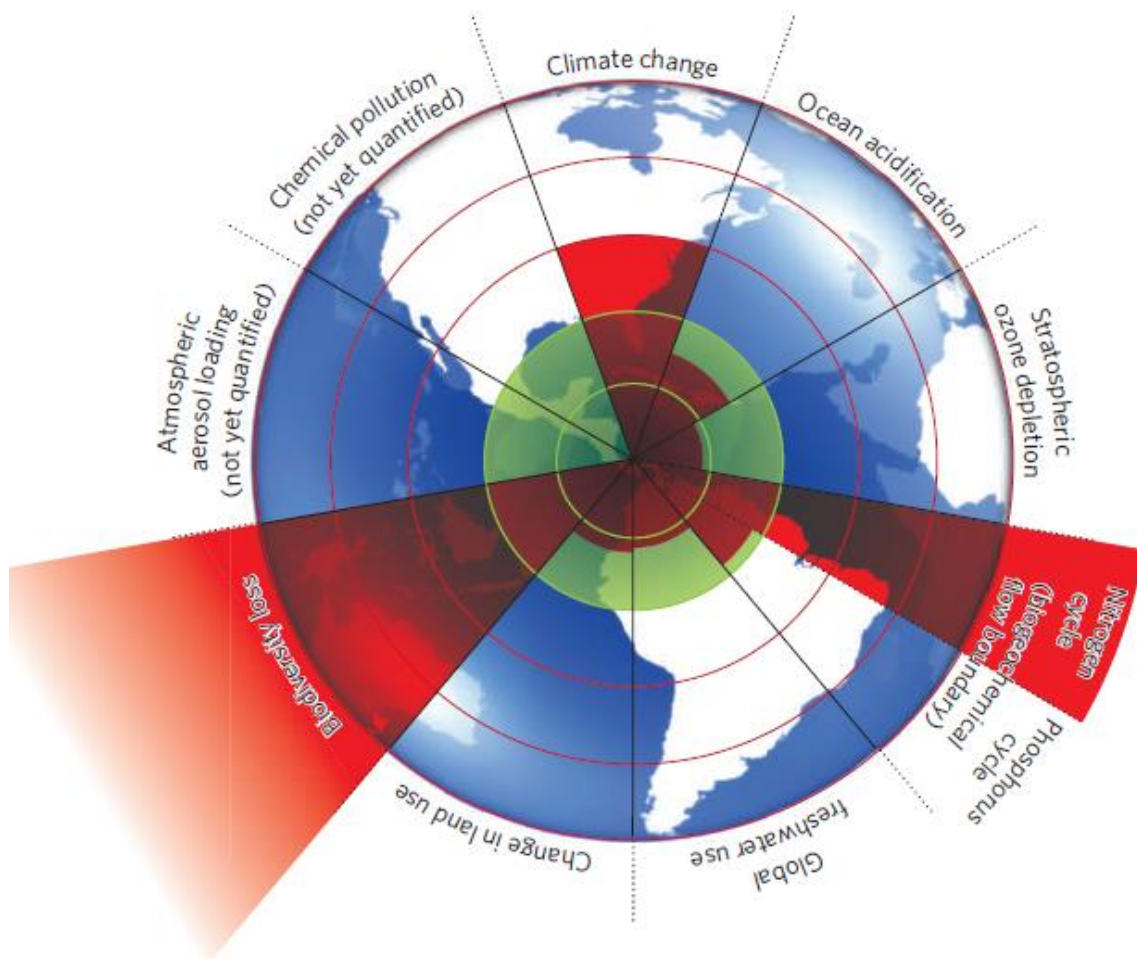


Figure 4: Beyond The Boundary (Rockström et al., 2009:472).

Note: The inner green shading represents the proposed safe operating space for nine planetary systems. The red wedges represents an estimate of the current position for each variable.

In the essential report “The road to dignity by 2013”, UN Secretary-General Ban Ki-moon describes challenges related to people and planet. The UN member states have called for a holistic approach to sustainable development in order to “guide humanity to live in harmony with the planet’s fragile ecosystems.” (Ban Ki-moon, 2014:8). Respecting the planetary boundaries identified by Rockström et al. is essential to protect our ecosystems for future generations. Ban Ki-moon states that the boundaries can be respected by addressing climate change, biodiversity loss, desertification, and unsustainable land use, as well as protecting wildlife, forests, oceans and water, atmosphere, and build resilience. The report explicitly ask that we:

“Promote sustainable agriculture, fisheries and food systems; foster sustainable management of water resources and of waste and chemicals; foster renewable and more efficient energy; decouple economic growth from environmental degradation; advance sustainable

industrialization and resilient infrastructure; ensure sustainable consumption and production; and achieve sustainable management of marine and terrestrial ecosystems and land use.”
(Ibid.:18)

The knowledge of sustainability and sustainable development including the importance of planetary boundaries and ecosystems is applied throughout this study, and put into context of the Environmental Goods Agreement and process.

3.2 GREEN ECONOMY

The ‘green economy’ concept has many definitions and is used differently in a range of contexts. Green economy works as a tool enabling us to achieve sustainable development and economic growth (UNCSD, 2012, World Bank, 2012). The concepts of green economy and sustainable development are interlinked in such a way that it is difficult to describe one without the other. UNEP (2011) claim that environmental sustainability and economic growth can be reached simultaneously by engaging in opportunities delivered by the development of green sectors, and are not necessarily contradictions, as previously believed.

3.2.1 CONCEPT DEVELOPMENT

The first mention of the term ‘green economy’ (GE) was by the environmental economists David Pearce, Anil Markandya and Edward B. Barbier who wrote a report to the government of the United Kingdom in 1989 entitled “Blueprint for a Green Economy” (UN Sustainable Development Knowledge Platform, 2015a). The report evolved around the term “sustainable development” and examined the implications of the concept on policies and projects arguing that economics should support environmental policy and protection. There were no further mention of green economy aside from in the title. The authors later published two sequels to the first report named “Blueprint 2: Greening the world economy” and “Blueprint 3: Measuring Sustainable Development” which were concerned also with larger global issues such as climate change and natural resource loss (Ibid.).

The GE concept gained the academic and public’s attention after the outbreak of the financial crisis in 2008 through the paper “Global Green New Deal” written as part of UNEP’s (2009) work on the Green Economy Initiative. The goal of this green deal was to guide the rebuilding of the economy and different sectors in the image of a green economy. Some major objectives emerge from the paper:

“1) Make a major contribution to reviving the world economy, saving and creating jobs, and protecting vulnerable groups; 2) Reduce carbon dependency and ecosystem degradation, putting economies on a path to clean and stable development; and 3) Further sustainable and inclusive growth, achievement of the MDGs, and end extreme poverty by 2015” (UNEP, 2009:5)

This paper was the first thorough use of the GE concept and presents necessary enabling conditions for the economy and society to move from what is described as a “brown economy” based on fossil fuels, and over to a green economy.

Ahead of the 2009 UN Climate Change Conference in Copenhagen, a UN interagency statement was released, supporting the turn towards a green economy. The UN (2009) wanted the Copenhagen Conference to be a turning point, and encouraged all nations to invest in sectors which would produce sustainability, green jobs and economic recovery. The preferred sectors involved “energy efficient technologies, renewable energy, public transport, sustainable agriculture, environmentally friendly tourism, and sustainable management of natural resources including ecosystems and biodiversity” (Ibid.). Investment in these areas would show *“that a green economy can create dynamic new industries, quality jobs, and income growth while mitigating and adapting to climate change and arresting biodiversity decline”* (UN, 2009).

In later work, UNEP (2010:5) defines green economy as an economy resulting in *“improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”*. The environmental, social and economic aspects of human life are accounted for and interlinked in this definition, forming the foundation of the GE initiative. A green economy must ensure that the Millennium Development Goals’ (MDGs) objective of eradicating poverty are met, and that measures aimed at protecting the environment go together with efforts to achieve poverty eradication and social equity (UNEP, 2011:21). UNEP calls this issue “a twin challenge”, illustrated in Figure 5, where the goal is to reach a high level of human development while remaining within the planetary boundaries (Ibid.).

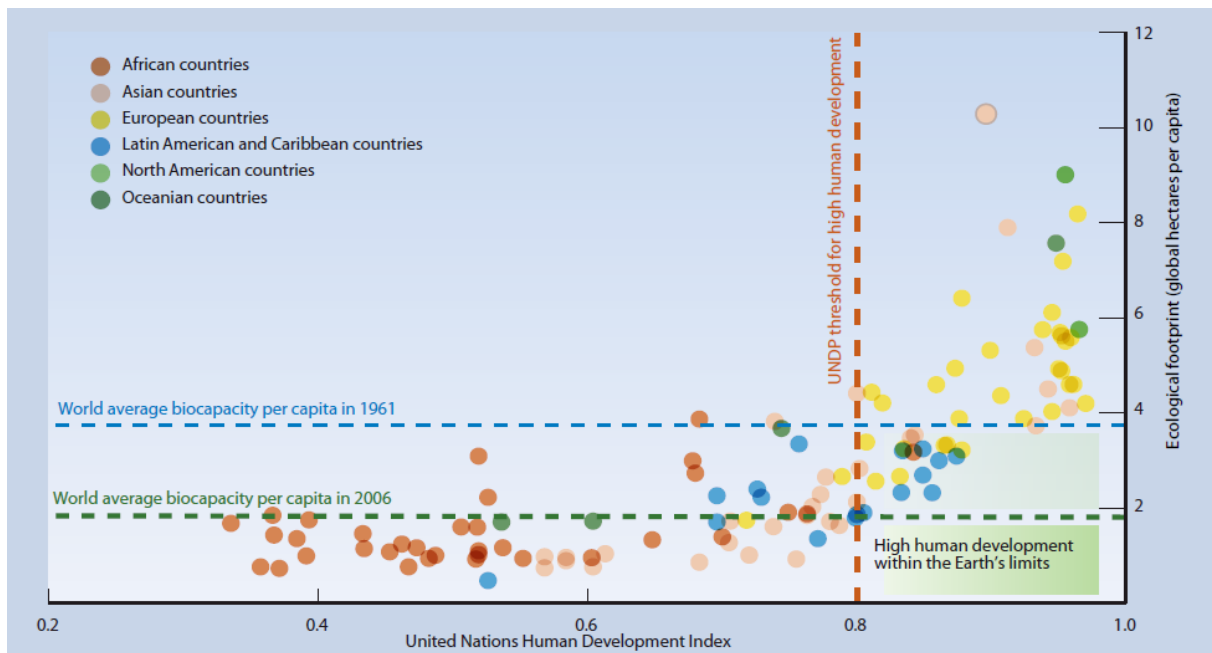


Figure 5: A Twin Challenge (UNEP, 2011:21)

UNEP (2011) encourages politicians to enable increased investment on the road to a green economy in tree ways. First, by shifting investments in public and private sectors towards sectors important for a green transition. The investments can create “green” jobs in those sectors, and thereby offset the job losses caused by the shift. Second, by highlighting the possibilities of reducing persistent poverty in important sectors such as agriculture, forestry, freshwater, fisheries and energy through the transition towards a GE. Third, by eliminating harmful subsidies, market failures, “creating market based incentives, implementing appropriate regulatory frameworks, initiating green public procurement and by stimulating investment”, which is essential to complete the shift to a green economy (Ibid.:16).

Five aspects are central to a green economy. A GE should be low carbon, meaning the emissions of carbon dioxide should be lowered drastically from today’s levels. It should also reduce pollution, enhance efficiency in resource and energy use, be socially inclusive, and prevent loss in biodiversity and ecosystem services (UNEP, 2011). Income and employment growth should be driven by investments intended to help reach these goals. One critical aspect of reaching these goals is to incorporate stricter environmental and social criteria into investment decisions.

A large scale misallocation of capital is one reason for recent crises in climate, biodiversity, fuel, food, water and the financial system (Ibid.). This capital has been wrongly invested into brown economy drivers such as “property, fossil fuels and structured financial assets with

embedded derivatives”, and too little have been invested in essential green economy sectors such as “renewable energy, energy efficiency, public transportation, sustainable agriculture, ecosystem and biodiversity protection, and land and water conservation” (UNEP, 2011:14). The World Bank (2012:xi) states that earth’s capital tends to be exploited in wasteful and economically inefficient ways because of market, policy and institutional failures. They also point out the lack of acknowledgement of the social costs related to these practices.

This suggests that investments have been used to rapidly and unsustainably collect human, physical and financial capital at the expense of natural capital, causing degradation of ecosystems and biodiversity loss. This has happened because the huge environmental and social externalities of this kind of capital accumulation have gone unchecked and unvalued (Ibid.).

There is a strong need to put value on natural resources and ecosystem services to account for external costs of production. UNEP (2011:18) states that to reverse the process of unsustainable development, “*environmental valuation and accounting for natural capital depreciation must be fully integrated into economic development policy and strategy*”. This calls for change in both investment patterns and policies to stop or reverse the effect of a brown economy and create incentives for actions more in pace with green economy goals. The World Bank (2012:xi) states that “*green growth policies must be carefully designed to maximize benefits for, and minimize costs to, the poor and most vulnerable, and policies and actions with irreversible negative impacts must be avoided*”.

3.2.2 DEFINING GREEN ECONOMY

Green economy was one of the main themes for the Rio+20 conference in 2012, contributing to an increased international interest in the concept and a surge of research and articles aiming at defining and explaining green economy (UN Sustainable Development Knowledge Platform, 2015a). One significant product of the conference was that all attendants, representing 192 countries, committed to the outcome report entitled “The Future We Want”. Through a summary of this outcome report, author Erika Palmer (2012) accounts for the positions of major groupings and introduces us to a range of different definitions of green economy.

This study refers to the definition developed by UNEP (2010) when discussing green economy. There are many other definitions, and we should be aware of them as they illustrate the diversity of interpretations of the concept. An overview of the diverse set of definitions identified is presented in Table 2.

Table 2: List of Definitions of the Concept ‘Green Economy’

Institution/Group:	Definition:
UNEP	“improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”
Norway: developed by “Yrkesorganisasjonens sentralforbund” and WWF-Norway	“An economy orientated towards ensuring effective value creation within an ecologically sustainable framework. Key parameters in a green economy are sustainable harvesting/extraction of resources, resource efficiency, environmentally friendly production processes and that the product or service (as well as waste from the production process) has the smallest environmental impact as possible while being as re-usable as possible”
Major Group for NGOs	“Greening the economy is the minimum that governments must achieve within the current flawed economic paradigm. It includes measures such as green technology, green jobs, and triple bottom line accounting. However, a green economy is an entirely different concept. It entails a fundamental paradigm shift away from a growth model of ever increasing consumption towards a truly sustainable economic model”
Business and Industry: ICC	“The business community believes that the term “Green Economy” is embedded in the broader sustainable development concept. The “Green Economy” is described as an economy in which economic growth and environmental responsibility work together in a mutually reinforcing fashion while supporting progress on social development. Business and industry have a crucial role in delivering the economically viable products, processes, services, and solutions required for the transition to a Green Economy”
U.S. Department of Commerce	“The Obama Administration has a strong commitment to fostering the development of a green economy; that is, a clean and energy-efficient economy. This means encouraging the development of green products and services that contribute to economic growth and improve this nation’s environmental stewardship. The jobs that are created and supported in businesses that produce green products and services are green jobs”
Norad	“Grønn økonomi omfatter økonomisk politikk og bruk av virkemidler som tar hensyn til naturens tålegrense og klimaendringer, og som samtidig reduserer fattigdom og bidrar til likhet og anstendig arbeid. Begrepet peker mot strategier for økonomisk politikk og utvikling som tar mer grunnleggende hensyn til naturens tålegrense og faren for klimaendringer i arbeidet for å redusere fattigdom og bidra til mer rettferdighet og anstendig arbeid”

Source: (Palmer, 2012:8, US. Department of Commerce, 2010:5, Norad, 2012, UNEP, 2010:5)

3.3 INTERNATIONAL ENVIRONMENTAL AGREEMENTS

An international environmental agreement (IEA) can be a means of regulating free-riding activity concerning environmental challenges and contribute to greater efforts and emissions reductions. Scott Barrett describes the central feature of IEAs as being self-enforcing. He states:

“No country can be forced to sign an IEA, and signatories to an IEA can always withdraw from the agreement. If IEAs can improve the management of shared environmental resources, they must make it attractive for countries to want to sign, and to want to carry out the terms of the agreement.” (Barrett, 1994:878)

Barrett studies IEAs from a game theory perspective and according to his results, self-enforcing IEAs set up to manage environmental resources may not be able to produce a better environmental outcome than if there were no agreement in the first place.

Authors Bratberg, Tjøtta and Øines (2005) explain that since the discovery of cross-border pollution in the 1950s, IEAs have increased in number, totalling 100 agreements in 1994. There is general agreement that cross-border environmental issues “such as global warming and acidification, require some form of international cooperation” (Ibid.:583). Bratberg et al. investigated whether IEAs leads to reductions in signatories’ emissions, by studying the effects of the Sofia Protocol on the reduction of nitrogen oxides. Much research on IEAs show limited effects of cooperation on emissions, but they found that “*the annual reduction in emissions was approximately 2.1% greater than if the Sofia agreement had not been signed.*” (Ibid.:596).

In the literature, the IEAs in the UN system is referred to as Multilateral Environmental Agreements (MEAs). There are many terms that needs clarification in order to understand the nature and varieties of multilateral agreements. Three of these terms are *Convention*, *Protocol* and *Party*. The UN information platform “InforMEA” (2015) on MEAs defines the terms as:

Convention: “*A binding agreement between States. Generally used for formal multilateral Instruments with a broad number of Parties.*” (2015a).

Party (or Contracting Party): “*A State (or regional economic integration organization such as the European Union) that has ratified, acceded to, or otherwise formally indicated its intent to be bound by an international agreement, and for which the agreement is in force.*” (2015c).

The Agreements with a binding effect on the Parties, require the Parties to implement policies to meet the requirements and obligations in the agreement. An example of this requirement is found in the UNFCCC in Article 4 on “Commitments”. InforMEA (2015b) states:

“Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention.”

Protocol: “*Internationally legal instrument appended or closely related to another agreement, which constitutes a separate and additional agreement and which must be signed and ratified by or acceded to by the Parties to the respective agreement. Protocols (in the environmental field) typically strengthen a convention by adding new and more detailed commitments.*” (2015d)

The different MEAs usually have associated Secretariats who support the Parties of the agreement in implementing their obligations. An example is the Ozone Secretariat (2015) who

“Facilitate and support the Parties to the Vienna Convention and the Montreal Protocol and other stakeholders as appropriate, in implementing actions to protect and heal the ozone layer against adverse impacts resulting from its modification, thus protecting human health and the environment, including minimizing impacts on climate.”

Table 3 shows an overview of the international environmental agreements or MEAs with most relevance for the topics of this study. In the left column, the agreements are presented by name and date, and in the right column follows a short descriptions of the goals, objectives or aims of the agreement. Table 3 is further expanded in chapter 5.2.1 to compare the agreements to the nomination categories of the EGA.

Table 3: Overview of MEAs and Their Aims

MEAs	Goals/Objectives/Aims
Atmosphere	
United Nations Framework Convention on Climate Change (UNFCCC 1992) Article 2 (*)	Prevent dangerous anthropogenic interference with the climate system: Stabilizing greenhouse gas emissions at a level that would hold the increase in global average temperature below 2°C above pre-industrial levels
Cancun Agreements (UNFCCC 2010) Article 1, Paragraph 4	
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 9a	Improve access to reliable, affordable, economically viable and environmentally sound energy supplies:
Energy for a Sustainable Future (AGECC 2010)	Achieve universal access to modern energy supplies by 2030
Convention on Long-range Transboundary Air Pollution (LRTAP) (*)	Limit and reduce air pollution in within the territories of the Parties. Limiting the concentration of pollutants (such as PM2.5, PM10, SO2, NO2, O3, CO, Pb) in line with WHO guidelines
WHO guidelines (WHO 2006)	
Montreal Protocol on Substances that Deplete the Ozone Layer (1987) under the Vienna Convention (1985). (*)	Develops a regime that limits the release of ozone-depleting substances (ODS) into the atmosphere.
Land	
FAO World Food Summit Plan of Action (FAO 1996) Paragraph 33g	Conservation and sustainable use of land and sustain forest cover: Reduce salinization, combat desertification, reduce cropland expansion and prevent soil pollution and degradation. Reduce the deforestation rate and expand forest areas
Agenda 21 (UNCED 1992b) Chapter 11.12a	
UN Millennium Declaration (UN 2000) MDG 1 Target 1c	Eradicate hunger: Halve, between 1990 and 2015, the proportion of people who suffer from hunger, and eradicate hunger by 2050
Water	
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 25d	Sustain water resources, protect water quality and aquatic ecosystems: Intensify water pollution prevention to reduce health hazards and protect ecosystems

UN Millennium Declaration (UN 2000) Paragraph 23	Stop the unsustainable exploitation of water resources by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies
UN Millennium Declaration (UN 2000) MDG 7 Target 7c	Universal provisioning of safe drinking water and improved sanitation: Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation and ensure full access by 2050
Biodiversity	
Convention on Biological Diversity (CBD) Aichi Biodiversity Targets (CBD 2010) Target 5, Target 12 (*)	Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity and promote its sustainable use and fair and equitable benefit sharing: By 2020, at least halve and where feasible bring close to zero the rate of loss of all natural habitats, including forests, and significantly reduce degradation and fragmentation. By 2020, prevent the extinction of known threatened species, and improve and sustain their conservation status, particularly of those most in decline
Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the CBD (Not in Force) (*)	Fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies. Contributing to the conservation of biological diversity and the sustainable use of its components.
UN Convention on the Law of the Sea (UNCLOS 1982) Article 192 (*) CBD Decision II/10 (Jakarta Mandate 1995) (*) FAO Code of Conduct for Responsible Fisheries (FAO 1995) Paragraph 6.2	Protect and preserve the marine environment: Promote conservation and sustainable use of the coastal and marine ecosystems as well as their natural resources Promote the maintenance of the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (D.C. 1973) (*)	Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.
Berne Convention on the Conservation of European Wildlife and Natural Habitats (1979) (*)	Protect European species of wild plants and animals and their natural habitats. The agreement applies primarily to the protection of species and areas that require cooperation between several states, and it places particular emphasis on the protection of endangered and vulnerable species and species that migrate over large areas.
The Convention for the Conservation of Atlantic Marine Living Resources (CCAMLR) (1982) (*)	Conserving Antarctic marine life
The Convention for the Protection of the Marine Environment of the North-East Atlantic (1992) (*)	The Convention combines Oslo Convention 1972 on dumping at sea and the Paris Convention of 1974 concerning land-based sources of marine pollution
International Plant Protection Convention (IPPC) (1951) (*)	To secure common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control
Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2000) (*)	Ensure an adequate level of protection in the field of safe transfer, handling and use of Living Modified Organisms (LMOs) that may have adverse effects on the conservation and sustainable use of biological diversity, also taking into account risks to human health
Chemicals and Waste	
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 23	Reduce chemical pollution to protect human health and the environment: By 2020, use and produce chemicals in ways that lead to the minimization of significant adverse effects on human health and the environment.

Stockholm Convention on Persistent Organic Pollutants (2009) (*)	Protect human health and the environment from persistent organic pollutants
Rotterdam Convention Certain Hazardous Chemicals and Pesticides in International Trade (1998) (*)	Monitor and control the trade in certain hazardous chemicals: Promote shared responsibility in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use
The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) (*)	To protect human health and the environment against the adverse effects of hazardous wastes: The reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, wherever the place of disposal; and the restriction of transboundary movements.
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 22	Minimize the amount of waste and promote reuse and recycling: Prevent and minimize waste and maximize reuse, recycling and use of environmentally friendly alternative materials
Minimata Convention on Mercury (2013) (*)	Regulate and reduce emissions of mercury: Regulates mercury from all sources, both from different types of mining operations, the use of mercury in products, industrial processes, and for mercury emissions to air and water from industrial activities. How mercury compounds should be stored in a proper manner, and treatment of waste containing mercury
The Convention on Wetlands (Ramsar 1971) (*)	Contributing to the conservation and wise use of wetlands through local, national and global actions and international cooperation, to contribute to sustainable development worldwide.

(*): The MEA is binding for the Parties/signatories of the agreement

Sources: (UNEP, 2012:426), (Basel Convention, 2011), (Rotterdam Convention, 2010), (CITES, 2013), (CCAMLR, 2015), (Miljødirektoratet, 2015), (WTO, 2013)

The vast amount of international environmental agreements signifies international recognition of climate change and environmental degradation issues. UNEP (2014) states that the collected pledges and targets of reduced emissions provides an indication of global ambitions, but even though efforts are extensive, the collected goals and targets are not enough to limit the global temperature rise to below 2°C. UNEP (2014:22) state that the results depend on two factors:

- 1) *“Accounting rules for credits or debits from land-use change and forestry (LULUCF), surplus emission units, and double counting and additionality of offsets”*; and
- 2) *“Whether parties adopt the more ambitious (conditional) or less ambitious (unconditional) variant of their pledges.”*

IPCC found that *“postponing further mitigation efforts to 2030 beyond current country pledges would substantially hinder the transition to lower long-term emissions levels and highlights that this postponement would narrow the range of options for staying within the 2°C limit with a likely chance”* (UNEP, 2014:18). They estimate a ‘carbon dioxide emissions budget’, accounting for the maximum amount of CO₂ that can be emitted and still keep the temperature rise below 2°C. Figure 6 illustrates different roads to carbon neutrality and we see that the faster

we exhaust the available emissions budget, the sooner we need to achieve carbon neutrality. Ban Ki-moon (2014:18) express his concern that

“The longer we wait to take action towards sustainable production and consumption, the more it will cost to solve the problem and the greater the technological challenges will be.”

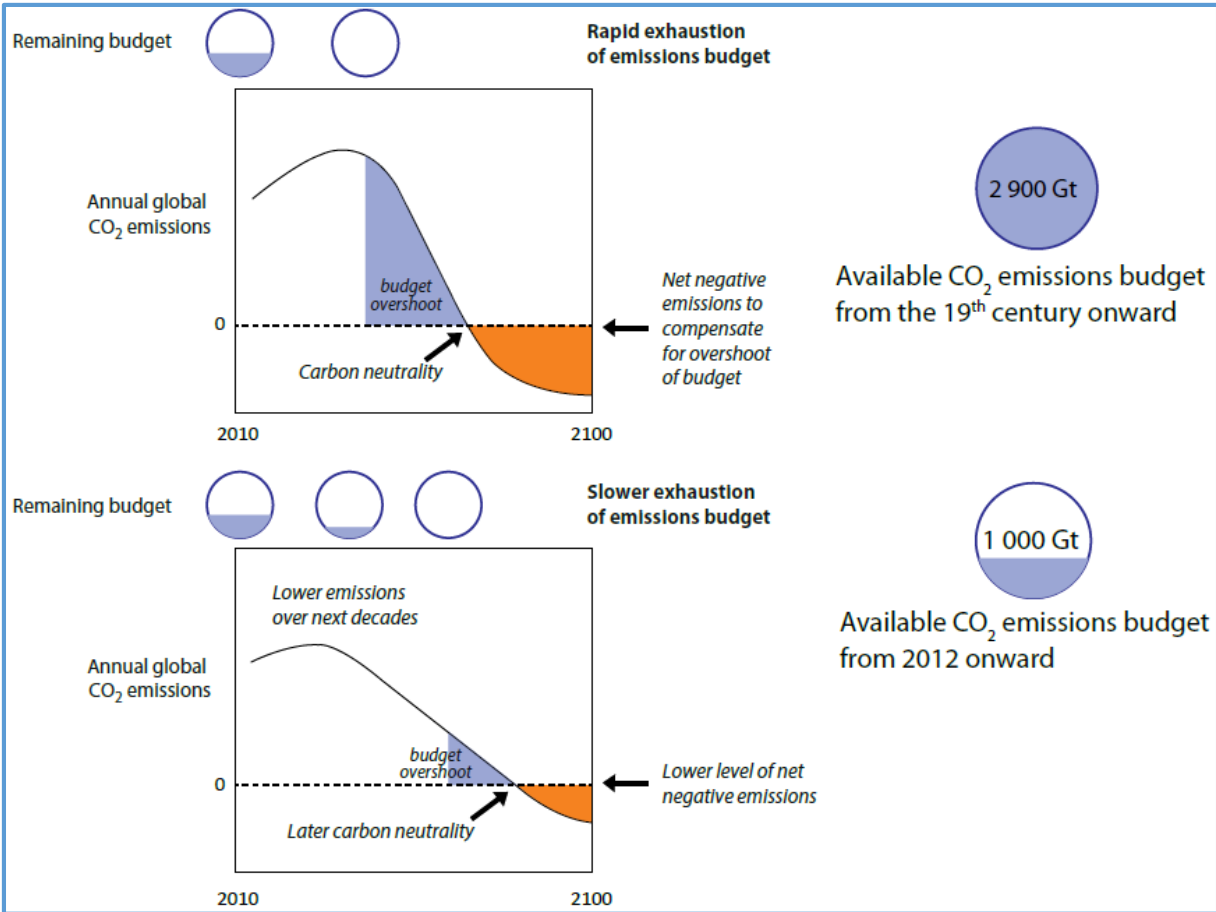


Figure 6: Carbon Neutrality (UNEP, 2014:xiv)

3.4 CREDIBILITY

The Merriam-Webster dictionary (2015) defines Credibility as “the quality of being believed or accepted as true, real, or honest”. Credibility is important to any agreement dependent on several actors, and is fundamental to this study of the EGA initiative.

Authors James Kouzes and Barry Posner (2011), offer suggestions on how leaders can increase the trust and confidence people have in them. To trust in the people who lead is necessary for people to follow. Kouzes and Posner describe a slide of confidence in all aspects of society related to the beginning of the financial crisis in 2007. Regular people were angered by “*the fact that once-powerful organizations were given government bailouts while at the same time*

paying massive bonuses to their top executives” (Ibid.:xiii). The crisis saw a monumental drop in perceptions of credibility and trust, and leaders were being viewed as greedy, self-interested liars without a care for the consumer, their employees or country (ibid.).

When investigating the most important leader abilities or characteristics of a good leader, Kouzes and Poser (2011:7) state that *“the most important leadership attribute since we began our research in 1980 has always been honesty”*. The next three characteristics mentioned by respondents from all over the world was forward-looking, inspiring and competent.

Peters, Covello and McCallum (1997:3) explored the topic of perceptions of trust and credibility among regular citizens from a risk communication perspective related to industry, government and citizens groups. The analysis of the empirical study strongly support their hypothesis (with a statistically significant result) that *“trust and credibility are based on three determinants: knowledge and expertise; openness and honesty; and concern and care”*.

Their study was based on the importance of credibility in environmental risk communications, and the concept can in many ways be applied in the context of the EGA initiative. Peters et al. suggests that being committed to having a communication source is a sign of concern and care, and therefore implies credibility. Analysis of the data collected indicates a clear relationship between “perceptions of commitment and perceptions of concern and care” (ibid: 10). Active disclosure of information and whether the information is received is often seen as a sign of openness and honesty by activists who appreciate those qualities, and increases the trust and credibility of actors such as industry and governments. The study supports the claim that the more information received from a source the stronger the trust towards that source will be.

Peters et al. (1997) discovered that for different groups in society, among all the variables tested for, the decisive factors which determine credibility vary. For industry, the ‘concern and care’-factor was clearly the most crucial. An increase in that factor resulted in the largest increase in perceptions of trust and credibility. For government, the determining factor was ‘commitment’, and for citizen groups it was ‘knowledge and expertise’.

Kouzes’ and Peters’ studies point to a clear relationship between perceptions of credibility and the impressions of knowledge and expertise, openness and honesty, and concern and care regarding credibility of leaders, governments, industry and citizens. These concepts are applied to analyse the perceptions of credibility of the EGA and possible areas of improvements.

4. HISTORICAL OUTLINE OF SIGNIFICANT INITIATIVES

Among the most significant initiatives of sustainable development are the SDGs and environmental goods. The negotiations on liberalization of environmental goods, the UN system, and the development from the MDGs to the SDGs are presented in this chapter.

4.1 THE EGs NEGOTIATIONS IN THE WTO AND THE EGA INITIATIVE

The following section presents developments in the WTO, environmental goods and services and the EGA initiative. These subjects are essential for exploring the research issue.

4.1.1 WORLD TRADE ORGANIZATION

The WTO grew out of and replaced the General Agreement on Tariffs and Trade (GATT) in 1995. The WTO/GATT is an international organisation and a Bretton Woods institution, and just like the World Bank and the International Monetary Fund (IMF), it is based on neoliberal ideas of development and economic growth through free trade. The WTO (2014e) states that *“the opening of national markets to international trade, with justifiable exceptions or with adequate flexibilities, will encourage and contribute to sustainable development, raise people's welfare, reduce poverty, and foster peace and stability.”* The WTO is *“the only international organization dealing with the global rules of trade between nations”* (WTO, 2014f).

The organisation makes most decisions based on consensus between its members, making the process long, but the result significant. The highest decision making body is the Ministerial Conferences (MC) held approximately every second year. The last MC was the MC9 in Bali, December 2013. The next round is taking place in Nairobi, Kenya in December 2015. Between the MCs the General Council, where all members are present, leads the WTO (WTO, 2014e).

The WTO works on the guiding principles of open borders, the Most-Favoured-Nation (MFN)-principle, non-discrimination among members, and organizational transparency. The MFN principle ensures that countries normally cannot “discriminate between their trading partners” and must grant all WTO members the same treatment. The organisation is structured around three pillars: the negotiations, implementation and monitoring, and the dispute settlement pillar.

The WTO is currently in its 14th year of the Doha Development Agenda (DDA). Starting in 2001, the DDA round and work program introduced a range of new aspects:

“[It] adds negotiations and other work on non-agricultural tariffs, trade and environment, WTO rules such as anti-dumping and subsidies, investment, competition policy, trade facilitation, transparency in government procurement, intellectual property, and a range of issues raised by developing countries as difficulties they face in implementing the present WTO agreements.” (WTO, 2014d).

The DDA have put forward many ambitious goals. The downside is that we have not been able to reach a multilateral agreement and finish the DDA in 14 years. The deadline was originally set to 1 January 2005, but has been broken a multitude of times after that. The WTO members now seem to be heading back on the right course towards the MC10.

4.1.2 ENVIRONMENTAL GOODS AND SERVICES IN THE WTO

Environmental and developmental issues are continuously getting more and more attention in the WTO, and the relationship between trade, environment and development has been given more room in negotiations and ministerial decisions. The Legal Texts, prepared during the Uruguay negotiation round of 1986-94, contains the notion that the policies of the free-trade values of the WTO and environmental considerations should not be contradictory. The ministerial decision on Trade and Environment (WTO, 1994:411) reads:

“...there should not be, nor need be, any policy contradiction between upholding and safeguarding an open, non-discriminatory and equitable multilateral trading system on the one hand, and acting for the protection of the environment, and the promotion of sustainable development on the other.”

Negotiations for reducing or eliminating barriers to trade in environmental goods and services (EGS) at the WTO is one essential theme under the DDA. Negotiations aim at creating “win-win-win” situations for trade, environment and development (WTO, 2014c). Many goods can achieve this triple win, for instance air filters and solar panels. Trade in services related to maintenance, installation and consultations are closely linked to the EGs and often central to make them work (Ibid).

The debate about environmental goods and services has been ongoing in the WTO since the start of the Doha-round, but no agreement has been reached. In the General Council of 28 July 2005, the chairperson of the Trade Negotiations Committee informed that the members did not agree on the approach to the EGS issue, or on a definition of EGs (WTO, 2005). In June 2014 the chairman of the Committee on Trade and Environment in Special Session stated in his oral

report that *“on environmental goods, delegations are still reflecting on ways to move forward on this part of the agenda and this will need to be further explored in the coming months”* (WTO, 2014a). He also mentioned that coming reflections on liberalization of EGS might need to consider the recent Environmental Goods Agreement (EGA) initiative.

The market of environmental goods and services is growing steadily, and the OECD predicts that consumption of EGs and ESs are going to increase significantly over the next 5-10 years (Kennett and Steenblik, 2005). Kennett and Steenblik suggests that the need for strengthening environmental regulation in many countries leads to an increased need for EGS in the future, resulting in broadening markets.

An UNCTAD (2015:7) informal summary on climate change, sustainable development goals and trade reflected on WTO’s role in combining trade and environmental policies. The Secretariat states that the WTO makes an excellent incubator for developing trade policies which are more *“supportive of environmental sustainability”*. Discussions in WTO on trade and environment can assist efforts on climate change as lowering trade barriers to environmental technologies and reducing barriers to trade on ‘climate friendly products’ *“should reduce the price and facilitate access to these products by a larger number of countries”* (Ibid.).

4.1.3 THE ENVIRONMENTAL GOODS AGREEMENT

The EGA is a plurilateral initiative aimed at liberalizing trade in environmental goods. In this case, being plurilateral means that it consists of several, but not all WTO members. The initiative initially compiled of 14 WTO members: Australia, Canada, China, Costa Rica, the EU (28 countries), Hong Kong, Japan, Korea, New Zealand, Norway, Singapore, Switzerland, Taiwan and the US (EGA, 2014a). As of June 2015, the initiative has reached 17 members with Israel, Iceland and Turkey joining the negotiations. The EGA (2014b) state that it will build on the *“ground-breaking”* achievements of the Asian-Pacific Economic Cooperation’s (APEC) list of EGs, which aims to lower tariffs on 54 agreed-upon goods.

The initiative has arisen as a response to the slow progress on EGSs in the WTO. It aims to liberalize EGs to make them more accessible for everyone. Norway, an original member of the initiative, states that EGSs can contribute to solving environmental and climate challenges (UD, 2014b) . Their view is that if the tariffs disappear, trade in these goods will increase, causing modern technology to become more easily available on the international market.

Negotiations in the WTO have, according to the ICTSD writer Mahesh Sugathan, been standing still because of disagreement regarding the definition of environmental goods and the correct way to liberalize them. Sugathan suggests that members of the WTO are increasingly engaging in plurilateral negotiations as a way to break the deadlock in the DDA. Members might do this to meet the instructions given at the MC in 2011 to “pursue new, more flexible negotiating approaches” (Sugathan, 2014).

Expert presentations have been included in the EGA negotiation rounds to inform the debate and share knowledge about which products are essential to each environmental product nomination category. This is an effort to bridge the gap between negotiators and experts related to environmental goods and services. Among others, experts from the OECD, the International Energy Agency (IEA), the World Customs Organization (WCO), UNEP, the French agency AREME, and several professors and industry specialists have given valuable information on challenges and opportunities of the sector to the EGA initiative (ICDST, 2014b). Professor Edgar Hertwich from NTNU presented on resource efficiency and Dr Mikael Karlsson on circular economy. Haley Knudson and John E. Hermansen from NTNU presented a report on EGs with development benefits during an information session with the EGA and other WTO members (UD, 2015d, 2015e). The Norwegian Ministry of Foreign Affairs (UD, 2014a) states that *“An active involvement of experts when discussing the individual categories is among the measures which ensures the selection of good environmental products”* (my translation).

The EGA first started discussing categories and product nominations during the round of 22-26 September 2014 in Geneva, Switzerland (UD, 2014a). By June six rounds have been completed, and the negotiations will continue into the summer, concentrating on establishing a final list of EGs in time for the COP21 meeting in Paris and the WTO’s 10th MC in Nairobi in December (UD, 2015e). The deadline for suggesting new products was 1 April 2015, but the three new members – Israel, Iceland and Turkey – have been allowed some extra time to consider nominating their own product lists (UD, 2015d).

Aims of the EGA

The aim of the EGA was presented in the initiative’s joint statement of 24 January 2014. They intend to expand the list to reach outside of the APEC-list. They wish to involve “all major traders” to encompass as much of global trade in EGs as possible, and to apply the MFN-principle as soon as a “critical mass” is reached (EGA, 2014b). According to the Secretary-

General of the WTO, Roberto Azevêdo, making the EGA accountable under the MFN-principle will secure a non-discriminatory trade agreement. Azevêdo also informed that initial members of the initiative made up 86% of global trade in EGs, implying that the agreement can have a large impact (WTO, 2014b). The EGA (2014b) initiative stated that they, for the purpose of properly addressing the EGs sector, would “*respond to changes in technologies in the years to come*”. The “living agreement”, an agreement that can change and adapt to new developments in technology and the EGs sector, has many advantages, but is also a challenging project. The EGA (2014b) seeks to accomplish these goals in order to “*directly and positively contribute to green growth and sustainable development*”, the environmental protection agenda and the negotiations in the United Nations Framework Convention on Climate Change (UNFCCC), which are major drivers of the initiative.

4.2 THE UN SYSTEM: IPCC AND IPBES

The United Nations was founded in 1945, following the end of World War II, and is today led by the Secretary-General Ban Ki-moon. The organization today consist of 193 members, and has an international charter which allows them to

“take action on the issues confronting humanity in the 21st century, such as peace and security, climate change, sustainable development, human rights, disarmament, terrorism, humanitarian and health emergencies, gender equality, governance, food production, and more.” (UN, 2015c)

The five principle organs of the UN are: the *General Assembly*, where all member nations are represented “making it the only UN body with universal representation”; the *Security Council* facing issues of peace and security and consisting of 5 permanent members (the United States, France, Russia, the United Kingdom and China), and 10 non-permanent places on rotation between the rest of the UN membership; the *Economic and Social Council* taking on matters of economic, social and environmental character, and is the UN’s “central platform for reflection, debate, and innovative thinking on sustainable development”; the *Trusteeship Council* meeting on occasion and before 1994 responsible for following up the self-governing transition of 11 territories; the *International Court of Justice* placed in Haag giving advice and settling legal disputes brought in by member states; and finally the *Secretariat* carrying out the assignments mandated by the General Assembly and other UN organs (UN, 2015a).

The Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) are the two most important UN institutions

for collecting knowledge on climate change and environmental matters. These organizations are central to this study, as their views on aspects of production and products in a sustainable development and Earth System perspective, represent one part of what the paper explores in relation to the discussion of environmental goods and the EGA. A short description of the institutions is therefore necessary.

The IPCC was established in 1988 by UNEP and the World Meteorological Organization (WMO) in order to provide “a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts” (IPCC, 2015). The panel gathers existing scientific material related to climate change for review and assessment, and does not conduct any research or monitoring of its own. The Planetary Sessions in the IPCC is where members discuss the IPCC work program and accept, adopt and approve reports. Today the organization has 195 members, and is open to all members of the UN and WMO to join and take part in the talks (Ibid.). What makes the IPCC relevant is that

“Because of its scientific and intergovernmental nature, the IPCC embodies a unique opportunity to provide rigorous and balanced scientific information to decision makers. By endorsing the IPCC reports, governments acknowledge the authority of their scientific content. The work of the organization is therefore policy-relevant and yet policy-neutral, never policy-prescriptive.”(IPCC, 2015)

The nature of the panel as providing agreed upon knowledge without making prescriptive policy suggestions is what makes it a natural arena for relevant dialogue. This aspect is one that it shares with a similar organization, the IPBES.

The IPBES (2015) is the “leading intergovernmental body for assessing the state of the planet's biodiversity, its ecosystems and the essential services they provide to society”. The processes of the Millennium Ecosystem Assessment Board and an International Mechanism of Scientific Expertise on Biodiversity (IMoSEB) came together to form the IPBES. It was founded in 2012 and aims to create a similar platform as the IPCC for knowledge of biodiversity and ecosystems. According to Nina Vik from MDIR, the most significant feature of the IPBES is that decision makers and experts have a forum where they meet. The IPBES has a work program designed by its members. The platform aims to include business, local society and all sectors, and provides a better foundation for making decisions. Vik states that what they want to achieve with initiatives such as the IPBES and IPCC is *“knowledge to enable change”*.

THE IPCC and IPBES are only two institutions under the international environmental and developmental governance. This governance is heavily fragmented, and in need of institutional coherence (UNEP, 2007). Leading organizations such as UNEP and the WTO coordinate the separate regimes, but come together through the many multilateral environmental agreements (MEAs). The UN Economic and Social Council and General Assembly have created fora for cooperation with organizations outside of the UN system, such as the WTO, World Bank and IMF (ibid.). The UN Global Compact initiative bridges the gap between international and business actions. Figure 7 describes the international interlinkages between governance, environment, development and trade.

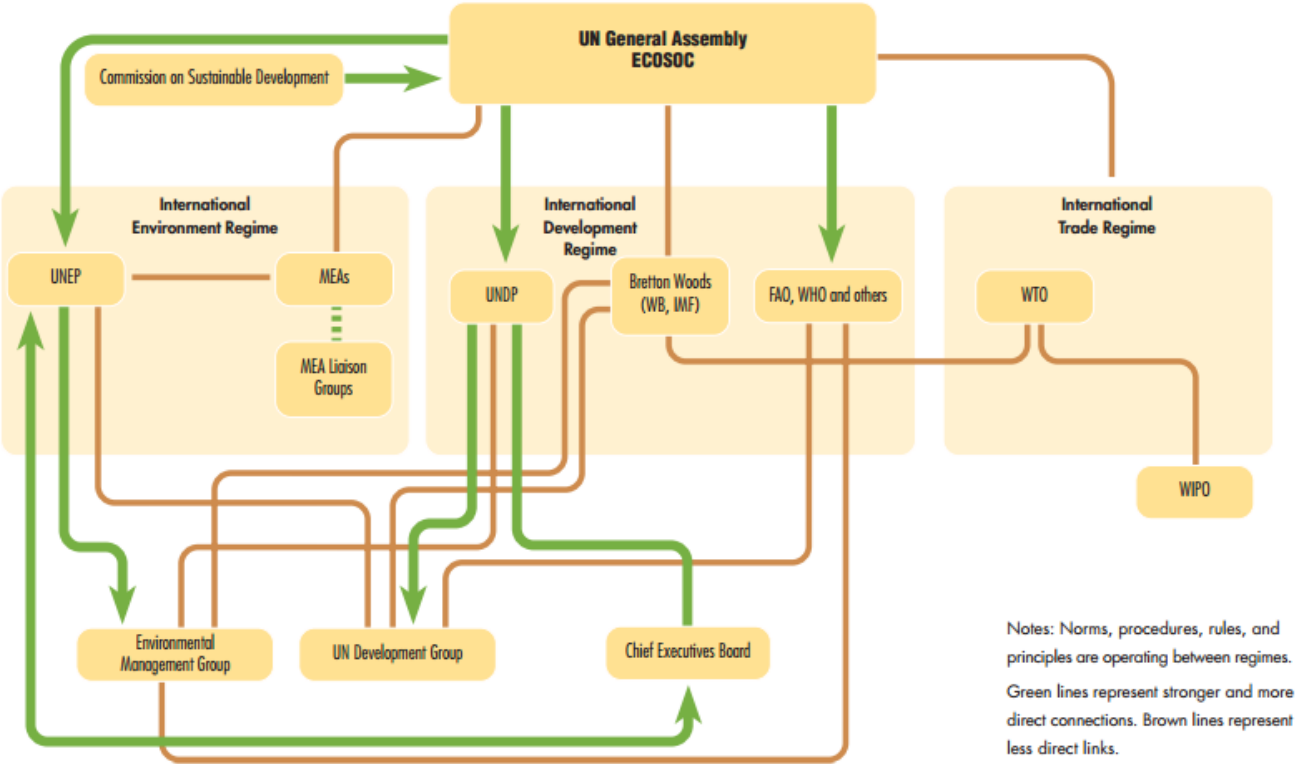


Figure 7: International Governance-Environment-Development-Trade Interlinkages (UNEP, 2007:381).
 Notes: Norms, procedures, rules, and principles are operating between regimes. Green lines represent stronger and more direct connections. Brown lines represent less direct links.

The IPCC and the IPBES can be placed under the box titled UNEP in Figure 7, and from there influences the UN system. Regarding possibilities to sanction members who are not complying with the terms of an agreement, there is an asymmetry of sanction possibilities between environmental agreements and trade agreements within the UN and WTO systems. The structure for sanctions in trade agreements are much stronger, as the WTO are able to punish non-compliance by imposing countermeasures and other punishments. This is not an option

with non-compliance of environmental agreements because UNEP has no such power. This asymmetry weakens the environmental agreements compared to trade agreements.

4.3 THE MDGs AND THE NEW SDGs

The Millennium Declaration was agreed upon during the UN General Assembly’s (UNGA) fifty-fifth meeting in September 2000. The Declaration concentrated on eight topics of high importance. The first topic, Values and Principles, included the fundamental values of Freedom, Equality, Solidarity, Tolerance, Respect for nature, and Shared responsibility, considered “essential to international relations in the twenty-first century”. The next seven topics were: Peace, security and disarmament; Development and poverty eradication; Protecting our common environment; Human rights, democracy and good governance; Protecting the vulnerable; Meeting the special needs of Africa; and Strengthening the United Nations (UNGA, 2000). The focus areas of the declaration became known as the eight Millennium Development Goals (MDGs), which are simply illustrated as presented by the UN in Figure 8. The target date for reaching the goals was set to 2015, and formed “a blueprint agreed to by all the world’s countries and all the world’s leading development institutions” (UN, 2015b).



Figure 8: The Millennium Development Goals (UN, 2015b)

The MDGs have to some extent been reached in prioritized areas. After the launch of the MDGs, the international society concentrated their efforts on the eight specific targets for development and eradicating poverty (UNDP, 2014). Ban Ki-moon reports that the effort has undoubtedly paid off, making “profound difference in people’s lives” (Ibid.). The targets that have been met, where considerable progress have been made, and where more efforts are needed in the future are presented in the MDG Report of 2015. The topics with major success are in areas of reducing extreme poverty by half, fighting malaria and tuberculosis, access to an improved source of drinking water, gender parity in all levels of school enrolment, increased political

participation of women, increased development assistance, and a favourable trading system for developing countries including keeping debt burdens low. Regarding environmental sustainability, hunger, under nutrition among children, child mortality, maternal mortality, antiretroviral therapy, improved sanitation, and reducing the amount of children who drop out of primary school education, especially in conflict areas, the targets need even more attention and effort (UNDP, 2014).

Through the outcome document of the Rio+20 summit of 2012, “The Future We Want”, the attendants reaffirmed their strong commitment to a “full and timely achievement” of the MDGs, with the deadline only three years away (UNCSD, 2012:43). The MDGs was a “useful tool in focusing achievement of specific development gains” and further work on goals is needed to pursue focused action towards sustainable development (Ibid.). The Future We Want recognizes the importance of the post-2015 Development Agenda’s new Sustainable Development Goals (SDGs). In “The road to dignity by 2030”, Ban Ki-moon recalls the mandate given by UNGA at the UN Conference on sustainable Development declaring that

“Sustainable development goals should be action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries, while taking into account different national realities, capacities and levels of development and respecting national policies and priorities.” (As cited in Ban Ki-moon, 2014:15)

After the Rio+20 conference, member states had agreed to launch the work on a set of SDGs, which would include all three aspects of sustainable development: social, economic and environmental (UN Sustainable Development Knowledge Platform, 2015b). The Open Working Group (OWG) set with the assignment, made sure to involve “relevant stakeholders and expertise from civil society, the scientific community and the UN system in its work, in order to provide a diversity of perspectives and experience.” (Ibid.).

David Griggs (2013:306) states that the best way of defining a universal set of SDGs is to combine the MDGs with “*global environmental targets drawn from science and from existing international agreements*”. He presents a model called “A Unified Framework”, illustrated in Figure 9, where six SDGs are proposed.

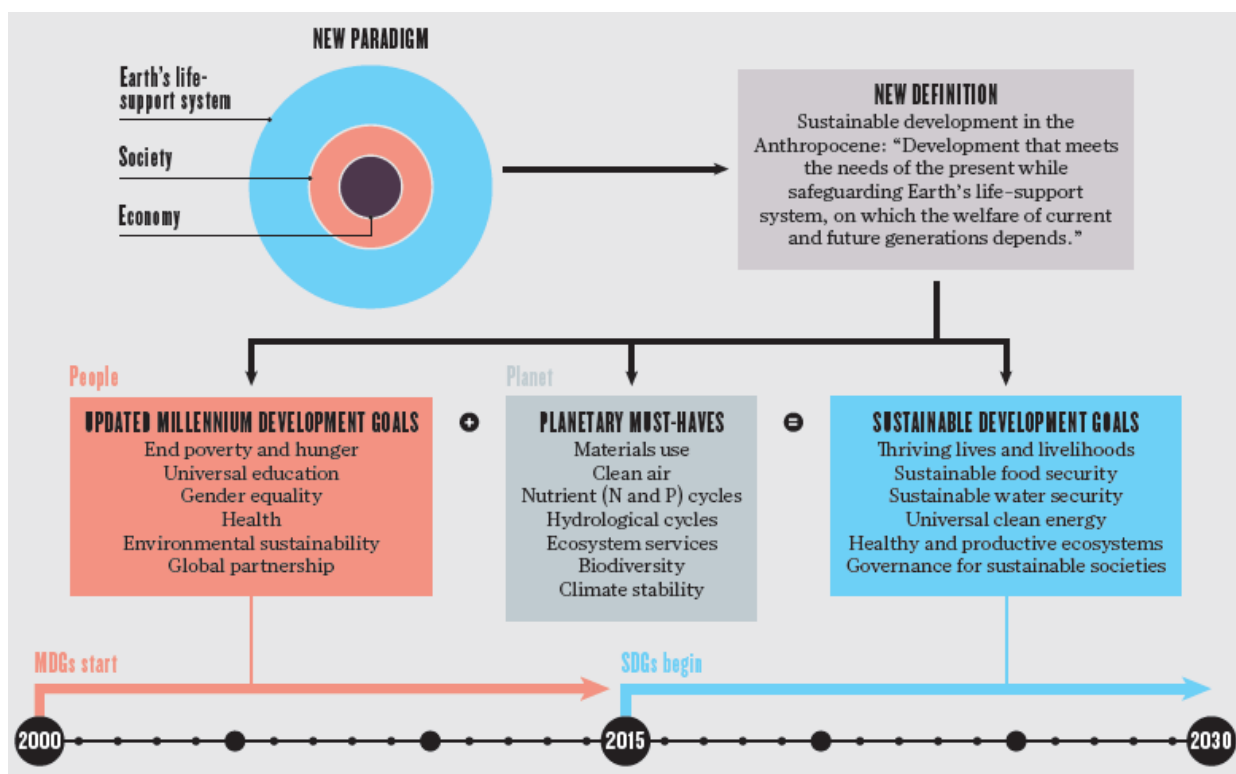


Figure 9: A Unified Framework (Griggs et al., 2013)

Ban Ki-moon (2014:16) suggests six ‘essential elements’ for delivering the SDGs in his synthesis report named “The Road to Dignity by 2030”. These are:

Dignity: to end poverty and fight inequalities

People: to ensure healthy lives, knowledge and the inclusion of women and children

Prosperity: to grow a strong, inclusive and transformative economy

Planet: to protect our ecosystems for all societies and our children

Justice: to promote safe and peaceful societies and strong institutions

Partnership: to catalyse global solidarity for sustainable development

In 2014, The OWG, published a proposal consisting of 17 sustainable development goals, each with several sub-targets or sub-goals. The list of main goals, as described in Table 4, was presented by the OWG and by UN SG Ban Ki-moon.

Table 4: List of the Post-2015 Sustainable Development Goals

1	End poverty in all its forms everywhere
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3	Ensure healthy lives and promote well-being for all at all ages
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5	Achieve gender equality and empower all women and girls
6	Ensure availability and sustainable management of water and sanitation for all
7	Ensure access to affordable, reliable, sustainable and modern energy for all
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10	Reduce inequality within and among countries
11	Make cities and human settlements inclusive, safe, resilient and sustainable
12	Ensure sustainable consumption and production patterns
13	Take urgent action to combat climate change and its impacts*
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development
* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.	

Sources: (UN OWG, 2014, Ban Ki-moon, 2014)

Without access to water, efforts to reach the SDGs will not be sufficient to meet environmental challenges. The World Water Development Report (WWDR) states that there is a need for an SDG devoted to water, targeting areas which would “*create social, economic, financial and other benefits that greatly outweigh its costs*”, and contribute to develop among other things, health, education, agriculture, food production, energy and industry (UNESCO, 2015:5). This need is provided for in Goal 6 of the SDGs.

Some criticism of the SDGs has occurred, particularly for being too comprehensive and lacking in private sector responsibility. The Norwegian NGO ForUM (Forum for Utvikling og Miljø) (2015) released a report concerning financing for development and corporate accountability. The SDGs are regarded as a step forward from the MDGs in relation to human rights, but ForUM (2015:6) also criticize the OWG’s proposal for not including any text about corporate and private sector responsibility. They state that “*the OWG makes no commitments that clarify the human rights responsibility of the private sector*”.

This dimension is also mentioned in UNCTAD’s (2014) annual World Investment Report, where they present the needed private sector contribution to the SDGs. This mostly includes

“good governance in business practices and investment in sustainable development” (xxvi), and has the following features:

“

- *commitment of the business sector to sustainable development;*
- *commitment specifically to the SDGs;*
- *transparency and accountability in honoring sustainable development in economic, social and environmental practices;*
- *responsibility to avoid harm, e.g. environmental externalities, even if such harms are not strictly speaking prohibited;*
- *partnership with government on maximizing co-benefits of investment*

” (Ibid.:137)

Ban Ki-moon (2014:7) considers private sector to have great potential as positive drivers of sustainable development, and mentions how “*forward-looking companies are taking the lead by transforming their business models for sustainable development*” and that “*we have only scratched the surface of the potential for ethics-driven investment by the private sector*”. Global business have addressed their role in the post-2015 agenda, and determined that:

“Companies are ready to change how they do business and to contribute by transforming markets from within and making production, consumption and the allocation of capital more inclusive and sustainable.” (Ibid.:9)

Finally, to end this chapter on the MDGs and SDGs, we take note of Ban Ki-moon’s (2014:11) announcement that the post-2015 agenda will be “*buttressed by science and evidence and built on the principles of human rights and the rule of law, equality and sustainability*”.

5. ANALYSIS

The analyses of the interviews and documents used in this study are presented in this chapter, and through that process, answers to the research questions emerge. These results lay the ground for discussion and recommendations.

5.1 ANALYSIS OF INTERVIEWS

The informants and their most prominent views are given a short introduction, followed by a thematic analysis of the interviews and a final summary of the analysis.

The themes appearing in the interviews were in many ways closely related to the themes and concepts of my study. The interviews were used for both informative reasons and for discovering opinions, and the interview guides were set up of several thematic parts. Some questions, such as those concerning green economy (GE) and IPBES, were only given to the interviewees with knowledge about the themes. As the study is not interested in whether people know about GE and IPBES, it was only relevant to ask questions to those who were familiar with the topics.

Other questions were part of all the interviews resulting in comparable answers. One of those were the questions about the environmental goods concept and definition. All the interviewees were asked questions about it, as understanding these issues are central to the study.

5.1.1 SUMMARY OF INTERVIEWS

To find the essence of the interviews, a short summary was made after analysing and coding each transcript. This summary gives a first glance at the topics and the understanding of the informants related to the themes brought up in the interview guides.

Kaja Edrén, from the Norwegian Ministry of Foreign Affairs (MFA), represents the official Norwegian perspective in this study, and is a good source for analysing the Norwegian understanding of the Environmental Goods Agreement and related themes. From her interview, the following essence was drawn: The EGA can contribute to the spread of technology, which then again contributes positively to the environment, and is one part of the common effort to achieve a green economy. Norway's attention in the nominations is on environmental and developmental concerns. The selection of goods for the list will happen in a consensus-seeking fashion, take place this summer, and include definition of ex-outs and other tariff-related issues.

Ingrid Jegou from the ICTSD is representing the Non-Governmental Organization perspective in the study. Essential aspects drawn from her interview are: The ICTSD focus on clean efficient and renewable energy – the most important sectors for impacting environment. They are closely connected to the APEC and EGA initiatives and try to guide the EGA initiative by providing research, meetings and dialogs. The EGA has to go beyond tariffs, and include non-tariff measures, services, and more members (especially developing countries) for it to be an environmentally relevant and effective agreement.

Finn Katerås from the Norwegian Environment Agency (MDIR) has experience and knowledge of green economy and represents the Norwegian public administration perspective. Through his interview, the central topics were: The GE concept has not been incorporated much into Norwegian policy and is difficult and unclear. EGs should be something contributing to the environment in a positive way. The society is moving in the direction of a low-carbon society, and everyone is very fixated on that part of the climate challenge issue and not so much on the part related to conserving ecosystems and biodiversity.

Nina Vik is also from MDIR and is the Norwegian contact to the IPBES, with good knowledge of the organization. She also represents the Norwegian public administration perspective, and the interview is summarized as follows: There is a need for a more coordinated approach to the climate issues. A knowledge based approach to the selection of EGs is important for credibility. One should be able to document a positive effect on climate or environment from the product. There will be trade-offs in measures for climate resilience and adoption.

Anders Larsen, from the Norwegian Society for the Conservation of Nature (NNF), represents the environmental social movement perspective in this study. The essential themes from his interview are: There are different views of GE in different countries. Industry responsibility is important, but it is mostly a political responsibility to regulate the market. Transport pollution needs to decrease. Trade agreements should be ranged beneath environmental agreements and the boundaries of the planet. We need to think about the rights and social aspect of producers in the south because they carry the burden and risk of environmental degradation and biodiversity loss on their land. For an agreement to be credible you need to inform and involve the public society in the process and debate before a finished deal is presented. We need to see measurable positive effects of the agreement and in consumer behaviour regarding products.

Haley Knudson, from the Department of Industrial Economics and Technology Management at NTNU, represents the development perspective from an academic angle. The core message is summarised as follows: There is a connection between some concepts, especially between the “broad approach” and importance of progress and moving on in the negotiations. There is an impression of members as enthusiastic and engaged. The process is challenging with different interests playing its parts. The interests of developed countries dominate the negotiations. There is an aspiration to incorporate developing country issues, but it is challenging to achieve.

THEMES

The structure of the interview guide influenced the topics and themes that came out of the analysis, as the questions often related to central concepts and fields of relevance to the study and to the interviewees. Coding the interview transcripts created main themes and sub-themes or concepts, which were used to compare and analyse further. For each interview, the coding contributed to identifying the most essential themes, which was placed into the table for easier systematization and analysis.

The main themes extracted from the interview data is: Knowledge; Green economy; EGA rationale and intentions; Motivations, goals and aims with the EGA; Environmental goods concept; The Environmental Goods Agreement; Impact of the EGA; Credibility of the EGA; and the IPBES and IPCC.

The interviews were analysed by selecting quotes from the interviewees and placing them under the appropriate theme. Table 5 is an example of the theme “Environmental Goods concept”, and shows how quotes representing the individual interviewee’s opinions or experiences is placed under each main theme and sub-themes.

Table 5: Illustration of Interview Analysis for the Theme “Environmental Goods Concept”

<i>Main theme: Environmental Goods concept</i>	
	<i>Sub-theme: EGs concept and definition</i>
UD, Kaja Edrén	“Hvis du spør meg personlig, så er det vel det at det bidrar til enten en miljøforbedring, eller bidrar til miljøforbedringer. At det er et mer gunstig for miljøet enn andre varer. Men det er veldig mye debatt om det der” p1.
ICTSD, Ingrid Jegou	“As you know, there is no definition in the negotiations and I don’t have a private definition. What we have been focusing on is not the environmental good, but rather on clean energy and energy efficiency” p2.
MDIR, Finn Katerås	“For meg er det vel mest et litt meningsløst begrep” p3. “Det blir litt som ‘miljøvennlig’, så det er veldig mange varer som sånn sett. Hva skal på en måte til? Er det noe, som i dette tilfelle, noe som legger til rette for et bedre miljø? Påvirker det? Er det noe som på en måte kobles til det? Jeg synes det er et forferdelig rart begrep” p3. “(Det må) på en eller annen måte være en vare som kan knyttes til å lage et bedre miljø” “ja, en positiv effekt. Den er forså vidt ganske klar, at hvis du først skal bruke det begrepet så vil jeg anta at da er det ikke noe som ødelegger, det er noe som gjør godt” p3. “Jeg tror jeg er fristet til å si at begrepet isolert sett vil handle om forholdet til miljøet. Og så får det nesten bli en egen diskusjon hva som er riktig eller galt for folk. Når jeg hører det begrepet og snakket rundt det, så sier ikke det hverken det ene eller det andre om det er bra for folk eller sosiale forhold eller fattigdomsbekjempelse” p3.
MDIR, Nina Vik (Finn)	“Når du gir meg et slikt ord som jeg ikke vet hva betyr eller hva det gjør, så går jo mine tanker veldig fort til de begrepene som jo faktisk ligger inne i navnet til IPEBS, altså dette med ‘ecosystem services’. Det er jo der mine tanker går” “når jeg tenker på økosystemtjenester, inni der ligger nettopp det at det kan være konkrete ting som naturens goder” “Det er jo fiber, vann og sånt så det kan jo kanskje være en miljøvare.” p6. “For det kommer jo litt ann på hva som er sammenhengen for å bruke et sånt ord” “da blir det jo fort sånn de mer konkrete tingene som mat for eksempel” p6.
NNF, Anders Larsen	“Jeg tror en miljøvare er noe som har lave klimagassutslipp og ikke ødelegger natur og ikke krever mer ressurser enn det den kan gi tilbake eller naturen klarer å opprettholde. Det jeg tror er viktig med en miljøvare er å tenke livsløpsperspektiv. At du må klare å se hele produksjonsrekken, og ikke minst hvis det har vært transport inne i bildet med ulike land involvert. Alt det der må regnes inn. Og levetiden til de ulike varene. Det er sånn sett mange enkelte miljøproblemer som bør tas hensyn til i varene men det bunner ut i at kanskje en sånn fellesnevner er ressurser, og at det må kreve mindre ressurser å lage og etablere og drifte, og det må være ressurser som er fornybare i den forstand at naturen klarer å reprodusere det” p2-3. “(Det er) litt ulike perspektiver i miljøbevegelsen også i hvilken grad man skal vektlegge det sosiale. Noen mener at miljøbevegelsen bare skal jobbe med miljø, og at sosiale konsekvenser som ikke er direkte miljørelatert er noe man skal se bort ifra. Vi har en annen tilnærming i NF der du har det sosiale, og ikke minst rettighetene, er et viktig perspektiv” p3. “(Det er) viktig at man kan kjøpe mobiltelefoner som varer mange år og som lar seg reparere. Ja at man har fabrikker i nord også som går på fornybar energi og at man minimerer miljøgiftutslipp osv. Jeg vil si at miljøvarer må gjelde hele spekteret” p3.
NTNU, Haley Knudson	“Because there is no definition, I guess it depends on the context in which you are looking for them. So for our report we generally just understood that it was a good that didn’t cause harm to the environment, or was comparatively better in benefiting the environment, or not surpassing the planetary boundaries, and that kind of thing. We used a very general understanding of it, so something a bit more specific could be helpful for future research, but because it’s such a large area, it’s difficult to define” p1.

5.1.2 THEMATIC ANALYSIS

For the analysis, main themes that appeared when coding the interviews are examined, special features or unexpected opinions, similarities and differences are highlighted and summarised.

Theme: Knowledge

Knowledge is a theme that stood out through all the interviews. This was not a topic delivered by the interview guides, and is interesting because of the link between knowledge and credibility, as seen in the theory of perceptions of trust and credibility by Peters et al. (1997).

One element was notions about lack of knowledge among a group of people, or impressions about their own level of knowledge. Some of the interviewees expressed lack of familiarity with the sustainable development goals, while others mentioned how knowledge of a concept or phenomenon such as environmental goods was limited. One example is Ingrid Jegou from the ICSTD, who mentioned in her interview how the industry that produce and provide environmentally friendly technology and products are not necessarily sure about what services should be liberalized because they lack understanding of which services are relevant.

The reception, use and inclusion of knowledge and research in the EGA is where the theme “knowledge” is most relevant for this study. Through the interviews with Kaja Edrén and Haley Knudson we learned how research such as the NTNU study of Development EGs is received by the EGA members and, according to Edrén, included directly into the process of nominating goods. Knudson describes WTO members’ reactions to the presentation of the report as appreciative and grateful, and state that *“to hear that the Norwegian delegation had already used some of our ideas and incorporated them in negotiations already was encouraging”*.

The connection between the ICTSD and the EGA initiative is strong, and Jegou stated that the organization use their research and dialogues with experts and stakeholders to try to inform the EGA. Nina Vik, from MDIR, thinks that having a solid knowledge basis is fundamental for making political decisions. Research on whether a measure has the desired effect is necessary to decide on future policy and actions. According to Vik, documentation of the product’s positive effects on climate and environment should be available for it to be nominated as an Environmental Good. Anders Larsen from the Norwegian Society for the Conservation of Nature (Norges Naturvernforbund (NNF)) calls for more political management regarding which research and development (R&D) topics and projects should be explored and prioritized.

One such example concerns what areas of R&D the Research Council of Norway (RCN) should prioritize. Larsen claims that much research done today is of the good kind, but that some of the Norwegian R&D will only contribute to a prolongation of the ‘Oil Age’. This is according to Larsen an undesirable road and the resources should be employed elsewhere.

Theme: Green economy

The green economy (GE) concept is central to this study, and involvement of informants from both administrative and community perspectives helps enlighten the topic. The theoretical framework provided an overview of the concept and its development. The interview data gave a reality check and broadened the understanding of such concepts’ influence on actual policy.

The GE concept is perceived by the interviewees as something that people are aware of internationally, but that has not really been implemented. There seems to be a lack of will to take the needs and ideas of green economy and make it into real life policy. Larsen and Katerås both have the impression that the interest has dwindled, and Larsen claims this has been the case especially after the “vague” outcome of the Rio+20 summit in 2012. Larsen claims the focus have shifted away from the GE, towards other approaches such as energy- and climate change policy. Katerås states that the concept is sometimes used too narrowly, concentrating not on the entire earth system, but jumping directly onto resource efficiency and the “low-carbon-society”. He states that people tend to forget about “*the state of the environment and natural conditions on the bottom*”. The GE concept tells us something about the platform on which to build the economy. Katerås states that taking into account the conditions of the ecosystems and the environment and its ability to deliver goods might have been a bit forgotten, but that we have to keep that essential part in mind.

The North – South divide in international negotiations also seems to play a part in how people and countries perceive and define GE. Larsen thinks that many countries in Africa and Latin America, when hearing talk about economy, equate it with “big business”, and are sceptical to the industry creating the solutions and fixing the environmental issues. It is therefore important that the solutions are made on a political level, and that the politicians carry the responsibility. If you rely on concepts like Corporate Social Responsibility, the great structural changes that are needed will not be achieved. Larsen believes involvement of the private sector is detrimental to discover the right solutions, but when discussing GE, we must be careful not to create an idea of placing the entire responsibility onto businesses.

Regarding Norwegian GE strategies, Katerås explains that the concept has not been implemented to a large degree into Norwegian policy or made into macroeconomic goals. He requests some overarching targets to reach for in environmental management, and sees a lack of such clear and visible targets in Norwegian policy today. From Larsen's perspective, Norway has some large structural challenges, such as a dependence on the petroleum industry, and a transition into the development of other types of industry is required. He thinks it is the actual political priorities that matter, not the reflections about GE. Larsen asks the question: "*what is the emphasis between economic considerations, economic growth and the environment?*", and considers it necessary for politicians to establish time-specific limits for emission levels.

For Katerås, resource efficiency is important when considering production in the light of GE. The production has to be conducted in the best way possible both when concerning harvesting biological resources, fishing methods, and the use of knowledge and technology.

Theme: EGA rationale and intentions

The main theme regarding rationales and intentions concerning the EGA contains reflections on the rationale behind creating, participating, and for possible new members to join the EGA.

There might be several reasons for creating the EGA initiative. Edrén points to the standstill in the Doha-negotiations regarding environmental goods and services as the main reason, while Jegou states that the ICTSD's efforts on a Sustainable Energy Trade Agreement have inspired the initiation of both the APEC- and the EGA-initiative. She also informs us that there was a lot of private sector interest in creating such an agreement.

Knudson regarded the EGA members as being excited to be involved and stated that "*I think it also has something to do just with the general push to be involved in sustainable policy*". According to Vik, it is natural and necessary to include both environmental and trade interest in an agreement such as this. For Norway, the aim to reduce tariffs has been a major motivation for engaging in the EGA initiative, and Edrén perceives one of the good outcomes of the agreement to be a larger spread of environmental goods and technology, which in turn will benefit the environment.

Regarding expanding the membership base of the EGA, the interviewees expressed the need and desire for more members, especially developing country members, to join, but highlighted some hindrances that may weaken the rationale behind joining. Edrén and Jegou points out that

for several reasons there are fewer and fewer incentives for new members to join. One reason is that many countries perceive participating in the initiative as unnecessary, as the MFN-principle will allow them to reap the benefits of the agreement whether or not they are members. A second reason is that at this point in the negotiations, there is little a new member can do to bring new goods to the table or change any aspect of the agreement. Edrén states that one rationale behind joining now would be to be associated and show your interest in the topic. Jegou mentions how the three month waiting period from applying until you are granted participation in the negotiations is an issue and an annoyance for new members.

Theme: Motivations, goals and aims with the EGA

Among the informants there seems to be both a hope and opinion that the motivation for participating in the EGA is to combat climate change, and a recognition that individual country interests are influencing the agreement. Knudson regards having an agreed upon list of goods, such as the APEC-list, as the motive, and that every member has their own idea of what to get from the EGA and their own national interest to be involved. Katerås states that people dealing with international environmental agreements generally desire to achieve a good agreement for reducing emissions. Jegou points to the EGA initiative's mandate where climate change is stated as a main reason for the initiative. From the ICTSD perspective she considers climate change as a main motivator, and that *"clean energy and energy efficiency is the sectors that can make the biggest contributions to climate mitigation"*. Norway is motivated to achieve an agreement that is environmentally credible, and states: *"We will not include goods that do not contribute to a better environment"* (my translation). They are concerned with results, and want to make sure that tariffs are not standing in the way of imports, exports and the spread of environmentally friendly technology. Norway's high ambitions of environmental credibility is a good sign, but as Jegou points out: *"it is a trade negotiation, so I think that should not be forgotten, that all the countries that negotiate have commercial interests"*.

From the perspective of developing countries, there is an issue with motivation to include them and to motivate them to participate. Knudson states that there are very few developing countries participating in the initiative, and although several members wish to include them, development issues remain challenging to incorporate. Jegou highlights what she considers a misconception among many developing countries. As mentioned earlier, some think they are better off outside of the initiative, as they will have market access through the MFN principle. Jegou expresses how joining such an agreement would promote access to the technologies, optimize supply-

chains and reduce costs. She has also gotten signals from the EGA members that they are becoming more sensitive to how they are being perceived, and also on how the initiative will contribute in the Doha-negotiations. Jegou thinks that *“many don’t want it to only be perceived as a developed country initiative, and they are more interested in getting the developing countries on board, so maybe they would be a bit more open to considering some special and differential treatment”*. Special and differential treatment is something that has been discussed in the EGA, but members have so far been reluctant to implement it. Giving some of the members who today have higher tariffs a bit more time to implement the EGA, would according to Jegou, not be unreasonable. Jegou thinks the EGA can only do ‘so much’ regarding giving developing countries access to technology, and developing countries might also have to consider reforms to their current systems to achieve that goal.

Theme: Environmental goods concept

All interviewees were asked questions about their understanding of environmental goods (EGs). Edrén’s opinion is that for something to be an EG it has to contribute in some way to improving the environment and be relatively better for the environment than other similar goods. This is a common perspective among the interviewees. Knudson states that the definition or understanding of the EG concept depends on the context, and in the case of the NTNU report presented to the EGA, they *“generally just understood that it was a good that didn’t cause harm to the environment, or was comparatively better in benefiting the environment, or not surpassing the planetary boundaries”*. Knudson explains that having a slimmer definition to go by might make research easier in the future. Katerås considers the concept as a quite empty expression, but describes a positive effect on the environment as essential to an EG. Vik had not heard of EGs before, but associates the term with ecosystem services such as food. Jegou from ICTSD took a different approach, and explained that because there is no definition of EGs in the initiative, ICTSD has not focused on the EG concept, but rather on clean energy and energy efficiency. Larsen claims that resources is the important aspect of EGs. An EG has to have low GHG emissions, not damage nature, and be made from renewable resources.

Social aspects did not emerge as central to evaluating whether something can be described as an environmental good or not. Larsen was the only one valuing the social implications of goods, and described social situations and rights as important. He states that local people and producers are vulnerable to loss of their land and the ecosystem services it provides, and should be heard in discussions of production and production methods in those areas.

Regarding the process of making a good and the use of the good, the interviewees were split in their opinion of what was relevant for an EG. The life cycle and production process is for Katerås, Vik and Larsen an important aspect when evaluating an EG. For them, both process and use should be accounted for. Jegou on the other hand, does not think the process of making a good is important. She states that *“It is not something that we have really discussed. I think we have seen more that the goods are for an environmental purpose”*. Vik explains that even though it is difficult to achieve sustainable production, we do know of some production methods that are comparatively better than others.

On the issue of identifying a common understanding of EGs in the EGA, Knudson describes the understanding as generally quite divided, but that there is a sort of understanding of what is acceptable to nominate as an EG. Jegou is not convinced they share a common understanding, as some countries have extensive nomination lists, even some containing nuclear technology, which is in strong contrast to what others see as acceptable. She state that this will be challenging for the members when continuing the process of creating a final list of EGs.

Theme: The Environmental Goods Agreement

This theme is quite large and considers different aspects of the agreement. The interviewees reflected on the scope of the EGA regarding members, goods and approach. Edrén states that the EGA does not include many developing countries, and that they are trying to reach out and include more, but points to the lack of incentives to join, except from being associated with the initiative, as every country will access the benefits through the MFN principle. Jegou also thinks that including a lot of goods might make it even more difficult for some countries to join. Some members in the EGA are anxious to have a long list of goods as they don't want to “undermine the Doha negotiations” and want to make sure an agreement is actually reached. Others would like an ambitious and broad agreement, which Jegou thinks *“would really make a difference for the environment”*. Knudson's impression is that the members are trying to involve the “whole span” of EGs, and that we won't know if that is good or bad until further down the road. Jegou points to another essential challenge: services, and explains that *“some countries are really pushing for including services, and others are saying: no, we'll rather it be a limited list of goods, and then deliver, and then we can see what comes next. But I mean, then you don't have services at all”*. Jegou considers standards to be less controversial than services, and that many can see the benefits of streamlining standards. Services might be more relevant to include in the EGA if the industry pushed harder for their liberalization.

Jegou states that there is not a good enough connection between the EGA negotiations and the UNFCCC negotiations. Even though the EGA state in their mandate that the agreement is targeted at supporting the UNFCCC process and combating climate change, there is no connection to the UNFCCC. According to Jegou, this indicates “*a disconnect between the rhetoric and what is actually being negotiated*”. Knudson also struggles to see the connections between the intentions of the initiative and the nominations, but claims to see efforts to combat climate change in the EGA process. She describes the process as being “all over the place at this moment” because of all the different interests and levels of environmental goods involved, from small parts to complex technological systems.

Edrén considers it unnecessary to define environmental goods before negotiating an agreement, as identifying what an EG is, is seen as intuitive. For the discussion not to come to a halt, the approach used by the EGA initiative at this time is to look at each good and consider whether it is good for the environment or not. An easy ‘yes or no’, and very broad, “bottom-up” approach.

According to Edrén, the EGA has connections to the sustainable development goals through the nomination categories. The process of deciding on the categories focused on environmental and climate challenges rather than the SDGs, but can contribute to sustainability through the spread of the technologies on the list. Knudson does not see an evident relationship there, and states that “*we have to integrate sustainability ideas into the economy and into trade, so why not do it with an initiative such as this?*”. Finn recognizes that frugally selected low-carbon goods can have a positive effect and contribute to the goals related to climate. Larsen considers the initiative as building cooperation and trust, which can help in Climate negotiations. Jegou states that there is a positive mention of trade in the post-2015 process, and believes that the EGA may support the SDGs, as trade is a tool for sustainable development. She believes that “*if The EGA becomes an effective agreement that actually takes on the barriers to trade in these goods, that would have positive implications for sustainable development*”.

Jegou states that the list of EGs consists of 600 goods at this moment. Edrén expects the final list of EGs, based on a method of consensus, to be ready by the end of 2015. They will need to sort out the ex-outs and determine which goods have the support of the member base.

Theme: Impact of the EGA

The interviewees consider the impacts of the EGA on sustainable development and environmental challenges, and propose main challenges and limits to the initiative. Edrén claim that liberalizing EGs, which then get cheaper, will result in a better or less constrained environment. Larsen states that technological transfer and the “trickle-down economy” has been attempted for many years without much luck, but that it can work if you have the necessary political control. For Jegou, the EGA can have a positive impact on sustainable development if it takes on barriers to trade. Development of industries in DCs can also contribute, and is the reason why Costa Rica is participating in the EGA, because as you import a technology, there is a learning process related to installations, maintenance and so forth in the importing country.

Regarding environmental challenges, Edrén describes the EGA as a small push compared to other international processes. Liberalizing a list of goods does not lead to environmentally friendly policies or way of living by itself. Edrén states that we need governments to take action on a large scale to achieve an actual impact. Katerås and Vik thinks the goods related to low emissions can contribute, but is also aware that new technology can have unforeseen effects on local ecosystems and these goals can be contradicting. Larsen believes the EGA can lead to the spread of technologies, and points to environmental regulations as decisive for this process. He claims that establishing equality between environmental agreements and trade agreements is a huge challenge, but essential. Jegou believes that the EGA can help reduce GHG emissions if the agreement includes relevant goods and goes beyond tariffs, as the ICTSD has done research showing a significant reduction of GHG emissions if the tariffs are eliminated. She states that more members would help reduce emissions and that *“if you include a few more countries, you would have a big impact on the environmental outcome as well”*.

According to Jegou, there is political will to get an agreement, but the challenge will be to make one that is environmentally relevant. Larsen believes that increased transport and related emissions is the main challenge of liberalization, and visions more focus on inter-regional trade. Knudson considers it challenging to incorporate development issues into the EGA, and because of all the diverse interests involved, the process is time- and resource intensive.

Theme: Credibility of the EGA

The interviewees were asked to evaluate the credibility of the EGA as a positive driver to meet climate and environmental challenges. For the EGA to be credible, Jegou thinks it has to be

environmentally relevant by including the right goods, extend to all WTO members on MFN basis, include services, broaden the country scope, eliminate tariffs and target non-tariff measures such as anti-dumping measures, because the tariffs of the suggested EGs are low for the current members of the agreement. She states that *“if you really want to make a difference, I think they would need to start thinking about those measures”*. Related to the issue of dual use, Jegou sees this as a challenge because it is sometimes necessary to include all kind of parts to make up for instance a wind turbine, but if you include too much dual use goods, countries might not want to join. Katerås considers a more specific target of what you want to achieve a necessity. That way you can more likely contribute to the UNFCCC and SDGs processes. He also criticize the environmental goods concept for having too many dualities. Vik concentrates on the need for concrete knowledge of the effects of EGs, and credibility depends on whether or not you can document an actual effect or not. Trade interests must be counted in, but Vik states she will be suspicious of the real intentions without documentation. Larsen values the possibility of measuring the effects of a product, and the involvement of civil society in the decision process as significant for credibility. He mentions the recent protests against trade agreements such as the Transatlantic Trade and Investment Partnership (TTIP), and states that it is important to show people how these agreements will benefit them and their regions, and to not create a top-down process, but involve society in a debate. Larsen states that it must be possible to make visible *“what kind of positive impact it will provide for environmentally friendly technologies and environmentally friendly products and goods”*.

Another issue, the need for a “living agreement” or review mechanism, is touched upon by Katerås, Vik and Jegou. Katerås sees a need for a possible way to include new technology and remove old, outdated technology and products. Vik states that *“we have learned enough to know that we should not create systems that cannot be changed”*. She claims that we need a mechanism that enables us to adjust the system as we go and new research to tell us about its effects. Jegou states that this will probably be included at a later stage.

Vik stresses the need for more connections and coordination between different international initiatives related to environment and climate change. The processes tends to go parallel to each other, and should be more aware of each other. Jegou also sees a disconnection between different organizations, as well as between the EGA and the UNFCCC process.

Larsen addresses the need for openness and transparency and states that it would be difficult to force an already signed agreement from an international fora onto people. The process is quite transparent from the Norwegian government, and Edrén explains that they publish information about the EGA on their webpage together with their nominations, and encourage anyone interested to deliver their input or comments. Larsen recognized that Norway has a tradition of openness, and highlights the importance of an enlightening debate beforehand.

Theme: The IPBES and IPCC

IPBES was established in 2012. The significant part of this initiative is that decision makers and experts have a fora where they meet. The process is important in itself. IPBES have, like the IPCC, a work program designed by its members. The platform aims to include business, local society and all sectors, and provides a better foundation for making decisions. Vik states that what they want to achieve with initiatives such as the IPBES and IPCC is "*knowledge to enable change*". When IPCC created a common science ground it truly contributed to driving the climate change debate forwards. The IPBES provides knowledge and reports, but like the IPCC, it does not provide policy recommendations to its members. This is according to Vik very important, as they rather provide knowledge about the consequences of possible choices and on that basis let the members decide. The IPBES is connected to the post-2015 process and the sustainable development goals through the current work program lasting until 2018, where pollination as ecosystem service, land degradation and desertification is among the themes. Vik states that they keep the SDGs in mind while conducting the research, and by incorporating them into the project descriptions.

2.1.3 SUMMARY OF THE INTERVIEW ANALYSIS

From the interview analysis, the following results have been found.

Knowledge is a factor which all the interviewees value significantly. The use of knowledge in the EGA negotiations, as basis for policy and determining the classification of environmental goods emerges as highly important.

The interviews reflects the diversity of how people interpret green economy, and reflect that green economy is not prioritized internationally or in Norway. The interviewees interpret GE the as a building block for the rest of the economy, where all actions have to be compatible to the condition of biodiversity and the ecosystems. Katerås requests macroeconomic targets for Norwegian policy, while Larsen requests structural changes.

The accounts given suggests that EGA member's intentions for joining the initiative was national interests, the push to participate in sustainable policy initiatives, and to create a wider spread of the EG technologies. There is a lack of incentive for new members to join the EGA, as new members have little influence on the final EG list at this time.

The motivations and goals of the EGA members vary, and some believe the initiative is aiming at contributing to the issue of climate change. However, there is an awareness that countries are also acting from domestic commercial interests. The initiative's aim of including developing countries and development issues is difficult to achieve, and the EGA contains very few developing country members, even though it is seen as beneficial to DCs to participate.

For something to be an EG it has to contribute in some way to improving the environment and be relatively better for the environment than other similar goods. The informants did not agree on whether process should influence the definition of an EG, and some thought the definition of EGs should be less broad. The EGA members do not seem to have a common understanding of EGs or what goods are acceptable to nominate.

The EGA members are divided when considering the scope of the agreement related to members, goods and services. Jegou and Knudson find little or no connection between intentions and nominations regarding a relationship between EGA and initiatives such as the UNFCCC. Edrén states that the process of selecting goods is done on an intuitive, 'yes or no' basis. There is no explicit relationship between the EGA and the SDGs, but linkages can be found through the nomination categories and the climate effect of low-carbon goods being nominated. The connection can be expanded and the EGA used as a tool to achieve the SDGs.

The EGA can have an impact on sustainable development and environmental challenges by liberalizing low-carbon technologies, going beyond tariffs, limiting additional pollution caused by increased transports and including more DCs, but is limited by being a small initiative in the climate context and can have unwanted effects on ecosystems.

The credibility of the agreement relies on whether it manages to include the right goods, extend to all WTO members on MFN basis, include services, broaden the country scope, eliminate tariffs and target non-tariff measures such as anti-dumping measures, document effects before nominating goods, measure impacts shortly after implementation, have an open, inclusive civil

society discussion before the agreement is finalized and include a review mechanism. Greater coordination with other initiatives and openness around the process is also necessary.

The IPBES and IPCC are platforms where members agree on a common science basis, and through a work program mandate experts to collect data on different topics decided by the members. This common knowledge provides a neutral ground for discussions on climate change and environmental challenges, and the IPBES keeps the SDGs in focus as they mandate and gather research.

5.2 ANALYSIS OF DOCUMENTS

The document analysis investigates documents related to the research questions, specifically international environmental agreements, the OWG proposal for sustainable development goals, the UN paper “The road to dignity by 2013”, the report on Development EGs for possible nomination in the EGA, and the Norwegian product nominations in the EGA.

5.2.1 INTERNATIONAL ENVIRONMENTAL AGREEMENTS

The table of international environmental agreements from chapter 3.3 is expanded in Table 6 to include the product nomination categories of the Environmental Goods Agreement. This will allow us to see the compatibility of the multilateral environmental agreements and the EGA.

The second EGA round, in september 2014, lead to agreement on ten categories for further product nominations. The categories are: Air Polution Control, Solid and Hazardous Waste Management, Wastewater and Water Treatment, Environmental Remediation and Clean-up, Noise and Vibration Abatement, Cleaner and Renewable Energy, Energy Efficiency, Environmentally Preferable Products, Reasource Efficiency and Environmental Monitoring, Analysis and Assessment (UD, 2014a, Knudson et al., 2015).

The overview of the MEAs given in chapter 3.3 have been extended and simplified. To analyse the compatibility between the framework of the EGA – the categories for nominating goods – and the goals of essential environmental agreements, a new column was added to the right to match the EGA categories to the different MEAs. The full table including descriptions of the agreements’ goals can be found in Appendix D.

Table 6: Combining MEAs with the EGA Categories

Multilateral Environmental Agreements	EGA Category
Atmosphere	
United Nations Framework Convention on Climate Change (UNFCCC 1992) Article 2 (*)	Air Pollution Control Cleaner and Renewable Energy Energy Efficiency
Cancun Agreements (UNFCCC 2010) Article 1, Paragraph 4	Environmental Monitoring, Analysis and Assessment
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 9a	Cleaner and Renewable Energy Energy Efficiency
Energy for a Sustainable Future (AGECC 2010)	
Convention on Long-range Transboundary Air Pollution (LRTAP) (*)	Air Pollution Control Environmental Monitoring, Analysis and Assessment
WHO guidelines (WHO 2006)	
Montreal Protocol on Substances that Deplete the Ozone Layer (1987) under the Vienna Convention (1985). (*)	Air Pollution Control Cleaner and Renewable energy Solid and Hazardous Waste Management
Land	
FAO World Food Summit Plan of Action (FAO 1996) Paragraph 33g	Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment
Agenda 21 (UNCED 1992b) Chapter 11.12a	
UN Millennium Declaration (UN 2000) MDG 1 Target 1c	Resource Efficiency Environmental Remediation and Clean-up
Water	
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 25d	Wastewater and Water Treatment Resource Efficiency Solid and Hazardous Waste Management
UN Millennium Declaration (UN 2000) Paragraph 23	Environmental Monitoring, Analysis and Assessment
UN Millennium Declaration (UN 2000) MDG 7 Target 7c	Wastewater and Water Treatment Resource efficiency Solid and Hazardous Waste Management
Biodiversity	
Convention on Biological Diversity (CBD) Aichi Biodiversity Targets (CBD 2010) Target 5, Target 12 (*)	Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment
Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the CBD (Not in Force) (*)	Environmentally Preferable Products Resource Efficiency
UN Convention on the Law of the Sea (UNCLOS 1982) Article 192 (*)	Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment
CBD Decision II/10 (Jakarta Mandate 1995) (*)	
FAO Code of Conduct for Responsible Fisheries (FAO 1995) Paragraph 6.2	
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (D.C. 1973) (*)	Environmentally Preferable Products (?) Environmental Monitoring, Analysis and Assessment
Berne Convention on the Conservation of European Wildlife and Natural Habitats (1979) (*)	Environmentally Preferable Products (?) Environmental Monitoring, Analysis and Assessment
The Convention for the Conservation of Atlantic Marine Living Resources (CCAMLR) (1982) (*)	Environmental Monitoring, Analysis and Assessment Environmental Remediation and Clean-up
The Convention for the Protection of the Marine Environment of the North-East Atlantic (1992) (*)	Solid and Hazardous Waste Management Wastewater and water treatment

International Plant Protection Convention (IPPC) (1951) (*)	Environmental Monitoring, Analysis and Assessment
Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2000) (*)	Environmental Monitoring, Analysis and Assessment
Chemicals and Waste	
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 23	Solid and Hazardous Waste Management Wastewater and water treatment
Stockholm Convention on Persistent Organic Pollutants (2009) (*)	
Rotterdam Convention Certain Hazardous Chemicals and Pesticides in International Trade (1998) (*)	Environmental Monitoring, Analysis and Assessment
The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) (*)	Environmentally Preferable Products Solid and Hazardous Waste Management
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 22	Resource efficiency Solid and Hazardous Waste Management Wastewater and water treatment Environmentally Preferable Products
Minimata Convention on Mercury (2013) (*)	Solid and Hazardous Waste Management Wastewater and water treatment Air Pollution Control Environmental Monitoring, Analysis and Assessment
The Convention on Wetlands (Ramsar 1971) (*)	Resource Efficiency Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment

(*): The MEA is binding for the Parties/signatories of the agreement

Sources: (UNEP, 2012:426), (Basel Convention, 2011), (Rotterdam Convention, 2010), (CITES, 2013), (CCAMLR, 2015), (Miljødirektoratet, 2015), (WTO, 2013)

We can see from the Table 6 that all of the agreements mentioned are compatible with at least one of the EGA categories. Some, like the Rotterdam Convention, Cartagena Protocol, CITES and the Berne Convention are harder to place under any of the categories, because they involve regulations in trade and protection of wildlife in a manner that is hard to incorporate into the EGA. The category of Environmental Monitoring, Analysis and Assessment can in some instances be applied here, but may only apply to certain technical aspects of the agreements.

Four categories stand out as especially significant in regards to MEAs: Environmental Monitoring, Analysis and Assessment; Solid and Hazardous Waste Management; Wastewater and Water Treatment; Environmental Remediation and Clean-up; and Resource Efficiency. The only category that I was unable to match with any of the MEAs was Noise and Vibration Abatement. Because this category involves a narrow range of products and technologies, it can be difficult to relate to MEAs which are quite general in their descriptions.

From the comparison made in Table 6, we can see that some of the major categories of the EGA nomination process can go together with important multilateral environmental agreements. This

gives us the impression that the EGA does involve topics which are highly relevant to environmental challenges.

5.2.2 THE SUSTAINABLE DEVELOPMENT GOALS

An analysis of the SDGs with regards to green products and technology is conducted in this section. To compare the SDGs and the EGA initiative and to see whether a direct link between the SDGs and the EGA can be found, the Development EGs identified by Knudson et al. (2015) are compared with the suggested products and technologies, and the Norwegian product nominations. This provides answers to whether any products emanating from the analysis of the SDGs, have been included in the EGA through already conducted nominations.

The mandate for establishing the new sustainable development goals for the UN post-2015 agenda came from the outcome document “The Future We Want” after the Rio+20 conference. The Open Working Group was tasked with creating SDGs that should be “coherent with and integrated into the United Nations development agenda beyond 2015.” (UN OWG, 2014)

The working group who presented the proposed SDGs recalled that the UNFCCC “*provides that parties should protect the climate system for the benefit of present and future generations of humankind on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.*” (*ibid.*)

The reaffirmed objectives from the outcome document of the OWG is summarized in Table 7. These objectives are reflected in the goals and sub-goal of the SDGs, and are backed by the UN document “The road to dignity by 2030” where Ban Ki-moon describes six essential components for reinforcing the post-2015 development agenda as described in chapter 4.3. These are dignity, people, prosperity, planet, justice and partnership (Ban Ki-moon, 2014:1).

Table 7: Main Areas and Objectives of the SDGs

<i>Main areas</i>	<i>Objectives/(essential requirements for sustainable development)</i>
Poverty eradication: freeing humanity from poverty and hunger	changing unsustainable and promoting sustainable patterns of consumption and production and protecting and managing the natural resource base of economic and social development
People at the centre: strive for a world that is just, equitable and inclusive	promote sustained and inclusive economic growth, social development and environmental protection
Reduce global greenhouse gas emissions	Wide cooperation: participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions. The ultimate objective under the Convention is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
Strengthen international cooperation	Achieve economic stability, sustained economic growth, the promotion of social equity and the protection of the environment, while enhancing gender equality, women’s empowerment and equal employment for all, and the protection, survival and development of children to their full potential, including through education.
Global partnership	The active engagement of Governments, as well as civil society, the private sector and the United Nations system. A robust mechanism to review implementation will be essential for the success of the goals. The General Assembly, the Economic and Social Council and the high-level political forum will play a key role in this regard.
Right of self-determination	Take further effective measures and actions, in conformity with international law, to remove the obstacles to the full realization of the right of self-determination of peoples living under colonial and foreign occupation.
Monitoring the implementation of the SDGs	Improve the availability of and access to data and statistics disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.

Source: (UN OWG, 2014, Ban Ki-moon, 2014)

Griggs’ (2013:306) model “A unified framework”, states that the definition of sustainable development should be based on the idea that the economy is serving the society, which again is dependent on Earth’s “life support system”. The definition suggested is:

“Development that meets the needs of the present while safeguarding Earth’s life-support system, on which the welfare of current and future generations depends.”

On the topics of biodiversity and conservation, efforts of trade related character can have indirect effects on the preservation of ecosystems through life cycle analysis and green, sustainable production which takes care not to destroy ecosystems in the production of goods.

The EGA negotiations happen within the WTO trading system, and use specific Harmonized Systems-codes (HS) to identify products and to make it possible to reduce tariffs on the goods. To be able to compare or see connections between the EGA product nominations and the SDGs, we look at goals that refer to production, products and actions linked to trade liberalization and

trade liberalization processes. In Table 8, the SDGs related to trade with a clear connection to environmental goods or products and production are identified and possible products or technologies selected. See Appendix E for full table including an intermediary step.

Table 8: Sustainable Development Goals and Related Products and Technology

Goal	Theme	EGs/green products and Technology
1	Poverty	1.4 Basic services, new technology, internet/phone connection, microfinance
		1.5 Resilience technology e.g. flooding-systems
2	Poverty Biodiversity	2.3 Equipment, land-quality improvements
		2.4 Equipment, anti-flooding and drought systems, rehabilitation of land(ecosyt.)
		2.5 Seeds, genetic resources
		2.a Develop technology, gene banks for LDCs
3	Health	3.3 Medicines, vaccines, nets etc.
		3.8 Medicines, vaccines
		3.9 Products removing hazardous chemicals, pollution, contamination
		3.b Medicines
4	Education	- No clear connection
5	Gender	- No clear connection
6	Water/ Sanitation	6.1 Cleaning technology, access systems
		6.2 Sanitation and waste management systems
		6.3 Pollution reduction products upstream and downstream, wastewater treatment, recycling systems
		6.4 Water efficient systems and products
		6.6 Water ecosystem restoration products
		6.a Technology for water and sanitation, efficiency, wastewater, recycling
7	Energy	7.1 Energy technology, grid system
		7.2 Renewable energy technology and products: solar panels, windmills etc.
		7.3 Energy efficient products
		7.a Clean energy technology, renewable and efficient technology/products, advanced cleaner fossil-fuel technology.
8	Economic growth and Jobs	8.2 Establish production of EGs in DCs
		8.4 Resource efficient products in production process and product itself, green products
9	Industrialization	9.3 Market and supply-chain access for EGs from DCs
		9.4 Greening infrastructure products, resource efficient products, clean technology and processes
		9.b. Establish production of EGs in DCs
10	Inequality	10.6 Inclusion of DCs and LDCs in agreements, credibility
11	Cities/ settlements	11.1 Houses, basic needs: water, shelter, electricity, energy
		11.2 Transport technology for public transport
		11.3 Sustainable city/settlement planning, tech. for cities/densely populated areas
		11.4 Technology for protection against flooding, pollution
		11.6 Air quality products, waste management technology, personal impact reduction products. Ex: energy saving light bulbs (CFL)
12	Consumption/ production	12.1 Green production and products, household waste management
		12.2 Resource efficient products, LCA, green SCM
		12.3 Reduce food waste/losses,

		12.4 Chemicals management technology, waste technology, filtering/pollution control products for air water and soil.
		12.5 Waste reduction through Life Cycle management. Efficient production, reuse, recycling
		12.6 Practices: production equipment/processes
		12.7 LCA in public procurement
		12.8 Information
		12.a Establish production of EGs in DCs, household waste management
13	Climate change	13.2 Agreements with impact on national policies
		13.3 Monitoring equipment, resilience/ adaption products
14	Oceans/ Water	14.1 Pollution technology, filters etc.
		14.2 Restoration technology and incentives for protection
		14.3 Information exchange, monitoring
		14.7 Sustainable management
		14.a Information and knowledge exchange, technology transfer.
15	Forests Biodiversity	15.1 Filtering/pollution control products for air water and soil. Restoration technology/products.
		15.2 Remediation/restoration technology/products
		15.3 Remediation/restoration technology/products
		15.6 Sharing of genetic resources
16	Governance/ Institutions	Nature of Agreement and process, involve more DCs, more transparent negotiations etc.
17	Implementation	Coordination of existing mechanisms for the spread of tech, science and innovation. Spread of environmentally sound tech. (EGs). Promoting a “good” system. Export increase of DC- establish export industry of EGs in DCs.

Sources: (UN OWG, 2014)

The review of the SDGs and goods that can meet the needs of the SDGs in Table 8 is one step in the process of linking the SDGs to the EGA. The interviews of Edrén and Knudson provided information about products identified by NTNU, which have been nominated in the EGA nominations by Norway. By comparing products suggested by Knudson et al. (2015) with the Norwegian product nominations, and by linking Knudson’s suggestions to products and technologies identified in Table 8, we can establish a direct connection between the SDGs and the EGA.

The study by Knudson et al. (2015) was requested by the MFA to ensure that environmental goods relevant to developing countries are discussed in the EGA. Knudson identified 15 goods, mainly EGs in the EGA categories of “sanitation, waste management, water supply and availability, and renewable energy access” which they explain “*should aid the Norwegian Delegation in promoting EGs relevant to developing countries for nomination in the EGA.*” (See overview of the Development EG list, Appendix F). According to the MFA, the report is intended to ensure that developing country interests are included in the negotiations, as there are few developing countries represented in the EGA (UD, 2015e).

Looking through the Norwegian nominations in the categories of Energy Efficiency (EE), Cleaner and Renewable Energy (CRE), Wastewater Management and Water Treatment (WMWT) and Environmentally Preferable Products (EPPs), products recommended by Knudson have been included to a large degree (see Norwegian nominations, Appendix H)¹. The 15 “Development EGs” composed by Knudson have up to eight different HS-codes per EG. Norway have nominated tariff lines from 12 of them, mostly in the WMWT and CRE category, and some from EPPs. The Norwegian product nominations include all the chosen HS-codes from the following Development EGs proposed by Knudson et al. (2015):

Developing EG number:

- 4) Containers for waste management and sanitation purposes. *HS: 730900, 731010, 731021, 731029, 761290*
- 5) Renewable energy powered pumps (wind & solar). *HS: 841381*
- 8) Drinking and potable water storage tanks. *HS: 392510*
- 9) Fresnel mirrors and reflectors. *HS: 900190, 900290*
- 10) Hydraulic turbines. *HS: 841011, 841012, 841013, 841090*
- 12) Solar stoves and cookers. *HS: 732111, 732190*
- 13) Solar powered lamps. *HS: 851310, 940540, 940550*
- 14) Other renewable energy powered lamps. *HS: 851310*
- 15) Building materials of sustainable natural materials. *HS: 440921, 441210, 460121, 460129, 680800*

There were also three Development EGs from Knudson’s list where a large part, but not all of the HS codes have been nominated:

Developing EG number:

- 1) Composting toilets. *HS: 442190, 691010, 732429*
- 2) Vacuum toilets. *HS: 691010, 732429*
- 3) Landfill liners and covers. *HS: 392010, 392020, 392112, 560314, 560290, 680620*

The easiest way to explore the connection between the nominations and the SDGs is to start with the HS codes nominated and work our way back to the targets.

Development EG number **12)** - “Solar stoves and cookers” - comprising of the HS-codes 732111 and 732190, were nominated by Norway under the Clean and Renewable Energy category with the ex-out “Solar powered stoves, ranges, cookers”. The EG is a device which uses heat energy converted from sunlight to heat and cook food, and meets the human

¹ Edrén informs (5 June 2015) that some Norwegian product nominations are being altered and will be published shortly. These changes might affect the results of the analysis.

development needs of “energy access, food availability, improved health and livelihoods” (Knudson et al., 2015:20, 61). Knudson (2015:56) states that the solar stoves and cookers “present an alternative for those in developing countries, and solve both the environmental and health issues associated with traditional fire cooking” and can even contribute to the eight MDGs. The Factsheet developed by Knudson on the solar stoves and cookers EG, is provided in Appendix G.

The next step in the analysis is to match the description of the EG and its effects with products and needs identified in Table 8 (see full version in Appendix E). Reviewing the SDGs, there is a strong connection between the EG **12**) and the SDGs 3, 7, 11, 12, 15 and 17. The sub-goals and products in Table 9 are connected to solar stoves and cookers, HS 732111 and 732190:

Table 9: SDGs Connected to Solar Stoves and Cookers, HS-codes 732111 and 732190

<i>Sub-goal</i>	<i>Products and technology</i>
3.9	Products removing hazardous chemicals, pollution, contamination
7.1	Energy technology, grid system
7.2	Renewable energy technology and products: solar panels, windmills etc.
7.3	Energy efficient products
7.a	Clean energy technology, renewable and efficient technology and products, advanced cleaner fossil-fuel technology
11.1	Houses, basic needs: water, shelter, electricity, energy
12.2	Resource efficient products, LCA, green SCM
15.2	Remediation/restoration technology and products
17.7	Coordination of existing mechanisms for the spread of technology, science and innovation. Spread of environmentally sound technologies (EGs)

From the analysis we find that the EGA and specific HS-codes already nominated can be linked to the SDGs and particular sub-goals. The attempt is done for two HS codes (one Development EG), and it is likely that a similar connection exists between several of the nominated EGs in the EGA negotiations, especially those related to development or to the EGs identified by Knudson et al.

6. DISCUSSION AND RECOMMENDATIONS

The data analysis is discussed in this chapter in the context of the theoretical framework with the aim of answering the four research questions laid out in the chapter 1.2.2. First, each research question is discussed separately, then the study is evaluated regarding the achieved results, validity and reliability. Finally, recommendations for possible ways to improve the compatibility and credibility of the EGA initiative are presented.

6.1 THE UNDERSTANDING OF EGs IN THE EGA INITIATIVE

The following research question is answered in this section:

1) What is the understanding of what constitutes environmental goods in the EGA initiative?

To answer this question I have analysed the interviews and key documents to get a sense of how the Environmental Goods Agreement initiative consider environmental goods.

Looking at the collected data, opinions within the EGA on what should constitute EGs are divided. The members do not, according to the interviewees, have a common understanding of what goods are acceptable to nominate, and tend to nominate widely different products. The initiative has chosen an approach where they avoid the definition of EGs entirely. This reflects how the members, and WTO members in general, do not have a united understanding of environmental goods. There is a focus towards low-carbon, clean and renewable energy technologies, and these areas seem to be the least controversial among members. The choice of product nomination categories implies a connection to climate change issues, but the purpose and end-use of the EGs, rather than the life cycle or process, is dominating the debate. The Norwegian negotiators understands the selection of EGs as intuitive, and directly connected to its environmental use and contributions. The EGs should contribute to improving the environment and be relatively better for the environment than other similar goods. This understanding cannot be generalized to other members, as Norway is regarded as one of the most altruistic countries in the EGA. The nominations and the technologies discussed are mostly related to manufacturing, and less related to developing countries export interests. The development perspective does not have a great influence on the understanding of EGs in the EGA thus far, and the lack of developing country members adds to that impression.

6.2 DESIRED PRODUCTION METHODS AND GREEN PRODUCTS

The following research question is answered in this section:

2) What are the needs and requests for desired production methods and green products emerging from the SDGs, the green economy concept, the IPCC and the IPBES?

The developed concepts, document analyses and interviews are used to understand the needs and requests from these initiatives. A discussion of the concepts of green economy, sustainability and of the SDGs with regard to green goods and products is necessary.

The sustainable development goals describe the efforts needed of the world community through 17 goals regarding climate change, poverty, environmental degradation, biodiversity, energy needs, water and several other important areas. Table 8 presented products and technologies related to the different SDGs. The needs included medicines, nets, technology for removing chemicals and pollution, sanitation systems, water treatment technology, clean energy products and technologies such as solar panels, public transport technology, flooding systems, monitoring and resilience equipment, remediation products, and requested transparency and cooperation, spread of technology and inclusion of developing countries.

Ban Ki-moon (2014:18) states that the planetary boundaries can be respected by addressing climate change, biodiversity loss, desertification, and unsustainable land use, as well as protecting wildlife, forests, oceans and water, atmosphere, and build resilience. “The road to dignity” report explicitly ask that we “Promote sustainable agriculture, fisheries and food systems; foster sustainable management of water resources and of waste and chemicals; foster renewable and more efficient energy; decouple economic growth from environmental degradation; advance sustainable industrialization and resilient infrastructure; ensure sustainable consumption and production; and achieve sustainable management of marine and terrestrial ecosystems and land use”.

IPCC’s reports present the scientific knowledge and foundation for further negotiations concerning effects of climate change. Knowledge presented by the platform is often used as a basis for initiatives such as the UNFCCC, the post-2015 development agenda and green economy. The IPBES is a newly established platform concerned with broadening the knowledge and cooperation between initiatives concerning biodiversity and ecosystem services. The Millennium Ecosystem Assessment and MA board, the front runner to the IPBES,

stated in their report (2005) that technologies aimed at resource efficiency, reduce impacts of climate change and nutrient loading are essential “given the growing demands for ecosystem services and other increased pressures on ecosystems”. The board requests promotion of technologies that increase crop yields, restores ecosystem services, increase energy efficiency and reduce GHG emissions without damaging effects on the surroundings.

The green economy concept points to the need for technologies and ‘green sectors’. The GE requests investments in sectors that would produce sustainability, green jobs and economic recovery, energy efficient technologies, renewable energy, public transport, sustainable agriculture, environmentally friendly tourism, and the sustainable management of natural resources including ecosystems and biodiversity. It also calls for the elimination of environmentally harmful subsidies, and stricter environmental and social criteria in investment decisions. A green economy is low-carbon, should reduce pollution, enhance efficiency in resource and energy use, be socially inclusive, and prevent loss in biodiversity and ecosystem services. Technologies within the fields of renewable energy, energy efficiency, public transportation, sustainable agriculture, ecosystem and biodiversity protection, and land and water conservation are needed. Katerås states that when considering production in the light of GE, the production has to be conducted in the best way possible both when concerning harvesting biological resources, fishing methods, and the use of knowledge and technology.

The SDGs, green economy, IPCC and IPBES initiatives requests technologies and products for reducing pollution and GHG emissions, cleaner and renewable energy, transportation systems, resilience, remediation and restoration, and sustainable use of natural resources such as biodiversity and ecosystem services.

6.3 COMPARISON OF THE UNDERSTANDINGS OF EGs

The following research question is answered in this section:

3) Does the understanding of EGs in the EGA initiative correspond with the needs and requests for EGs identified in the SDGs, the Green Economy concept, the IPCC and the IPBES?

The uncertainty of the EGA’s understanding of EGs makes this question challenging. If we choose to look at the outputs from the EGA process as implicating understanding, we have more to work with. The concrete documentation of the EGA process is their joint statements of

2014, the agreed upon product nomination categories, and what we have accessed of Norway's product nominations so far.

There seems to be an acceptance towards nominating low-carbon technologies and renewable energy technology, which goes together with the requested technologies from the SDGs, GE, IPCC and IPBES initiatives. The nature of the EGA as an initiative based on cooperation among a range of significant countries, is contributing to the overall international cooperation needed to achieve targets related to climate change. According to EGA's joint statements, the driving force behind the EGA is making EGs more accessible for everyone, and to contribute to the UNFCCC process, green growth, sustainable development and environmental protection. These intentions go well together with the international initiatives, but might, according to Jegou, prove not to be as influential on the nominations as we would like.

One aspect of preventing loss of biodiversity and ecosystems as well as achieving social inclusion, is the production and life cycle of a good. According to our results, the EGA does not consider process as a vital aspect when deciding on what should be nominated as an environmental good. There is an evident difference between the understanding of the EGA and the other initiatives regarding the needs of green production and products. While the international initiatives concentrate on all faces of a product's life, the EGA focus on the end-use and "purpose" of a product. The divide has possibly arisen as a result of the 'broad approach' taken in the EGA negotiations, with the aim to deliver on an agreement in a 'timely manner'.

Many of the product needs deduced from the international initiatives relate to specific developing country challenges and their need to establish production and exports with environmental and developmental benefits. This understanding is not a general characteristic of the EGA initiative. Some countries choose to nominate goods based on developmental benefits, but this does not apply to the majority of members.

The use of expert presentation during the EGA negotiation rounds, can potentially bring the understanding of EGs in the EGA and the initiatives closer together. This again depends on the experts and their angle. Jegou stated that the ICTSD arrange meetings and dialogues to influence the EGA negotiations. If this is successful, the understanding of EGs might develop in a direction closer to the ideas of sustainable development.

From the comparison of international environmental agreements made in Table 6, we can see that some of the major categories of the EGA nomination process are compatible with important multilateral environmental agreements. If we assume that the product nominations represent a form of understanding of needs and concerns of climate and environmental challenges in the EGA, then the EGA corresponds to some degree with essential aims of international initiatives.

From the analysis of the SDGs and green products, we find that the EGA can be linked to the SDGs and particular sub-goals through specific HS-codes nominated by Norway. The attempt is done for two HS-codes (one Development EG identified by Knudson et al.), and it is likely that a similar connection exists between several of the nominated EGs in the EGA negotiations, especially those related to development.

There is a clear connection between the MEAs, SDGs and the EGA, implying a similar understanding of needs and requests for green products, but the EGA did not deliberately consider the MEAs or the SDGs when deciding on product nomination categories or nominations in general.

6.4 THE CREDIBILITY OF THE EGA AS A DRIVING FORCE

The following research question is answered in this section:

4) Is the EGA credible as a driving force on meeting essential environmental and sustainability challenges?

The main challenges to credibility, and possible measures that can be taken to make sure the EGA becomes a credible and good driver is identified through theoretical resources and analysis of interviews.

The interviewees have varying ideas of the credibility of the EGA system, and mention a range of interesting and relevant factors to consider when discussing credibility.

According to the interviewees, the credibility of the EGA relies on the scope of the agreement related to including the right products and technologies, extending the benefits of zero tariffs to all WTO members through the use of the MFN-principle, whether it includes services, and that it broadens the country scope to include more developing countries. The agreement should eliminate tariffs and target non-tariff measures such as anti-dumping measures and be based on knowledge. There should be a documented effect of the nominated goods, and one should be

able to measure impacts shortly after implementation. Openness, transparency and the inclusion of civil society in the process and discussion before the agreement is finalized are also important factors for credibility. The EGA should include a review mechanism to include new technologies and possibly exclude outdated ones. A last factor reflected throughout the interviews is the need for greater coordination with other initiatives, and the lack of this reduces the perceived credibility of the initiative.

To have environmental credibility, the agreement must include enough new (outside the APEC-list), relevant, environmentally beneficial goods to have a real, positive effect on the environment and emissions levels. According to the interviewees, the Environmental Goods Agreement can have a positive impact on sustainable development and environmental challenges by liberalizing low-carbon technologies. The results demonstrate that low carbon, clean energy, and energy efficient technologies are popular and uncontroversial in the initiative. It therefore seems that the EGA will be able to produce a list with a good amount of low-carbon products. A dilemma for product nominations is the inclusion of single and dual/multiple-use products. To include a large variety of goods, the members of the EGA might have to go beyond exclusively including environmental goods with a single end-use – meaning that the product might be used for several purposes. This makes the exact use of the product less clear and can decrease the environmental credibility of the EGA. At the same time, if the method of including multiple or dual-use products leads to inclusion of more products used for environmentally beneficial tasks, then the environmental impact of the agreement might be greater and again increase credibility. The concern is however, whether the inclusion of many of these technologies will happen at the expense of the careful selection requested by Katerås, and that there will be emphasis on end-use, but not on the process of creating goods and the impacts of each product on the environment during its life cycle.

The MFN-principle is perceived as essential to the credibility of the EGA as a positive driver for developmental, sustainability and environmental issues. In the EGA's joint statement, the members ensured that they would like to include the agreement into the WTO on an MFN basis, so that all WTO members can share its benefits. This can be achieved if enough members, or a "critical mass", is to join the agreement and by that make it feasible. According to ICTSD Bridges (2014b), the EGA-initiative needs to reach a portion of trade in the chosen EGs so high that it would fend off possible free-riders. A critical mass is usually around 90% of world trade,

and we already know that the EGA members accounted for 86% in 2012. This makes the possibility of reaching a critical mass more likely.

The way the EGA is planned to be included in the WTO system, has been used by other initiatives before, among others the plurilateral Information Technology Agreement on eliminating tariffs for certain products (ICTSD Bridges, 2014a). The fact that this has been achieved before, makes it more likely and believable that the MFN-principle will be operationalized and that every WTO member will be included through it.

The MFN-principle signals a wish to extend the benefits of the liberalization of environmental goods to countries who need it for their own development and is a good way to display qualities of concern and care. Values such as these will increase the perception of the initiative's credibility.

The EGA has not yet included environmental services (ESs) in the negotiations. Trade in ESs often relate to the maintenance, installation, consultations and so forth of environmental goods, and are closely connected to the EGs. A range of organizations and analysts highlight the need for an agreement on liberalization of EGs to also include ESs. It is possible that the EGA includes services at a later stage as some members are very keen on them being included, but as long as that remains uncertain, the EGA is unable to meet expectations and requirements.

Eliminating tariffs and non-tariff barriers can be a challenge for the EGA. The current agreement aims at eliminating tariffs on a list of EGs, and even though non-tariff barriers are recognized as the most essential barriers to trade in EGs, these issues are not being countered. Like services, the members delay the more challenging negotiations until later, and keeps the first draft as simple as possible. Excluding services and non-tariff barriers will surely shorten the time until delivery, but makes the agreement less environmentally relevant as its impacts will be limited.

Edrén states that the EGA wants to include more developing countries, but that there are limited incentives for them to join at this time. Jegou has explained that even though they would benefit through the MFN-principle regardless of whether they join or not, DCs should join the EGA. The three month waiting period from applying for membership in the EGA until you are allowed to attend, is also an annoying hindrance for new members. The EGA wants to be an

ambitious agreement and involve DCs, but the lack of incentives, and directly deterrent effect of the formalities creates an uncertainty about whether this is just talk.

As mentioned earlier, the EGA have included experts from several organizations in their negotiation rounds to be more informed about essential products in each product nomination category. By creating a bridge between negotiators and experts from a range of different organizations, the EGA manage to build knowledge and expertise about environmental goods and technology. The method of dividing the process into categories based on environmental needs and involving experts to inform the delegations regarding each category under discussion, contributes to ensuring a reflective and knowledge-based selection process. Involving experts benefits the credibility of the EGA through increasing perceptions of knowledge and expertise, and concern and care. The openness around the use of external experts implies a concern among the EGA members with understanding the products for nomination, instead of attempting to get as many of their own products as possible included in the agreement.

Transparency, openness and inclusion are desired features of any international institution, and applies also to the EGA. The interviewees requested openness and transparency in the process of negotiations and involvement of society in decision making. As Norway is the only EGA member to publish their nominations, transparency and openness has a large improvement potential. The image of a selected few developed countries negotiating behind closed doors is not appealing, and not one EGA members wants to reflect. The initiative invites interested WTO members to information sessions and talks, achieving more openness about the EGA within the WTO. What is still missing is the openness to outside actors, NGOs and civil society.

There is a risk that the goods on the EGA list might become outdated rather quickly because of the rapid pace of technological innovation. Also, all new technology might not fit already existing HS-codes or categories. The list should therefore include a review mechanism, be a “living list”, meaning it can be reviewed and updated on a frequent basis without having to undergo the negotiation process again. The mechanism is requested by several of the interviewees, and by political commentators. There is political will, and plans, to include a review mechanism in the agreement, although at a later stage. This will increase the relevance of the EGA in the future, keeping it up to date.

Coordination with other international initiatives is requested frequently from all perspectives. There needs to be a coordinated response to environmental and climate challenges as they do

not operate in a vacuum, but are complex and interlinked. Several interviewees stress the issue that one measure, if not adequately coordinated, might negatively affect another aspect of the earth system, or decrease positive effects achieved by another measure. The coordination between the EGA and the SDGs and UNFCCC processes is non-existing. This lack of coordination damages the potential of the initiative to become a positive driver for meeting complex challenges.

The EGA has chosen to avoid the question of defining environmental goods and it is easy to see that the issue is problematic. This study shows clearly that opinions about what EGs entail are varied concerning characteristics, end-use and process. The uncertainty of what is an EG creates difficulties when discussing the subject, and as Katerås stated: pitfalls. Some researchers would like a narrower definition than what is available right now – which seems to be simply something that does not damage the environment – while many politicians prefer to keep it open, and just move on. The difficult part of that is, of course, that not all politicians want to move on. So, to get a multilateral environmental goods agreement, which is the final goal, is it better to define or not define?

The impression one can easily get when researching this issue is that developing countries tend to favour the ‘define’ stand, thinking that not defining is another attempt of developed countries to dismiss the views of the small and vulnerable while safeguarding their own prosperity. Developed countries on the other hand, favours the ‘not define’ and ‘let’s get on with it’ attitude, often regarding the concern with defining EGs as an effort by DCs to hold back and drag out the process indefinitely, and might view it as a slightly immature tactic. Looking at these different stands, it’s not hard to imagine why the debate has led us nowhere for so long. The negotiations in the EGA regarding concretizing the list of proposed goods, will be an interesting case study of the ‘list approach’, and analysing the results can enlighten this debate further.

The analysis shows compatibility between aspects of the EGA initiative and international initiatives such as multilateral environmental agreements, the sustainable development goals and efforts of meeting challenges related to environment issues and sustainable development. This increases the chance of the EGA becoming a positive driving force. Further efforts to connect these initiatives, will contribute to enhancing the impact of the agreement.

As a final remark, one can conclude that the EGA has the potential, and some necessary characteristics to be a positive driving force and good initiative for boosting the trade in

environmental goods, and engage other countries in the global effort to meet climate change, environmental and sustainability challenges. A part aim of the EGA is to contribute with something positive and a step forwards to present at the WTO's 10th Ministerial Conference in Nairobi in December 2015. As the negotiations are progressing, it seems they will be able to achieve this objective. The uncertainty lies in whether or not the initiative is able to contribute to something more.

6.5 RECOMMENDATIONS

From the long list of identified requirements for the EGA to be a credible driver, one can detect areas of good progress and areas where more efforts are needed. The initiative manages to involve quite a few relevant low-carbon, clean energy, and efficient technologies, which are popular and innovative fields. It also includes shared benefits through the MFN-principle, involves knowledge and expertise in the negotiations, and aims at creating a 'living agreement'. These goals are important and improves the relevance of the EGA, but still some other targets should be met to achieve a credible, effective agreement.

The EGA needs to concentrate on non-tariff barriers and the inclusion of environmental services. These are the most fundamental needs identified for the agreement to achieve status as a credible driver for meeting climate and environmental challenges. Increased transparency is also needed, and is an important factor of credibility. Better communication and making sure that interested parties get access to available information contributes to increased credibility and trust in the initiative. The initiative needs to establish some new incentives and change part of the character of the EGA for it to attract more DCs and members in general. By doing that it becomes an ambitious agreement with a large scope and evident environmental impact. If ESs are included at a later stage, it might create the new incentives needed to attract new members, and especially DCs, as they have much to gain by including ESs and by involving themselves in the process.

Lastly, a greater coordination with other international initiatives is requested from all over the board, and are obviously beneficial for all international initiatives dealing with these kinds of issues. The main priority should be to create a more natural connection with the UNFCCC process. A better dialogue and relationship is needed for all initiatives to achieve better and coordinated results when dealing with a system as complex as the Earth System.

6.6 EVALUATING THE STUDY

The study has produced some interesting results relevant to the ongoing process of the Environmental Goods Agreement. Based on the literature, document analysis and interview analysis, the results found can give new insights to the research issue. Answering the four research questions was challenging because of the lack of access to primary sources, such as EGA members, and a limited number of informers representing different perspectives in the study. This limits the ability to make bold statements, but the findings point to several areas of special importance to the research issue. The study is not generalizable to other initiatives than the EGA, or other people than the interviewees.

The producer-aspect has not been investigated in this study. This is because the study is meant to give a broader understanding of the theme and contribute to knowledge about the EGA and the environmental goods concept. This is best done by contacting those that are engaged in the development of concepts such as sustainability and EGs. Contacting producers might be relevant on a later stage, when the list of EGs is ready, and researchers can look into the method of production and the actual trade as it happens. Since the EGA is at an early stage, the concept approach was the most relevant.

The documents analysed are constant, and given the current information available, the results are reliable, and can be replicated by other researchers. This is harder to achieve with the interview analysis, but as in much qualitative research, the reliability of interview results is difficult to determine. My impression is that the interview questions and answers received were good sources for understanding the interviewees' opinions and understandings of the relevant concepts, and is therefore valid.

The empirical data was, as mentioned, limited to some degree, and this influenced the ability of the results to fully answer all of the research questions. The first question – “What is the understanding of EGs in the EGA initiative?” – was difficult to answer as the EGA negotiations are not yet completed. Individual national positions and understandings are therefore problematic to access and evaluate. While this question is hard to answer in its entirety, it was possible to interpret some direction and differences through statements of the interviewees. Further research after the completion of the EGA might bring new knowledge to the table and better answer this research question. Determining the credibility of the EGA was also challenging, as it is still not clear whether certain important factors are included in the

agreement or not. At a later stage, when one can determine whether the EGA includes services and non-tariff barriers, the credibility of the initiative as a driver can be determined with more certainty. In the future, further research on the impacts of the agreement can be conducted, providing an opportunity to measure the effects of the coordinated liberalization of environmental goods, and perhaps also environmental services.

7. CONCLUSION

This study has attempted to answer four research questions: 1) What is the understanding of what constitutes environmental goods in the EGA initiative?; 2) What are the needs and requests for desired production methods and green products emerging from the SDGs, the green economy concept, the IPCC and the IPBES?; 3) Does the understanding of EGs in the EGA initiative correspond with the needs and requests for EGs identified in the SDGs, the green economy concept, the IPCC and the IPBES?; and 4) Is the EGA credible as a driving force on meeting essential environmental and sustainability challenges?

7.1 FINDINGS

There are divided opinions within the EGA on what constitutes an EG and what goods are acceptable to nominate, as the members tend to nominate widely different products. The members seem to favour low-carbon, clean and renewable energy technologies, and the choice of product nomination categories implies a connection to climate change issues.

The SDGs, green economy, the IPCC and the IPBES requests technologies and products for reducing pollution and GHG emissions, cleaner and renewable energy, transportation systems, resilience, remediation and restoration, and sustainable use of natural resources such as biodiversity and ecosystem services. There is an evident difference between the understanding of the EGA and the other initiatives regarding the needs of green production and products. While the international initiatives concentrate on all faces of a product's life, the EGA focus on the end-use and "purpose" of a product. While many of the product needs deduced from the SDGs, green economy, IPCC and IPBES initiatives relate to specific developing country challenges and their need to establish production and exports with environmental and developmental benefits, this understanding is not a general characteristic of the EGA initiative. Some countries nominate goods based on developmental benefits, but this does not include the majority of EGA members.

Through the analysis of MEAs and SDGs, we find that the EGA corresponds to some degree with essential aims of international initiatives, and can be linked to the SDGs and particular sub-goals through the HS-codes nominated by Norway.

The EGA has the potential, and some necessary characteristics to be a positive driving force and good initiative to boost the trade in environmental goods and engage other countries in the global effort to meet climate change, environmental and sustainability challenges.

In order to increase the compatibility and credibility of the EGA system, the negotiations needs to concentrate on non-tariff barriers and the inclusion of environmental services. Increased transparency is an essential factor of credibility, so better communication and openness will contribute to increased credibility and trust in the initiative. Greater coordination with other international initiatives is in high demand and the main priority should probably be to create a more natural connection with the UNFCCC process.

7.2 FUTURE RESEARCH

Further research on some aspects of the EGA can contribute to a better understanding of contributions and effects. The negotiations regarding concretizing the list of proposed goods will be an interesting case study of the ‘list approach’, and may provide further insight into how one is to go about trade liberalization of environmental goods and services in the WTO. There existed little research in the literature related to how one can coordinate between international initiatives such as those reviewed in this study. Further research on this issue is required to create a method for identifying products and goods for nomination in the EGA, which will better accommodate the need of coordination with international initiatives.

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Interviewees:

KAJA BRUNDTLAND EDRÉN. Senior Advisor at the Norwegian Ministry of Foreign Affairs. Interviewed on March 12, 2015 in Oslo.

INGRID JEGOU. Manager of the Climate Change and Energy program in the International Centre for Trade and Sustainable Development (ICTSD). Interviewed on April 28, 2015 in Trondheim.

FINN KATERÅS. Senior Advisor in the Section of Environmental Economics at the Department of Nature (Naturavdelingen) at the Norwegian Environment Agency. Interviewed on April 9, 2015 in Trondheim.

NINA VIK. Senior Advisor in the Section of Global Biodiversity at the Department of Nature (Naturavdelingen) at the Norwegian Environment Agency. Interviewed on April 9, 2015 in Trondheim.

ANDERS HAUG LARSEN. Environmental Advisor at the Norwegian Society for the Conservation of Nature. Interviewed on April 15, 2015 in Trondheim

HALEY KNUDSON. Research assistant at the Department of Industrial Economics and Technology Management at the Norwegian University of Science and Technology. Interviewed on March 18, 2015 in Trondheim.

APPENDIX A: INTERVIEW GUIDE: INGRID JEGOU

Interview guide: Ingrid Jegou ICTSD, 28 April 2015

Intro:

1. Please describe your field of work at the ICTSD.
2. What are your duties in connection with the Environmental Goods Agreement?
3. What do you see as the greatest motivation behind participating in the negotiations?

Part 1: EG concept

4. What is your understanding of what constitutes an environmental good?
Needs based, developing c., process or use?
5. Is there a common understanding within the EGA initiative on what constitutes an environmental good?
6. Is there any common understanding of what is acceptable to nominate as a good/product?
Explain.
7. What does the majority of participants wish to achieve with such an agreement?
Is that realistic?
Can you describe some differences in positions (if any)
8. Is there any connection between the EGA initiatives intentions - regarding environmental goods, greenhouse gas emissions and the impact on climate change, - and what kind of goods are being nominated?

Part 2: EGA and SDGs

9. How is the relationship between the EGA and new sustainable development goals?
10. How and to what extent does the EGA meet the needs and ambitions that emerges from the SDGs?
11. How can the EGA initiative best take into consideration the needs and ambitions stemming from the SDGs?

Part 3: Challenges and Credibility

12. What do you consider to be the biggest challenges for the EGA-initiative in the process of negotiations and agreement?
13. How do you think a trade deal like the EGA can help to reduce greenhouse gas emissions and reach new goals for sustainable development?
14. Can this kind of trading system be credible?
15. What is needed for the agreement to be a credible and good driver for reducing emissions?
Any changes to increase credibility?
Improvements?
16. What are the biggest challenges for the EGA to be viewed as credible?
How is it viewed today?
By developing countries, organizations etc.

Ending:

17. What is the next steps in the negotiations?
Any new members joining?
Is it being discussed outside of the EGA?

APPENDIX B: EGA INITIATIVE JOINT STATEMENT: DAVOS

JOINT STATEMENT REGARDING TRADE IN ENVIRONMENTAL GOODS

**24 January 2014
at Davos, Switzerland**

We the representatives of Australia; Canada; China; Costa Rica; the European Union; Hong Kong, China; Japan; Korea; New Zealand; Norway; Singapore; Switzerland; Chinese Taipei; and the United States welcome Asia-Pacific Economic Cooperation (APEC) Leaders' agreement to explore opportunities in the World Trade Organization (WTO) to build on its ground-breaking commitment to reduce tariffs on the APEC List of Environmental Goods by the end of 2015. So today, we announce our commitment to achieve global free trade in environmental goods, and pledge to work together, and with other WTO Members similarly committed to liberalization, to begin preparing for negotiations in order to advance this shared goal.

We are convinced that one of the most concrete, immediate contributions that the WTO and its Members can make to protect our planet is to seek agreement to eliminate tariffs for goods that we all need to protect our environment and address climate change.

We anticipate a structure for an environmental goods agreement that would reinforce the rules-based multilateral trading system and benefit all WTO Members, including by involving all major traders and applying the principle of Most Favored Nation. Such an agreement would take effect once a critical mass of WTO Members participates.

Our work will build upon APEC Leaders' commitment to reduce tariffs on the APEC List of 54 Environmental Goods. APEC has given us a good start, and we are committed to exploring a broad range of additional products, in the context of a future oriented agreement able to address other issues in the sector and to respond to changes in technologies in the years to come, that can also directly and positively contribute to green growth and sustainable development.

Building on the momentum created by the agreement reached in Bali, we strongly believe that this effort in the WTO will add impetus and energy to the multilateral trading system and support its mission to liberalize trade, and make a significant contribution to the international environmental protection agenda, including our shared efforts in the ongoing United Nations Framework Convention on Climate Change negotiations to combat climate change and transition to a green economy.

APPENDIX C: EGA INITIATIVE JOINT STATEMENT: GENEVA

JOINT STATEMENT REGARDING THE LAUNCH OF THE ENVIRONMENTAL GOODS AGREEMENT NEGOTIATIONS

8 July 2014 at Geneva, Switzerland

Earlier this year, the representatives of Australia; Canada; China; Costa Rica; the European Union; Hong Kong, China; Japan; Korea; New Zealand; Norway; Singapore; Switzerland; Chinese Taipei; and the United States, committed to begin preparations for negotiations to liberalise trade in environmental goods, building on the APEC List of Environmental Goods.

The global challenges we face, including environmental protection and climate change, require urgent action. Today, we¹ are pleased to announce the launch of negotiations on the Environmental Goods Agreement (EGA), through which we aim to achieve our shared goal of global free trade in environmental goods. We will now engage in intensive negotiations, meeting regularly in Geneva, to discuss the substance of the agreement, including product coverage. We are committed to work towards the timely and successful conclusion of the agreement.

In this process we are committed to work together and with other WTO Members similarly committed to liberalization that are interested in joining our ambitious efforts. We are convinced that this WTO initiative will strengthen the rules-based multilateral trading system, support its mission to liberalise trade, provide important impetus to the DDA negotiations and benefit all WTO Members, including by involving all major traders and applying the principle of Most Favoured Nation, once a critical mass of Members agree to participate.

1. For Korea, the domestic procedures for participation are still in progress.

APPENDIX D: OVERVIEW OF MEAS AND CORRESPONDING EGA CATEGORIES

Multilateral Environmental Agreements	Goals/Objectives/Aims	EGA Category
Atmosphere		
United Nations Framework Convention on Climate Change (UNFCCC 1992) Article 2 (*) Cancun Agreements (UNFCCC 2010) Article 1, Paragraph 4	Prevent dangerous anthropogenic interference with the climate system: Stabilizing greenhouse gas emissions at a level that would hold the increase in global average temperature below 2°C above pre-industrial levels	Air Pollution Control Cleaner and Renewable Energy Energy Efficiency Environmental Monitoring, Analysis and Assessment
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 9a Energy for a Sustainable Future (AGECC 2010)	Improve access to reliable, affordable, economically viable and environmentally sound energy supplies: Achieve universal access to modern energy supplies by 2030	Cleaner and Renewable Energy Energy Efficiency
Convention on Long-range Transboundary Air Pollution (LRTAP) (*) WHO guidelines (WHO 2006)	Limit and reduce air pollution in within the territories of the Parties. Limiting the concentration of pollutants (such as PM2.5, PM10, SO2, NO2, O3, CO, Pb) in line with WHO guidelines	Air Pollution Control Environmental Monitoring, Analysis and Assessment
Montreal Protocol on Substances that Deplete the Ozone Layer (1987) under the Vienna Convention (1985). (*)	Develops a regime that limits the release of ozone-depleting substances (ODS) into the atmosphere.	Air Pollution Control Cleaner and Renewable energy Solid and Hazardous Waste Management
Land		
FAO World Food Summit Plan of Action (FAO 1996) Paragraph 33g Agenda 21 (UNCED 1992b) Chapter 11.12a	Conservation and sustainable use of land and sustain forest cover: Reduce salinization, combat desertification, reduce cropland expansion and prevent soil pollution and degradation. Reduce the deforestation rate and expand forest areas	Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment
UN Millennium Declaration (UN 2000) MDG 1 Target 1c	Eradicate hunger: Halve, between 1990 and 2015, the proportion of people who suffer from hunger, and eradicate hunger by 2050	Resource Efficiency Environmental Remediation and Clean-up
Water		
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 25d UN Millennium Declaration (UN 2000) Paragraph 23	Sustain water resources, protect water quality and aquatic ecosystems: Intensify water pollution prevention to reduce health hazards and protect ecosystems Stop the unsustainable exploitation of water resources by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies	Wastewater and Water Treatment Resource Efficiency Solid and Hazardous Waste Management Environmental Monitoring, Analysis and Assessment

UN Millennium Declaration (UN 2000) MDG 7 Target 7c	Universal provisioning of safe drinking water and improved sanitation: Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation and ensure full access by 2050	Wastewater and Water Treatment Resource efficiency Solid and Hazardous Waste Management
Biodiversity		
Convention on Biological Diversity (CBD) Aichi Biodiversity Targets (CBD 2010) Target 5, Target 12 (*)	Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity and promote its sustainable use and fair and equitable benefit sharing: By 2020, at least halve and where feasible bring close to zero the rate of loss of all natural habitats, including forests, and significantly reduce degradation and fragmentation. By 2020, prevent the extinction of known threatened species, and improve and sustain their conservation status, particularly of those most in decline	Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment
Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the CBD (Not in Force) (*)	Fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies. Contributing to the conservation of biological diversity and the sustainable use of its components.	Environmentally Preferable Products Resource Efficiency
UN Convention on the Law of the Sea (UNCLOS 1982) Article 192 (*) CBD Decision II/10 (Jakarta Mandate 1995) (*) FAO Code of Conduct for Responsible Fisheries (FAO 1995) Paragraph 6.2	Protect and preserve the marine environment: Promote conservation and sustainable use of the coastal and marine ecosystems as well as their natural resources Promote the maintenance of the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations	Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (D.C. 1973) (*)	Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.	Environmentally Preferable Products (?) Environmental Monitoring, Analysis and Assessment
Berne Convention on the Conservation of European Wildlife and Natural Habitats (1979) (*)	Protect European species of wild plants and animals and their natural habitats. The agreement applies primarily to the protection of species and areas that require cooperation between several states, and it places particular emphasis on the protection of endangered and vulnerable species and species that migrate over large areas.	Environmentally Preferable Products (?) Environmental Monitoring, Analysis and Assessment
The Convention for the Conservation of Atlantic Marine Living Resources (CCAMLR) (1982) (*)	Conserving Antarctic marine life	Environmental Monitoring, Analysis and Assessment Environmental Remediation and Clean-up
The Convention for the Protection of the Marine Environment of the North-East Atlantic (1992) (*)	The Convention combines Oslo Convention 1972 on dumping at sea and the Paris Convention of 1974 concerning land-based sources of marine pollution	Solid and Hazardous Waste Management Wastewater and water treatment

International Plant Protection Convention (IPPC) (1951) (*)	To secure common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control	Environmental Monitoring, Analysis and Assessment
Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2000) (*)	Ensure an adequate level of protection in the field of safe transfer, handling and use of Living Modified Organisms (LMOs) that may have adverse effects on the conservation and sustainable use of biological diversity, also taking into account risks to human health	Environmental Monitoring, Analysis and Assessment
Chemicals and Waste		
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 23 Stockholm Convention on Persistent Organic Pollutants (2009) (*)	Reduce chemical pollution to protect human health and the environment: By 2020, use and produce chemicals in ways that lead to the minimization of significant adverse effects on human health and the environment. Protect human health and the environment from persistent organic pollutants	Solid and Hazardous Waste Management Wastewater and water treatment
Rotterdam Convention Certain Hazardous Chemicals and Pesticides in International Trade (1998) (*)	Monitor and control the trade in certain hazardous chemicals: Promote shared responsibility in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use	Environmental Monitoring, Analysis and Assessment
The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) (*)	To protect human health and the environment against the adverse effects of hazardous wastes: The reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, wherever the place of disposal; and the restriction of transboundary movements.	Environmentally Preferable Products Solid and Hazardous Waste Management
Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 22	Minimize the amount of waste and promote reuse and recycling: Prevent and minimize waste and maximize reuse, recycling and use of environmentally friendly alternative materials	Resource efficiency Solid and Hazardous Waste Management Wastewater and water treatment Environmentally Preferable Products
Minimata Convention on Mercury (2013) (*)	Regulate and reduce emissions of mercury: Regulates mercury from all sources, both from different types of mining operations, the use of mercury in products, industrial processes, and for mercury emissions to air and water from industrial activities. How mercury compounds should be stored in a proper manner, and treatment of waste containing mercury	Solid and Hazardous Waste Management Wastewater and water treatment Air Pollution Control Environmental Monitoring, Analysis and Assessment
The Convention on Wetlands (Ramsar 1971) (*)	Contributing to the conservation and wise use of wetlands through local, national and global actions and international cooperation, to contribute to sustainable development worldwide.	Resource Efficiency Environmental Remediation and Clean-up Environmental Monitoring, Analysis and Assessment

(*): The MEA is binding for the Parties/signatories of the agreement

Sources: (UNEP, 2012:426), (Basel Convention, 2011), (Rotterdam Convention, 2010), (CITES, 2013), (CCAMLR, 2015), (Miljødirektoratet, 2015), (WTO, 2013).

APPENDIX E: SDGs AND RELATED PRODUCTS AND TECHNOLOGIES

Goal	Theme	Sub-goals relevant to EG trade processes, green economy and green products	EGs/green products/Tech
1	Poverty	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services , ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4 Basic services, new technology, internet/phone connection, microfinance
		1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	1.5 resilience technology e.g. flooding-systems
2	Poverty Biodiversity	2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land , other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	2.3 Equipment, land-quality improvements
		2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production , that help maintain ecosystems , that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	2.4 equipment, anti-flooding and drought systems, rehabilitation of land (ecosystems)
		2.5 By 2020, maintain the genetic diversity of seeds , cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge , as internationally agreed	2.5 seeds, genetic resources
		2.a Increase investment, including through enhanced international cooperation , in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries	2.a develop technology, gene banks, for LDCs
3	Health	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3 Medicines, vaccines, nets etc.
		3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8 Medicines, vaccines
		3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9 Products removing hazardous chemicals, pollution, contamination
		3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which arms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all	3.b Medicines

4	Education	- No Clear Connection	
5	Gender	- No Clear Connection	
6	Water/ Sanitation	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1 Cleaning technology, access systems
		6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2 Sanitation/ waste management systems
		6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials , halving the proportion of untreated wastewater and increasing recycling and safe reuse by [x] per cent globally	6.3 Pollution reduction products upstream and downstream, wastewater treatment, recycling systems
		6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4 Water efficient systems and products
		6.6 By 2020, protect and restore water-related ecosystems , including mountains, forests, wetlands, rivers, aquifers and lakes	6.6 Water ecosystem restoration products
		6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes , including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	6.a Technology for water and sanitation, efficiency, wastewater, recycling
7	Energy	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1 Energy technology, grid system
		7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2 Renewable energy technology and products: solar panels, windmills etc.
		7.3 By 2030, double the global rate of improvement in energy efficiency	7.3 Energy efficient products
		7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology , including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology , and promote investment in energy infrastructure and clean energy technology	7.a Clean energy technology, renewable and efficient technology and products, advanced cleaner fossil-fuel technology
8	Economic growth and Jobs	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation , including through a focus on high-value-added and labour-intensive sectors	8.2 Establish production of EGs in developing countries
		8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	8.4 Resource efficient products in production process and product itself, green products

9	Industrialization	9.3 Increase the access of small-scale industrial and other enterprises , in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets	9.3 Market and supply-chain access for EGs from DCs
		9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable , with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes , with all countries taking action in accordance with their respective capabilities	9.4 Greening infrastructure products, resource efficient products, clean technology and processes
		9.b Support domestic technology development , research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities	9.b. Establish production of EGs in DCs
10	Inequality	10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible , accountable and legitimate institutions	10.6 Inclusion of DCs and LDCs in agreements, credibility
11	Cities/ settlements	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	11.1 Houses, basic needs: water, shelter, electricity, energy
		11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport , with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2 Transport technology for public transport
		11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	11.3 Sustainable city/settlement planning, technology for cities/densely populated areas
		11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	11.4 Technology for protection against flooding, pollution
		11.6 By 2030, reduce the adverse per capita environmental impact of cities , including by paying special attention to air quality and municipal and other waste management	11.6 Air quality products, waste management technology, personal impact reduction products ex: energy saving light bulbs (CFL)
12	Consumption/ production	12.1 Implement the 10-year framework of programmes on sustainable consumption and production , all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries	12.1 Green production and products, household waste management
		12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2 Resource efficient products, LCA, green SCM
		12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	12.3 Reduce food waste/losses,

		12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle , in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	12.4 Chemicals management tech, waste tech, filtering/pollution control products for air water and soil.
		12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5 Waste reduction trough Life Cycle management. Efficient production, reuse, recycling
		12.6 Encourage companies, especially large and transnational companies , to adopt sustainable practices and to integrate sustainability information into their reporting cycle	12.6 Practices: products equipment/processes
		12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities	12.7 LCA in public procurement
		12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	12.8 Information
		12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production	12.a Establish production of EGs in DCs, household waste management
13	Climate change	13.2 Integrate climate change measures into national policies, strategies and planning	13.2 Agreements with impact on national policies
		13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3 Monitoring equipment, resilience/ adaption products
14	Oceans/ Water	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	14.1 Pollution technology, filters etc.
		14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience , and take action for their restoration in order to achieve healthy and productive oceans	14.2 Restoration technology and incentives for protection
		14.3 Minimize and address the impacts of ocean acidification , including through enhanced scientific cooperation at all levels	14.3 Information exchange, monitoring
		14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources , including through sustainable management of fisheries, aquaculture and tourism	14.7 Sustainable management
		14.a Increase scientific knowledge, develop research capacity and transfer marine technology , taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	14.a Information and knowledge exchange, technology transfer.


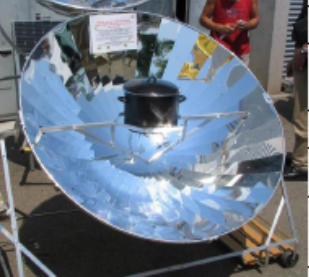
15	Forests Biodiversity	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands , in line with obligations under international agreements	15.1 Filtering/pollution control products for air water and soil. Restoration technology/ products,
		15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and increase afforestation and reforestation by [x] per cent globally	15.2 Remediation/restoration technology/products
		15.3 By 2020, combat desertification, restore degraded land and soil , including land affected by desertification, drought and floods, and strive to achieve a land-degradation-neutral world	15.3 Remediation/restoration technology/products
		15.6 Ensure fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources	15.6 Sharing of genetic resources
16	Governance/ Institutions	16.5 Substantially reduce corruption and bribery in all their forms	Nature of Agreement and process, involve more DCs, more transparent negotiations etc.
		16.6 Develop effective, accountable and transparent institutions at all levels	
		16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels	
		16.8 Broaden and strengthen the participation of developing countries in the institutions of global Governance	
		16.b Promote and enforce non-discriminatory laws and policies for sustainable development	
17	Implementation	17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms , in particular at the United Nations level, and through a global technology facilitation mechanism when agreed upon	Coordination of existing mechanisms for the spread of technology, science and innovation. Spread of environmentally sound technology. (EGs). Promoting a “good” system Export increase of DC- establish export industry of EGs in DCs.
		17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed	
		17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda	
		17.11 Significantly increase the exports of developing countries , in particular with a view to doubling the least developed countries’ share of global exports by 2020	
		17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access	
		17.14 Enhance policy coherence for sustainable development	

APPENDIX F: "DEVELOPMENT EG LIST" (KNUDSON ET AL., 2015:20)

Development EG	HS code(s)	Main EGA product category	Additional EGA product categories	Human development need met
1) Composting toilets	392220, 392290, 442190, 691010, 732429, 761529	Solid and hazardous waste management	Wastewater management and water treatment, Resource efficiency	Sanitation
2) Vacuum toilets	392220, 392290, 691010, 732429, 761529, 841410	Solid and hazardous waste management	Wastewater management and water treatment, Resource efficiency	Sanitation
3) Landfill liners and covers	392010, 392020, 392112, 560314, 392690, 560290, 680620, 681599	Solid and hazardous waste management	Wastewater management and water treatment	Sanitation and waste management
4) Containers for waste management and sanitation purposes	730900, 731010, 731021, 731029, 761290	Solid and hazardous waste management	Wastewater management and water treatment	Sanitation and waste management
5) Hand and foot pumps	841320	Wastewater management and water treatment	Solid and hazardous waste management	Access to clean drinking water
6) Renewable energy powered pumps (wind & solar)	841381	Wastewater management and water treatment	Cleaner and renewable energy, Environmentally preferable products	Access to clean drinking water and potable water
7) Drinking water taps, valves and distribution kits	848180	Wastewater management and water treatment		Access to clean drinking water
8) Drinking and potable water storage tanks	392510	Wastewater management and water treatment		Access to clean drinking water and potable water
9) Fresnel mirrors and reflectors	900190, 900290	Cleaner and renewable energy	Reduces climate gases	Energy access
10) Hydraulic turbines	841011, 841012, 841013, 841090	Cleaner and renewable energy	Reduces climate gases	Energy access
11) Biomass boilers	840219	Cleaner and renewable energy	Solid and hazardous waste management	Energy access and waste management
12) Solar stoves and cookers	732111, 732190	Environmentally preferable products	Cleaner and renewable energy, Resource efficiency, Air pollution control	Energy access, food availability, improved health and livelihoods
13) Solar powered lamps	851310, 940540, 940550	Environmentally preferable products	Cleaner and renewable energy, Resource efficiency	Energy access and improved livelihoods
14) Other renewable energy powered lamps	851310	Environmentally preferable products	Cleaner and renewable energy, Resource efficiency	Energy access and improved livelihoods
15) Building materials of sustainable natural materials	440921, 441210, 460121, 460129, 680800	Environmentally preferable products		Infrastructural and shelter improvements for development

APPENDIX G: FACTSHEET COVERING SOLAR STOVES AND COOKERS (KNUDSON ET AL. 2015:61)

Table 19: Solar stoves and cookers Factsheet

Good:	Solar stoves and cookers		
EGA category:	Environmentally preferable products; Cleaner and renewable energy; Resource efficiency; (Indoor) Air pollution control		
HS code and description:	(1) 732111	Stoves, ranges, grates, cookers, barbecues, braziers, gas-rings, plate warmers and similar non-electric domestic appliances, and parts thereof, of iron or steel: for gas fuel or for both gas and other fuels	
	(2) 732190	Parts	
Potential ex-out:	Solar powered stoves, ranges, cookers		
Norwegian producers:	MorphoSolar (NTNU start-up, not yet producing)		
Description:	Device that uses the energy of the sun to heat or cook food – sunlight converted to heat energy		
Content:	Solar reflectors to collect sunlight, pot, bowl or tray for cooking food; May be in the form of a box or in a curved parabolato better direct sunlight to food; May contain a feature to store solar energy for later use (e.g. molton salts)		
Use:	For the cooking of food		
References:	Mussard, Gueno & Nydal, 2013; Otte, 2009; 2013; 2014a; 2014b; Images: http://climatekids.nasa.gov/smores/ ; http://www.conserve-energy-future.com/DIY-SolarPanelCooker.php		
Evaluation			
	Environment	Development	Other / comments
+	<ul style="list-style-type: none"> Renewable energy source No expenses for fuel or energy Suitable for off grid usage Reduction in deforestation for firewood 	<ul style="list-style-type: none"> Removal of indoor air pollution from the burning of biomass or charcoal Quality of life benefits - daily time spent gathering firewood or biomass is saved and can be used for other activities, e.g. education for children Increased safety for those gathering fuel (wood or other biomass), often women and children No recurring expense for the purchasing of fuels such as firewood or charcoal 	<ul style="list-style-type: none"> Solar cookers with the ability to store solar energy allow local peoples to cook indoors, at night, and on cloudy days
-		<ul style="list-style-type: none"> A lack of technological understanding or required maintenance of the cooker may prevent long-term usage after initial delivery or purchase 	<ul style="list-style-type: none"> Without the ability to store solar energy, the cookers may not be locally implemented, e.g. cooking outdoors may not fit with cultural norms - women may look forward to time spent gathering fuel for social reasons

APPENDIX H: NORWAY'S PRODUCT NOMINATIONS

ENVIRONMENTALLY PREFERABLE PRODUCTS (EPP):

Norwegian EGA Product Nominations. Environmentally Preferable Products (EPP)

(https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/handelspolitikk/norske_nominasjoner_mars2015.pdf)

EGA. NORWEGIAN NOMINATIONS. ENVIRONMENTAL PREFERABLE PRODUCTS (EPP).					
HS code 2012	HS 6 Code Description	Ex-out/Additional Product Specification	Environmental Benefits and Additional Information	Category	APEC list?
440921	Wood (including strips and friezes for parquet flooring, not assembled) continuously shaped (tongued, grooved, rebated, chamfered, V-jointed, beaded, moulded, rounded or the like) along any of its edges, ends of faces, whether or not planed, sanded or end-jointed.--Of bamboo	Building materials made of sustainable natural materials	The use of sustainable natural materials for construction helps to replace use of the resource extensive and polluting traditional materials such as steel and concrete	EPP	No
441210	Plywood, veneered panels and similar laminated wood.- Of bamboo	Building materials made of sustainable natural materials	Bamboo is more sustainable than other woods- it grows quickly and abundantly and can grow in nutrient depleted soil.	EPP	No

460121	Plaits and similar products of paiting materials, whether or not assembled into strips, plaiting materials, plaits and similar products of plaiting materials, bound together in parallel strands or woven, in sheet form, whether or not being finished articles (for example, mats, matting, screens).- Mats, matting and screens of vegetable materials:-- Of bamboo	Building materials made of sustainable natural materials	Bamboo is more sustainable than other woods- it grows quickly and abundantly and can grow in nutrient depleted soil.	EPP	No
460129	Plaits and similar products of paiting materials, whether or not assembled into strips, plaiting materials, plaits and similar products of plaiting materials, bound together in parallel strands or woven, in sheet form, whether or not being finished articles (for example, mats, matting,	Building materials made of sustainable natural materials	The use of sustainable natural materials for construction helps to replace use of the resource extensive and polluting traditional materials such as steel and concrete	EPP	No
611420	Other garments, knitted or crocheted -of cotton	Textiles that include more than 50 percent recycled material	Resource efficiency, circular economy and recycling	EPP	No

611430	Other garments, knitted or crocheted - of man-made fibres	Textiles that include more than 50 percent recycled material	Resource efficiency, circular economy and recycling	EPP	No
611490	Other garments, knitted or crocheted - of other textile materials	Textiles that include more than 50 percent recycled material	Resource efficiency, circular economy and recycling	EPP	No
680800	Panels, boards, tiles, blocks and similar articles of vegetable fibre, of straw or of shavings, chips, particles, sawdust or other waste, of wood, agglomerated with cement, plaster or other mineral binders.	Panels, boards, tiles, blocks and similar articles of vegetable fiber	The use of sustainable natural materials for construction helps to replace use of the resource extensive and polluting traditional materials such as steel and concrete	EPP	No
841381	Pumps for liquids, whether or not fitted with a measuring device: other pumps	Pump powered by renewable energy	Replaces the emissions and pollution of traditional diesel or other fossil fuel powered pump	EPP, CRE, WM, WT	No

WASTEWATER MANAGEMENT AND WATER TREATMENT (WMWT):

EGA. Norwegian nominations. WWMT. (Additional products sent in 27 March 2015 in red)

(https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/handelspolitikk/ega_combinedsheet_final.pdf)

EGA. Norwegian nominations.WWMT. Additional products sent in 27 March in red.					
HS6 (2012)	HS 6 Code Description	Ex-out/Additional Products Specification	Environmental Benefits and Additional Information	Category	APEC ?
391740	Tubes, pipes and hoses, and fittings thereof (for example, joints, elbows, flanges, of plastics. Fittings		The couplings secures tight water distribution pipes and thereof reduce the leakage ration in the water supply system. As a consequence the energy consumption connected to cleaning of water / water production and the pumping of water will be reduced. The couplings are made out of corrosion resistant material, that secures the energy saving water supply over a minimum lifetime of 50 years	WWMT	No
392010	Other plates, sheets, film, foil and strip, of plastics, non-cellular and not reinforced, laminated, supported or similarly combined with other materials: of polymers of ethylene;		Safer and cleaner surface and groundwater sources. Reduced runoffs and contamination from dangerous chemicals and heavy metals.Increased soil protection and reduced erosion. Trap methane that can be converted to energy and prevent leakage of contaminated water.	WWMT	No
392020	Other plates, sheets, film, foil and strip, of plastics, non-cellular and not reinforced, laminated, supported or similarly combined with other materials: of polymers of propylene;		Liners prevent leachate (seeping of waste and chemicals into groundwater), provide soil protection and anti-erosion. Prevent contaminated water runoff. (Also relevant in waste management)	WWMT	No

392112	Other plates, sheets, film, foil and strip, of plastics: of polymers of vinyl chloride;		Liners prevent leachate (seeping of waste and chemicals into groundwater), provide soil protection and anti-erosion. Prevent contaminated water runoff. (Also relevant in waste management)	WWMT	No
392290	Baths, shower-baths, sinks, wash-basins, bidets, lavatory pans, seats and covers, flushing cisterns and similar sanitary ware, of plastics; Other.		Unit for defecation in which human waste is kept out of soil and water sources and can be transformed into agricultural fertilizer. Relevant also in both Solid and Hazardous Waste Management and Resource Efficiency.	WWMT	No
392510	Reservoirs, tanks, vats and similar containers, of a capacity exceeding 300 l	Water storage tanks of PVC-coated fabric	Prevents light penetration and resulting algae growth, thereby reducing changes of contamination.	WWMT	No
400922	Tubes, pipes and hoses, of vulcanised rubber other than hard rubber, with or without their fittings (for example, joints, elbows, flanges), with fittings		Used in the process of injecting oxygen and air in water to improve the water quality, especially in waters low in oxygen that promotes anaerobic conditions (decomposition of organic material without oxygen).	WWMT	NO
442190	Other articles of wood: Other;		Necessary part of 392290.	WWMT	No

560290	Felt, whether or not impregnated, coated, covered or laminated: other;		Liners prevent leachate (seeping of waste and chemicals into groundwater), provide soil protection and anti-erosion. Prevent contaminated water runoff. (Also relevant in waste management)	WWMT	No
560314	Nonwovens, whether or not impregnated, coated, covered or laminated: Weighing more than 150 g/m ²			WWMT	No
591190	Textile products and articles, for technical uses, specified in Note 7 to this Chapter. Filter bags and similar for use in purifying plants		This filter system will typically use only 1/10th the land requirements of conventional primary wastewater treatment systems, making it ideal for those areas where land is expensive or unavailable.	WWMT	NO
680620	Slag wool, rock wool and similar mineral wools, exfoliated vermiculite, expanded clays, foamed slag and similar expanded mineral materials; mixtures and articles of heat-insulating or sound-absorbent mineral materials, other than those of heading 68.11 or of Chapter 69. -Exfoliated vermiculite, expanded clays, foamed slag and similar expanded mineral materials (including intermixtures thereof)		Benefits 30-40% less footprint, lower energy consumption, less use of chemical. More water to people to lower cost per m ³ . This product has excellent properties for use in pre-treatment filters in desalination plants, both in filters for filtration of coagulated water and in biological processes. Use of Filtralite will provide low SDI values, reduced danger for bio-fouling of the RO membranes and long filter runs between backwashes.	Wastewater Management and Water Treatment	NO

681599	Articles of stone or of other mineral substances (including carbon fibres, articles of carbon fibres and articles of peat), not elsewhere specified or included: other (including intermixtures thereof)		Stone or other mineral substances used for landfinn drainage and leachate protection, made of composite clay and geosynthetic liners.	WWMT	No
691010	Ceramic sinks, wash basins, wash basin pedestals, baths, bidets, water closet pans, flushing cisterns, urinals and similar sanitary fixtures.		Unit for defecation in which human waste is kept out of soil and water sources and can be transformed into agricultural fertilizer.	WWMT	No
730900	Reservoirs, tanks, vats and similar containers for any material (other than compressed or liquefied gas), of iron or steel, of a capacity exceeding 300 l, whether or not lined or heat-insulated, but not fitted with mechanical or thermal equipment;	Containers for waste management and sanitation purposes	Can contain wastewater, sewage or hazardous waste. Important in developing safe drinking water systems and human waste management systems. Also reduces diseases spread through open defecation. Can contain hazardous waste in order to prevent contamination.	WWMT	No
731010	Tanks, casks, drums, cans, boxes and similar containers, for any material (other than compressed or liquefied gas), of iron or steel, of a capacity not exceeding 300 l, whether or not lined or heat-insulated, but not fitted with mechanical or thermal equipment: Greater than 50l;		Waste containers for wastewater, sewage, and hazardous waste; Storage containers for safe drinking water; Solar preheating tank.	WWMT	No
731021	Tanks, casks, drums, cans, boxes and similar containers, of a capacity not exceeding 300 l: To be closed by soldering or crimping		waste containers for wastewater, sewage, and hazardous waste; Storage containers for safe drinking water; Solar preheating tank.	WWMT	No
731029	Tanks, casks, drums, cans, boxes and similar containers, of a capacity not exceeding 300 l: Other		Waste containers for wastewater, sewage, and hazardous waste; Storage containers for safe drinking water; Solar preheating tank.	WWMT	No
732429	Sanitary ware and parts thereof, of iron or steel: other, including parts		Unit for defecation in which human waste is kept out of soil and water sources and can be transformed into agricultural fertilizer.	WWMT	No
741220	Copper tubes or pipe fittings (for example, couplings, elbows, sleeves). Of copper alloys.		The couplings secures tight water distribution pipes and thereof reduce the leakage ration in the water supply system. As a consequence the energy consumption connected to cleaning of water / water production and the pumping of water will be reduced. The couplings are made out of corrosion resistant material, that secures the energy saving water supply over a minimum lifetime of 50 years	WWMT	NO

761290	Aluminium casks, drums, cans, boxes and similars containers (including rigid or collapsible tubular containers), for any material (other than compressed or liquified gas), of a capacity not exceeding 300 l, wheter og not lined or heatinsulated, but not fitted with mechanical or thermal equipment, --Other		Used in the proses of injecting oxygen and air in water to improve the water quality, especially in waters low in oxygen that promotes anaerobic conditions (decomposition of organic material without oxygen).	WWMT	NO
761520	Sanitary ware and parts thereof, of aluminum		Unit for defecation in which human waste is kept out of soil and water sources and can be transformed into agricultural fertilizer.	WWMT	No
841320	Pumps for liquids, whether or not fitted with a measuring device: Hand pumps, other than those of subheading 841311 or 841319	Hand and foot pumps	Can be used to irrigate farms, removing dependence on external diesel pump services etc. Manual efforts lead to reduced CO2-emissions. Can also be important in the collection and disposal of human waste.	WWMT	No
842121	Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases.-- For filtering or purifying water	In-line or in-tank ballastwater treatment systems	Ballast water treatment systems on board ships are used to avoid the spread of invasive species when vessels are emptying or cleaning their ballast water tanks. Can be installed on board a ship e.g. by integrating the system into the existing ballast water system. Several ballast water treatment systems exist. The systems typically rely on filtration and UV treatment-methods plus a ballasting and de-ballasting process. Ballast Water Treatment Systems includes several components such as filters, reactors, lamps, flow meters, valves and control systems.	WWMT	YES
842121	Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases. --For filtering or purifying water		Eco efficient technology for waste treatment, <50% of the cost of sedeimentation/clarification, reduces footprint, sludge dewatering reduces disposal costs. Enables waste to energy conversion. Reduces environmental footprints.	WWMT	APEC

842199	Other (Parts of 842121)	Biofilm carrier element used in biological treatment processes for both water- and wastewater treatment plants.	Biological treatment of waste water. Reduce energy consumption, investment cost, footprint. Better control of the biology, increase the capacity of membranes, reduce effluence to the environment	Wastewater Management and Water Treatment	APEC
848180	Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves.	Drinking water, taps, valves and distribution kits.	Improved delivery of drinking water, reduced spilling and waste. Through closing or water-saving mechanisms, water use is significantly reduced.	WWMT	No

ENERGY EFFICIENCY (EE):

Norwegian EGA Product Nominations. Energy Efficiency (EE)

(https://www.regjeringen.no/contentassets/866db6809113469cbce57141e7042774/norwegian_nominations1501.pdf)

Norwegian nominations EGA. Energy efficiency (EE)

HS 6 code (2012)	HS 6 Code Description	Ex-Out/Additional Product Specification	Environmental Benefits and Additional Information	Category	APEC list?
841861	Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading 84.15. - -Other	Heat pumps not containing fluorocarbons.	Heat pumps offer an energy efficient way to provide space heating and preparation of sanitary hot water.	EE	NO
841899	Refrigerators, freezers and other refrigerating or freezing equipment, electric or other; heat pumps other than air conditioning machines of heading 84.15. - -Other	Parts of heat pumps not containing fluorocarbons.	Technology related to renewable energy.	EE	NO

Addition of 27 May 2015

(https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/handelspolitikk/ega_newnomination.pdf)

320890	Paints and vernishes (including enamles and lacquers) based on synthetic polymers or chemically modified natural polymers, dispersed or dissolved in a non-aqueous medium; solutions as defined in Note 4 to this Chapter; Other	Anti-fouling for hull protection	Efficient biocide free underwater hull protection in only two coats, especially suitable for vessels where maintenance simplicity and docking efficiency is important. Contributes towards hull protection and contributes to energy efficiency. Biocide free hull protection is also environmental preferable.		NO
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CLEAN AND RENEWABLE ENERGY (CRE):

Norwegian EGA Product Nominations. Clean and Renewable Energy (CRE)

(https://www.regjeringen.no/contentassets/866db6809113469cbce57141e7042774/norwegian_nominations_cre.pdf)

Norwegian nominations to EGA. Cleaner and renewable energy (CRE)					
HS 6 code (2012)	HS 6 Code Description	Ex-Out/Additional Product Specification	Environmental Benefits and Additional Information	Category	APEC list?
732111	Stoves, ranges, grates, cookers, barbecues, gas-rings, plate warmers and similar non-electric domestic appliances, and parts thereof, of iron or steel: for gas fuel or for both gas and other fuels.	Solar powered stoves, ranges, cookers.	Renewable energy source, no expenses for fuel or energy, Suitable off grid usage, reduction in deforestation for firewood. Removal of indoor air pollution. Device that uses the energy of the sun to heat or to cook food- sunlight converted to heat energy (Also relevant for EPP, APC, Resource Efficiency).	CRE	NO
732190	Parts of HS 732111			CRE	NO

841011	Hydraulic turbines, water wheels, and regulators therefor. Of a power not exceeding 1,000 kW		Turbines are essential for the production of electricity from flowing water. Can be used in a number of setting to produce ranges of emission-less power. Cost-effective and relevant technology for electricity generation.	CRE	NO
841012	Hydraulic turbines, water wheels, and regulators therefor. Of a power exceeding 1,000 kW but not exceeding 10,000 kW.		Turbines are essential for the production of electricity from flowing water. Can be used in a number of setting to produce ranges of emission-less power. Cost-effective and relevant technology for electricity generation.	CRE	NO
841013	Hydraulic turbines, water wheels, and regulators therefor. Of a power exceeding 10,000 kW		Turbines are essential for the production of electricity from flowing water. Can be used in a number of setting to produce ranges of emission-less power. Cost-effective and relevant technology for electricity generation.	CRE	NO

841090	Hydraulic turbines, water wheels, and regulators therefor. Parts, including regulators		Turbines are essential for the production of electricity from flowing water. Can be used in a number of setting to produce ranges of emission-less power. Cost-effective and relevant technology for electricity generation.	CRE	NO
848610	Machines and apparatus of a kind used solely or principally for the manufacture of semiconductor boules or wafers, semiconductor devices, electronic integrated circuits or flat panel displays; machines and apparatus specified in Note 9 (C) to this Chapter; parts and accessories.	Machines producing wafers for the solar industry.	Necessary to produce wafers in order to produce electricity in an environmentally benign manner.	CRE	NO
850131	Electric motors and generators (excluding generating sets). --Of an output not exceeding 750 W	Solar Panels		CRE	NO

851310	Portable electric lamps designed to function by their own source of energy (for example, dry batteries, accumulators, magnetos), other than lighting equipment of heading 85.12.	Renewably powered lamps and lighting fittings.	Gravity powered lamp that uses the kinetic energy of a weight falling to produce live electricity. Used for production of light, often in off-grid settings.	CRE	NO
854190	Diodes, transistor and similar semiconductor devices; photosensitive semiconductor devices, including photo-voltaic cells whether or not assembled in modules or made up into panels; light emitting diodes; mounted piezo-electric crystals. -Parts	Part to solar cells	Solar photovoltaic cells generate electricity in a benign environmentally manner.	CRE	NO
900190	Optical fibres and optical fibre bundles; optical fibre cables other than those of heading 85.44; sheets and plates of polarising material; lenses (including contact lenses), prisms, mirrors and other optical elements, of any material, unmounted, other than such elements of glass not optically worked. Other.	Fresnel mirrors. Solar mirrors and reflectors. Used in solar collectors that concentrate light by refraction.	Renewable energy source, no expenses for fuel or energy, electricity produced without emissions. Much lower cost than flat panel mirrors.	CRE	NO

900290	Lenses, prisms, mirrors and other optical elements, of any material, mounted, being parts of or fittings for instruments or apparatus, other than such elements of glass not optically worked. - Objective lenses	Fresnel reflector modules.	Used in solar collectors that concentrate light by refraction, may boil water to make steam for direct power generation, or be used on smaller scale for water or space heating applications. Also for water purification.	CRE	NO
940540	Lamps and lighting fittings including searchlights and spotlights and parts thereof, not elsewhere specified or included; illuminated signs, illuminated name-plates and the like, having a permanently fixed light source, and parts thereof not elsewhere specified or included. Other electric lamps and lighting fittings	Renewably powered lamps and lighting fittings.	Renewable energy source, no expenses for fuel or energy, Suitable for off grid usage. Used to provide lighting, often in off-grid settings. Solar cell, lamp (often efficient LED lamps), batteries (often long-lasting or rechargeable)	CRE	NO
940550	Non-electrical lamps and lighting fittings	Renewably powered lamps and lighting fittings.	Renewable energy source, no expenses for fuel or energy. Suitable for off grid usage	CRE	NO

Additions of 27 May 2015

(https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/handelspolitikk/ega_newnominations_cre.pdf)

Norwegian nominations. CRE					
Norway. EGA nominations. CRE					
HS 6 code (2012)	HS 6 Code Description	Ex-Out/Additional Product Specification	Environmental Benefits and Additional Information	Category	APEC list?
391732	Tubes, pipes and hoses, and fittings therefor (for example, joints, elbows, flanges), of plastics. --- Of condensation, polycondensation and polyaddition products. ---Of addition polymerisation products	Parts of fish passage system in hydro power plants	This system ensures clearly improved passage for fish in hydro power plants.	CRE	NO
391733	Tubes, pipes and hoses, and fittings therefor (for example, joints, elbows, flanges), of plastics.-- Other, not reinforced or otherwise combined with other materials, with fittings	Parts of fish passage system in hydro power plants	This system ensures clearly improved passage for fish in hydro power plants.	CRE	NO
731010	Tanks, casks, drums, cans, boxes and similar containers, for any material (other than compressed or liquified gas), or iron of steel, of a capacity not exceeding 300 l, whether or not lined or heat-insulated, but not fitted with mechanical or thermal equipment. Of a capacity of 50 l or more, - Of a capacity of less than 50 l : □	Pumphouse for fish accelerator	This system ensures clearly improved passage for fish in hydro power plants.	CRE	NO
732690	Other articles of iron or steel. - Forged or stamped, but not further worked- Other	Cyclone and slides for fish transport system in hydro power plants	Used in the system for fish transport in hydro power plants.	CRE	NO

	Tanks, casks, drums, cans, boxes and similar containers, for any material (other than compressed or liquified gas), or iron of steel, of a capacity not exceeding 300 l, whether or not lined or heat-insulated, but not fitted with mechanical or thermal equipment. Of a capacity of 50 l or more, - Of a capacity of less than 50 l : □				
731010		Pumphouse for fish accelerator	This system ensures clearly improved passage for fish in hydro power plants.	CRE	NO
732690	Other articles of iron or steel. - Forged or stamped, but not further worked- Other	Cyclone and slides for fish transport system in hydro power plants	Used in the system for fish transport in hydro power plants.	CRE	NO
850422	Having a power handling capacity exceeding 650 kVA but not exceeding 10,000 kVA : Liquid dielectric transformers : Electrical transformers, static converters (for example, rectifiers) and inductors		Important component of all power plants using renewable energy.	CRE	
850433	Electrical transformers, static converters (for example, rectifiers) and inductors. Having a power handling capacity exceeding 16 kVA but not exceeding 500 kVA	Modern Transformers	Superconductors are materials that conduct electricity with 100 percent efficiency, losing nothing to resistance at temperatures above the boiling point of liquid nitrogen. Extraordinary superconducting and magnetic properties for wide-ranging technological applications including power transmission.	CRE	NO
890110	Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods. Cruise ships, excursion boats and similar vessels principally designed for the transport of persons; ferry-boats of all kinds	Battery powered vessels	Energy efficient. No emissions to air. Cleaner and renewable energy (CRE). Also favourable for local air conditions.	CRE	NO