

Environmental Impacts of a Free Trade Agreement between China and Norway

Methodological framework

Ole Kristian Fauchald and Haakon Vennemo

Report 2011/11 Vista Analysis

13 April 2011



FRIDTJOF NANSENS INSTITUTT
FRIDTJOF NANSEN INSTITUTE



VISTA
ANALYSE

Document Details

Vista Analysis AS	Report number 2011/11
Title	Environmental impacts of a Free Trade Agreement between China and Norway – methodological framework
ISBN	978-82-8126-025-2
Author	Ole Kristian Fauchald and Haakon Vennemo
Finished date	April 13, 2011
Project Manager	Haakon Vennemo
Quality Control	NA
Client	Ministry of Environment Norway
Access	Public
Published	April 14, 2011
Key words	Environment, free trade agreement, methodology

Preface

This is the Report on methodologies from the project 'Assessment of environmental impacts of a Free Trade Agreement between China and Norway'. It has been developed in October 2010 – April 2011 by Ole Kristian Fauchald of Fridtjof Nansen Institute (FNI) and Haakon Vennemo of Vista Analysis. We have solicited comments and suggestions based on a draft of the report (see www.fni.no/Norway-China-FTA/index.htm). The report will form the basis for a second phase of the project. The second phase will perform the actual assessment of environmental impacts of a Free Trade Agreement between Norway and China.

13 April 2011

Haakon Vennemo

Project Manager

Vista Analysis AS

Content

Preface 2

Executive summary 6

1. Introduction 9

2. Modalities of the process for environmental assessments..... 11

 2.1 Screening 12

 2.2 Scoping 14

 2.3 Assessment 15

 2.4 Flanking measures 17

 2.5 Methodologies for assessment of impacts 20

 2.5.1 Assessment of economic and physical environmental impacts 20

 2.5.2 Partial equilibrium method 22

 2.5.3 General equilibrium model 23

 2.5.4 Life cycle analysis 24

 2.5.5 Combining methods 24

 2.5.6 Implications of different methods 25

 2.5.7 Regulatory assessment 25

3. Review of ‘Preliminary guideline of EIA of trade policy’ 27

 3.1 Modalities in the Preliminary guideline of EIA of trade policy 27

 3.2 Methodologies in the Preliminary guideline of EIA of trade policy 29

 3.3 The guideline at work: The EA of the CJK-FTA 29

4. Recommendations 31

 4.1 Modalities 31

 4.2 Scenarios 31

 4.3 Screening and scoping 31

 4.4 Methodologies 31

- Appendix 1 Inputs to Baseline Scenario..... 33
 - General issues 33
 - Trade in goods 33
 - Trade in services..... 35
 - Investment..... 38
- Appendix 2 Inputs to the Free Trade Scenario 39
 - General issues 39
 - Trade in goods 39
 - Trade in service 41
 - Investment..... 43
- Appendix 3 Inputs to Green Trade Scenario..... 44
 - General issues 44
 - Trade in goods 44
 - Trade in services..... 45
 - Investment..... 46
- Appendix 4 Details of Screening..... 48
 - General..... 48
 - Trade in goods 48
 - Trade in services..... 49
 - Investment..... 55
- Appendix 5 Details of Scoping..... 57
 - Trade in goods 57
 - Trade in services..... 59
 - Investment..... 60
 - Other elements 60

Executive summary

Environmental impact assessment of a free trade agreement between China and Norway

Norway and The People's Republic of China are currently negotiating a free trade agreement (FTA). It will be Norway's first agreement conducted independently of EFTA since 1992. It will be China's first agreement with a mainland European country. Both countries are therefore attaching great importance to the negotiations.

In recent years it has become common to conduct environmental assessments (EAs) of free trade agreements. Examples involving China include New Zealand's National Interest Analysis of the China-New Zealand FTA (2008), the analysis of a potential FTA between China, Japan and Korea (Liu et al, 2010) and the analysis of a potential partnership and cooperation agreement between China and the EU (EU, 2008). The U.S. and Canada are other countries regularly conducting EAs of free trade agreements. Depending on their timing and official status the assessments inform negotiators about pitfalls and opportunities, with the potential of influencing negotiation outcomes; or they analyze impacts of an FTA after the fact, providing impetus for national policy debates on follow up measures and safeguards.

Given the paucity of free trade agreements between Norway and other countries there is no tradition in Norway for conducting EAs of such agreements. The only such assessment carried out in Norway was done during the negotiations in the OECD of a Multilateral Agreement on Investment in 1998.¹ However, an EA of the free trade agreement with China is underway. This phase one report from the EA is on methodology. It is written by a team from Vista Analysis and Fridtjof Nansen Institute led by professors Ole Kr. Fauchald and Haakon Vennemo. The mandate of the EA is set out in appendix 6. The team is making use of its international contacts including contacts with a team of Chinese experts in EAs of free trade agreements at Beijing Normal University.

At this stage, methodologies are agreed

The tasks to be covered in this stage of the EA are the following:

- I. A brief review of the current methodologies of trade policy EA, focusing on various methodologies, including EU, UNEP, OECD and others.
- II. Review the draft guideline on trade policy EA developed by the team of Chinese experts.
- III. Based on the reviews, set out the modalities and methodologies to be used in the EA of the free trade agreement between China and Norway.

The chosen modalities and methods may also be used in a future revision of the draft guideline of EAs of free trade agreements in China. Furthermore it is hoped that the presentation of methodological perspectives may be useful not only for the evaluation of a Sino-Norwegian trade agreement, but even for forthcoming trade agreements between Norway or China and third countries.

Some elements of the assessment are also included

The research team is aware that reports from similar projects, at a similar stage in the work process, have the character of being inception reports. These inception reports often contain hypotheses and initial reasoning pertaining to the actual environmental assessments. It has proven fruitful to air hypotheses and initial reasoning at the inception stage of the work process. For instance, it is helpful in order to facilitate public participation. For this reason we have chosen to include in the report

¹ See <http://www.regjeringen.no/nb/dep/ud/dok/veiledninger/1998/multilateral-avtale-om-investeringer-mai-3.html?id=275075> (in Norwegian).

hypotheses and initial reasoning with respect to negotiation outcomes and main implications. Much of this material is placed in appendices.

In fact it is not given where a description of a methodology ends and its application starts. One could argue that a proper description of methodology should include a description of how it is tailor-made to the issue at hand. In this sense our report is fully methodological.

There will be three scenarios

Our assessment will have three scenarios: A baseline scenario (appendix 1), a free trade scenario (appendix 2) and a green trade scenario (appendix 3). A significant feature of the green trade scenario is that it includes flanking measures to encourage a greening of trade and investment.

The details of the scenarios will be worked out in the assessment phase of the project. The main inputs for the scenarios are the Feasibility Study on the Free Trade Agreement between Norway and China (Ministry of Trade and Industry, 2008a), the Model for future Investment Agreements (Ministry of Trade and Industry, 2008b), and a chapter on trade and sustainable development suggested by a working group in EFTA (EFTA, 2010). The recent FTAs between EFTA and other countries, and the ones between China other countries, also are important source documents. Finally, several agreements related to trade, investment and environment between Norway and China exist already and will provide points of reference.

Standard modalities will be followed

As outlined by, e.g., OECD (2007) an EA of a free trade agreement has the following phases:

- Screening
- Scoping
- Assessment
- Flanking measures
- Monitoring program

Public participation is a cross cutting issue, integrated in the phases.

The Chinese guideline for EAs of free trade agreements essentially contain the same phases, although the names are slightly different. In particular, the screening and scoping phases are grouped slightly differently in the Chinese guideline, but the content is the same when the two phases are considered simultaneously.

In our work we will follow standard modalities and choose the shorter OECD nomenclature. A public hearing of the current report is held in Oslo March 4, 2011.

Screening and scoping:

Screening provides an overview of sectors and issues subject to negotiation. The purpose of screening is to exclude from further consideration those sectors and issues that are of no or little interest for the purpose of further assessment. This report identifies five criteria to be used in the screening process and carries out a preliminary screening in appendix 4.

Scoping involves a process of prioritizing among these sectors and issues, as well as defining the extent to which the sectors and issues shall be assessed. The scoping process shall place equal emphasis on enhancing positive and reducing negative environmental effects. The scoping stage of the current project will identify one or two sector(s) or issue(s) among each of the three main areas of negotiation, i.e. goods, services and investment. As to regulatory effects, the main focus will be on those parts of Norwegian environmental policy that involve a higher level of environmental protection than what is generally the case for other countries. Some preliminary elements of scoping are set out in appendix 5.

Partial equilibrium modeling and life-cycle analysis will be used to assess physical impacts

Our review makes it clear that there is a substantial long-list of partially exclusive assessment methodologies for environmental assessments, but most analyses use one or more of the partial equilibrium method, general equilibrium method and life cycle analysis method in addition to verbal reasoning. This project will use the partial equilibrium method in combination with a life cycle perspective. We will use verbal reasoning to analyze so-called direct effects and for the overall assessment. In addition we will be informed by lessons learned from general equilibrium studies.

The partial equilibrium method is particularly relevant for studying economic and environmental impacts in a single market. Based on estimates of price responsiveness it makes predictions about the likely increase in sales when tariffs or tariff equivalents are lowered. Regulations and transaction costs on investments may also be analyzed in this way. However the focus on a single market makes it difficult to understand environmental repercussions in other markets. The life cycle analysis will help analyze such repercussions by following products from the “cradle” to the “grave”. At least in principle, services and investments may also be analyzed in this way.

Direct impacts of trade are related to the physical act of trading in goods and services, in particular the transport of goods. Emissions during transport, and impacts from invasive species on biodiversity are two commonly cited effects. Verbal reasoning will be used to discuss those. Verbal reasoning will also be used for the overall assessment, since the in-depth analysis will not cover all potential markets, sectors and effects. This overall reasoning will be informed, inter alia, by general equilibrium methodology and the computable general equilibrium output from previous studies.

Assessment of regulatory impacts

A regulatory impact analysis is relevant where a FTA will affect a country’s internal environmental policy measures. The FTA may affect the lawfulness of such policy measures, as well as their effectiveness. The lawfulness of internal policy measures will have to be determined on the basis of a legal analysis of rules to be contained in the final FTA. Methods of interpretation developed in international law will be used when analyzing the potential effects of provisions of the FTA. Assessment of such effects must also be based on information about the status and future development of domestic environmental policy. Such information will be gathered from government reports, other policy documents, as well as other reports and assessments of the need for and effectiveness of environmental policy measures.

1. Introduction

The People's Republic of China (China) and Norway signed a Memorandum of Understanding (MoU) on 18 September 2008 to undertake negotiations of a Free Trade Agreement (FTA) between the two countries. According to the MoU,

The Free Trade Agreement will aim at promoting trade in goods and trade in services, while facilitating investment flows between the People's Republic of China and the Kingdom of Norway, contributing to sustainable economic growth as well as enhancing the cooperation between their enterprises, thus improving the welfare and living standard of their people.

The general conclusion on the expected outcomes of the negotiations has been set out in the Norway – China Free Trade Agreement – Joint Feasibility Study, 2008 (hereafter the referred to as the Feasibility Study, Ministry of Trade and Industry, 2008a:5) as follows:

A possible FTA between China and Norway would be expected to eliminate tariffs on substantially all the trade between the two countries and addressing non-tariff measures, while taking into account sensitivities on both sides. ... Further liberalisation of trade in services between the two countries should be aimed at creating mutual beneficial and tailor made solutions for China and Norway. In relation to investment, the future FTA between China and Norway would result in greater transparency of regulations and laws that affect both direct and portfolio foreign investments, more liberalised regimes which will facilitate investments in each country, and a more stable policy framework for investors.

The FTA is the first bilateral FTA negotiated by Norway on a bilateral basis since 1992. Most such agreements are currently negotiated through EFTA. FTAs between EFTA and The Gulf Cooperation Council, Serbia, Albania, Ukraina, Peru and Colombia have been negotiated and are in the process of being approved by the Norwegian Storting (parliament). China is however a much larger trading partner for Norway than any of these countries; it is Norway's second largest trading partner outside the EU.

China has recently agreed FTAs with New Zealand, Chile and Peru. An FTA with Iceland is under negotiation, but otherwise the negotiation with Norway is the first with a European country.

The FTA between China and Norway will be one of several agreements of relevance to commerce between the two countries. It may encompass or replace in whole or in part some of the earlier agreements. These include the following:

1. Memorandum of Understanding on Cooperation in the Field of Water Resources between the Ministry of Water Resources of the People's Republic of China and the Royal Ministry of Petroleum and Energy of the Kingdom of Norway, signed 10-06-2010 in Oslo
2. Memorandum of Understanding on Cooperation in the Petroleum Sector between the Royal Norwegian Ministry of Petroleum and Energy and the National Energy Administration of the People's Republic of China, signed 12-01-2009 in Beijing
3. Memorandum of Understanding on Environmental Cooperation between the Ministry of the Environment of the Kingdom of Norway and the Ministry of Environmental Protection of the People's Republic of China, signed 30-06-2008 in Beijing
4. Memorandum of Understanding between Norway and China recognizing China as full market economy country, signed 26-03-2007 in Beijing
5. Memorandum of Understanding on Enhancing Cooperation in Energy Conservation and Renewable Energy between Ministry of Petroleum and Energy of the Kingdom of Norway and

National Development and Reform Commission of the People’s Republic of China, signed 27-09-2006 in Oslo

6. Agreement on maritime transport between Norway and China, signed 04-12-2003 in Shanghai
7. Protocol between Norway and China on certification and inspection procedures regarding fertilizers, signed 30-06-2000 in Oslo
8. Memorandum of Understanding between Norway and China on the protection of intellectual property rights, signed 20-06-1995 in Oslo
9. Agreement Between the Government of the People’s Republic of China and the Government of Norway on the Mutual Protection of Investments, signed 21-11-1984 in Beijing
10. Long term trade agreement between Norway and China, signed 15-06-1982 in Oslo
11. Agreement between Norway and China on economic, industrial and technical cooperation, signed 25-09-1980 in Beijing (This Agreement established the Sino-Norwegian Mixed Commission for Economy and Trade. A separate agreement on establishing a Sub-Committee on Investments was adopted in 2006.)
12. Maritime transport agreement between Norway and China, signed 02-08-1974 in Beijing
13. Treaty concerning the relinquishing of extraterritorial rights in China and the settling of related questions, with exchange of notes and agreed minutes, signed 10-11-1943 in Chungking
14. Treaty between Norway and China regulating tariff relations, signed 12-11-1928 in Shanghai
15. Treaty of peace, friendship and commerce between Norway and China, signed 20-03-1847 in Canton

In addition, the Feasibility Study mentions that a MoU on sanitary and phytosanitary measures has been negotiated and is ready for signature. According to the Study (p. 82): ‘The parties to that MoU are the General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China (AQSIQ), and on the Norwegian side, the Ministry of Fisheries and coastal Affairs and the Ministry of Agriculture and Food. The scope of the MoU is limited to the competency of the respective parties mentioned.’

In light of a classification used in OECD 2007:30-1, a future Sino-Norwegian FTA can be classified as a ‘broad trade agreement’, i.e. an agreement that often includes “provisions on market access, domestic regulation, services, investment, and intellectual property. In addition to clauses aiming at ensuring the trade partners’ ability to protect the environment, many of these agreements also contain references to environmental co-operation, either in the trade agreement itself or in a separate agreement.”

Environmental perspectives have received significant attention in the Feasibility Study (Ministry of Trade and Industry, 2008a:99): “This report illustrates that there are significant complementarities of demand and competence between Norway and China in the field of renewable energy technologies and other areas of environmental cooperation. The benefits of this, both for the economy and the

environment, may be facilitated through appropriate language in a future free trade agreement. Both Governments also recognize a possible future FTA as a useful tool to achieve their common goal of sustainable development and harmonious development of nature and human society.”

There has been no procedure for environmental assessment of bilateral FTAs in EFTA including Norway. Nor has there, as far as we know, been conducted environmental assessment on an independent basis, e.g., by academic institutions. In the case of China the FTA with New Zealand was initiated by a Joint Study Report (2004) which analysed potential impacts of future negotiations in different dimensions, including environmental impacts. The final FTA was made subject to a National Interest Analysis by New Zealand (2008) that includes a brief assessment of environmental effects. A possible Partnership and Cooperation Agreement between China and the EU has been the subject of an extensive ‘sustainability impact assessment’ emphasizing environmental features (EU, 2008) and a team of researchers from Beijing Normal University and other institutions have carried out an EA of a possible FTA between China, Korea and Japan (Liu et al, 2010). A draft guideline for EA of free trade agreements has also been developed by Chinese experts (Mao et al, 2010).

Environmental assessments of free trade agreements are quite common in some other countries, most prominently the U.S. and Canada. Several institutions have developed guidelines or inventories for EA of free trade agreements. These include OECD (2007), UNEP (2005a and 2005b), and EU (EU Handbook 2006). Canada (Canada Handbook 2008) and the U.S. (2000) have national guidelines.

2. Modalities of the process for environmental assessments²

EAs carried out so far have been analyzed in OECD 2007, as updated in annual reports by the OECD Joint Working Party on Trade and Environment.³ These integrate other source documents as well.

The following elements are common to most EA processes:⁴

1. Screening – identification of sectors considered to be of interest from an EA perspective through an exclusion of sectors where environmental impacts are estimated to be insignificant. In this context it is important to take into account both the potential for mitigating negative effects and the potential for enhancing positive effects.
2. Scoping – in light of available information, select those sectors that seem to be of most interest. Further, select issues of particular interest and consider system boundaries.
3. Assessment – the task is to carry out assessments of physical environmental effects as well as regulatory effects, i.e. effects on the use of environmental policy measures. (Policy) scenarios are often used to frame the assessment.
4. Discussion of flanking measures – this includes both mitigation of negative environmental effects and enhancement of positive environmental effects.
5. Setting up a framework for monitoring and follow up of issues identified as relevant for such purposes in the EA. The actual monitoring may take several years and is not part of the environmental assessment as such.

² The term environmental assessment (EA) is used as shorthand for the analysis we are in the process of undertaking. This is in agreement with e.g. the Canadian use of the term. The nomenclature is not settled in this area. The content of the analysis and process also fits with the term SEA (for Strategic Environmental Assessment (or Analysis)), or EIA (environmental impact assessment). Other terms one sometimes hears are RIA (Regulatory Impact Analysis) and SIA (Sustainability Impact Analysis).

³ See OECD 2008a, OECD 2009 and OECD 2010.

⁴ OECD 2007:69 – note in particular the common features of the US, EU and Canada. See, however, Canada 2008, where Canada emphasizes that the design of the EA must be adjusted to the specific of the negotiations. Researchers in China have suggested a slightly different set-up without significant practical differences, see below for a discussion.

6. Designing a procedure and program for public participation, and carrying out of the program. Public participation is considered a cross cutting issue in environmental assessments, i.e. it cuts across the other phases.

In the following, we will elaborate on the more specific elements of the first four of these phases. Reviewing the systems for monitoring and for public participation are not part of the mandate of the report.

2.1 Screening

The core of the screening process is to provide an overview of sectors and issues that are covered by the negotiation mandate, and subsequently to exclude from further consideration those sectors and issues that are assumed to be of no or little interest for the purpose of further assessment. A precondition for carrying out a screening process is a tentative identification of negotiation results, hereinafter referred to as exogenous scenario inputs. The baseline for such an exercise is the existing legal commitments of the negotiating partners; in the context of these negotiations the commitments that Norway and China have undertaken in the WTO as well as bilateral agreements in force between the parties. This baseline should be adjusted based on relevant unilateral decisions of the negotiating parties to liberalize, such as the application of lower tariffs than those set out in the WTO Schedule of Concessions. Preliminary inputs to a baseline scenario are set out in appendix 1.

The baseline is to be used as a starting point for establishing exogenous scenario inputs regarding negotiation results. The scenario(s) shall be based on the negotiation mandate, the “Feasibility Study”, and any additional information made available to the assessment team, including recent free trade agreements accepted by Norway (e.g. the EFTA-Korea FTA) and China (e.g. the China-New Zealand FTA), as well as model agreements. Model agreements are particularly relevant for the investment chapter. The exogenous scenario inputs should exclude those parts of the negotiations where the parties have expressed no wish to reform or further develop existing obligations, and that the parties regard as “sensitive” in the sense that there is an unwillingness to liberalize further. Preliminary exogenous scenario inputs regarding negotiation results are set out in appendices 2 and 3.

The topic to be considered in the following is the criteria that shall be used in the screening process. The main criteria to be used in the screening process are the following:

1. Assumed effects on the physical environment
2. Assumed effects for environmental policy measures

These criteria will be further elaborated below.

1. As to the assumed *effects on the physical environment*, we will first note that such effects will occur through a causal chain. This causal chain can be described as follows:

Assumed negotiation result -> changes in behavior of relevant actors -> environmental effects of such changes

The exclusion can thus be based on the following criteria:

- 1) The assumed negotiation result will not constitute any significant change to the incentives of relevant actors, because:
 - a) the sector or issue is already subject to similar commitments, in particular under the WTO Agreement,
 - b) the negotiation result will not lead to any changes of current relevant measures, e.g. where tariff rates applied to imports are lower than the tariff rate in the relevant Schedule of Commitments, or

- c) a specific assessment of the negotiation result concludes that it is unlikely to lead to significant changes of the incentives of relevant actors.
- 2) The assumed changes in behavior of relevant actors will not have significant negative or positive effects for the physical environment, because:
 - a) the environmental effects are considered irrelevant for the purpose of the environmental assessment, or
 - b) there is no significant environmental effects of the activities in question or associated activities.

In order to ensure an efficient screening process, it is recommended to apply the criteria in the following order: 1)a), 1)b), 2)a), 2)b) and 1)c).

Criteria 1)c), 2)a) and 2)b) need further elaboration. Application of criterion 2)a) depends on the mandate of the environmental assessment. Its relevance assumes that the mandate limits the environmental effects to be taken into account. Such limitations could include limitations based on the geographical location of the environmental effects or exclusion of certain categories of environmental effects, for example positive environmental effects. In cases where the mandate does not explicitly exclude certain environmental effects, the assumption is that all environmental effects should be taken into account. The mandate of this assessment sets out that the main focus of the Norwegian assessment shall be on effects in Norway, but it does not prevent us from taking into account effects elsewhere. For those environmental issues for which Norway has undertaken relevant international commitments, such as emission of greenhouse gases and trade in hazardous chemicals and waste, we will take into account effects outside Norway to the same extent as we take into account effects within Norway.

Application of criterion 2)b) will require knowledge about environmental effects of the activities in question. As indicated, relevant environmental effects include positive and negative effects. The objective is thus to exclude activities that in essence are environmentally neutral. One important problem is the extent to which environmental effects that are indirectly linked to the activity should be taken into account. The screening process will only take into account environmental effects that are closely associated with the activity in question, and will not go into any detailed assessment of potential effects. Particular attention will be given to environmental effects associated with transportation. A more detailed assessment of environmental effects will be part of the scoping.

Application of criterion 1)c) necessitates an assessment of which effects changes in relevant measures will have for relevant actors. Such assessments require knowledge about the impact of negotiation results relative to other factors that relevant actors take into account when determining whether to change their behavior. Due to the framework for this project, our screening process can only be based on general assumptions about the relative role of negotiation results. Such assumptions will be based on general knowledge about the incentive structure within the relevant sector, to the extent possible on the basis of literature studies. It is proposed to apply criterion 1)c) as the last criterion due to resources required to make an assessment of sufficient quality based on this criterion.

2. *Environmental policy measures* include core environmental legislation, such as pollution control legislation and legislation concerning protection of the natural environment, as well as other legislation that has among its main objectives to contribute to environmental protection. Moreover, environmental policy measures also include various economic instruments, such as taxes, subsidies and trading schemes, established in whole or in part for environmental protection purposes.

The screening process will be based on the assumption that the negotiation results will be allowed to significantly affect existing environmental legislation and other policy measures only pursuant to a political decision to that effect during negotiations. The assumption is that the negotiation results will not have any such effects, unless the authorities signal to the assessment team that such effects

should be addressed in the assessment report. As no such effects have been previewed for these negotiations, our scenario(s) will assume that no such effects will take place. Even if the negotiation results will not have any effects on existing legislation and economic measures as such, the negotiation results may still have effects for the future specific application of the legislation and economic measures. Moreover, the negotiation results may have effects for other measures, such as voluntary agreements and labeling schemes. Such effects shall be taken into account in the scenarios and the screening process.

In addition to effects linked to existing environmental policy measures, it can be asked whether and to what extent the screening process should take into account effects that negotiation results will have for adoption of future environmental policy measures or reforms of existing measures. This raises questions regarding predictions concerning the future development of environmental policy. Such predictions can be based on policy papers published by relevant public authorities, as well as information provided by public authorities directly to the assessment team. Given resource constraints, this assessment cannot be based on any exhaustive examination of policy papers that might signal environmental policy reform. Predictions regarding future environmental policy measures will be integrated as an element of the scenario(s), i.e. in appendices 2 and 3

Against this background, the screening process will address effects for environmental policy measures based on the exclusion of sectors or issues:

- 1) that are not subject to environmental measures, and
- 2) where the negotiation results are assumed to have insignificant effects for the application of existing environmental policy measures and for future environmental policy measures.

The screening of effects on the physical environment and effects for environmental policy measures will be carried out separately. A draft of the screening for the purpose of this assessment is set out in appendix 4.

2.2 Scoping

The process of scoping takes as its point of departure those sectors and issues remaining after the screening process. Scoping involves a process of prioritizing among these sectors and issues, as well as defining the extent to which the sectors and issues shall be assessed. The scoping is based on a more in-depth preliminary assessment of potential effects of the negotiation results. The table below illustrates a range of potentially relevant effects for the physical environment and their association with various environmental issues. As is illustrated by the table, exhaustive or detailed assessments could be very resource demanding and cannot be undertaken as part of a scoping process. A similar table could be made for environmental policy measures and the related regulatory assessment.

Table 2.1 Example of physical environmental aspects to consider in the scoping process

	Biodiversity	Human health	Landscape	Air	Water	Climate	Material assets	Buildings	Cultural heritage	Other
Physical area affected										
Status of area										
Vulnerability										
Likely effect										
Lasting effect										
Frequent effect										
Secondary effects										
Cumulative effects										
Synergetic effects										
Positive effects short term										
Positive effects long term										
Negative effects short term										
Negative effects long term										

The scoping will be based on the exogenous scenario input(s) as developed during the screening process (appendices 2 and 3). There may be a need to further specify some aspects of the input(s) as part of the scoping process.

The mandate and resources available for the assessment set the basic framework for the scoping process. According to the mandate:

- There should be equal emphasis on enhancing positive and reducing negative environmental effects
- The assessment should at least focus on one sector or issue among each of the three main areas of negotiation, namely goods, services and investment
- As to regulatory effects, the main focus will be on those parts of Norwegian environmental policy that involve a higher level of environmental protection than what is generally the case for other countries.

In addition to carrying out the assessment as such, the assessment shall contribute to the development of processes and methodologies for environmental assessment of trade negotiations, as well as increasing public awareness of and involvement in the negotiations. Given these constraints, the scoping process should result in a detailed scoping of one or two sector(s) or issue(s) in each of the three main areas of negotiation.

A draft of the scoping to be performed in this assessment is set out in appendix 5.

2.3 Assessment

Above we explained how the screening and scoping phases are based on a tentative analysis of the negotiation outcome. In the assessment phase this analysis is developed into consistent scenario inputs.

These inputs are then processed by one or more assessment method(s). We devote chapter 2.5 below to a review of assessment methods. Policy scenarios are formed that contain both the exogenous scenario inputs and the endogenous scenario outputs. In order to understand the consequences of the FTA one must compare the policy scenarios to the baseline (reference) scenario. The difference in output gives the response to the difference in input, that is, the response to an FTA versus no FTA.

The scenarios may contain physical impacts, economic impacts, environmental impacts, regulatory impacts and even other categories like social impacts etc. It is not common that a formal scenario contain all impacts of interest, however. The formal assessment is therefore usually followed by an interpretive phase where variables are interpreted for environmental consequence. Even impacts that are indicated in a scenario will usually be interpreted by the analysis. In his interpretation the analyst will take into account the outcome of the public review process.

In the study of an FTA (called Partnership and Cooperation Agreement) between China and the EU, no less than nine policy scenarios were designed, see the table below. The scenarios differed with respect to the extent of reductions in tariffs and non-tariff barriers, and whether or not proposals offered in the Doha Development Round of WTO negotiations would be implemented. The scenarios also took into account whether the trade surplus of China would change.

Table 2.3 GLOBE Scenarios

Scenario	Tariffs / NTBs Reduction		China Current Account Surplus
	China	World	
1. Current account adjustment	0%	0%	- US\$ 60 bn
2. Modest Liberalisation 1 (factors immobile)	25%/0%	0%	No change
3. Modest Liberalisation 2	25%/0%	0%	No change
4. Modest Liberalisation 3	25%/25%	0%	No change
5. Ambitious Liberalisation 1	75%/0%	0%	No change
6. Ambitious Liberalisation 2	75%/75%	0%	No change
7. DDA Modest	Same ->	25%	No change
8. DDA Ambitious 1	Same ->	75%	No change
9. DDA Ambitious 2	Same ->	75%	- US\$ 60 bn

Source: EU (2008)

Although there were nine policy scenarios in this example, the EU handbook for trade sustainability impact assessment (EU, 2006:28) emphasizes that one policy scenario plus the reference scenario (called baseline scenario below) often may suffice:

While the Trade SIA methodology originally aimed to analyse three hypothetical scenarios (baseline, liberalisation, further liberalisation), the experience so far has shown that, because of a lack of data and of assessment tools, in practice only two scenarios can be assessed.

In addition to the complexity of the FTA, which naturally matters for the number and design of policy scenarios, resource constraints for the analysis also have a bearing on their number and design.

Scenarios in an EA of a Sino-Norwegian FTA

The baseline scenario attempts to describe how the variables of interest develop if the FTA is not negotiated. Important considerations were outlined above in our description of screening. The baseline scenario is a 'without FTA' scenario

We envisage two policy or 'with FTA' scenarios. One scenario presents a proactive strategy for flanking measures (see below) with the intention of obtaining a greening of the FTA. We call this the Green Trade Scenario. Another scenario does not include these flanking measures and is a Free Trade

Scenario. Both policy scenarios are integrated in the sense that they include economic and regulatory impacts.

2.4 Flanking measures

For the purpose of this document, ‘flanking measures’ include measures taken to offset negative environmental effects of commitments under the FTA, and measures taken to enhance positive environmental effects of the FTA. Flanking measures are measures taken by the states both inside and outside the framework of the FTA. Hence, measures included in the FTA to avoid negative environmental effects and enhance positive environmental effects would in general constitute elements of the Green Trade Scenario. However, it is not possible to draw a clear distinction between flanking measures outside the scope of the FTA on the one hand and the Green Trade Scenario on the other. The decision on whether to include a measure in the FTA or to make it part of ongoing bilateral cooperation will be taken in the future, and a measure that we consider as part of the Green Trade Scenario may end up as a measure outside the scope of the FTA in the end. The negotiation mandate does not mention the opportunity of establishing any ‘environmental side agreement’, such as was done as part of the negotiations between New Zealand and China in the form of an Environmental Cooperation Agreement,⁵ and such an option will therefore not be considered.

Flanking measures may relate to both physical and regulatory effects of the FTA. We may thus distinguish among four categories of flanking measures, namely those that address (1) negative physical environmental effects and (2) negative regulatory effects, as well as those contributing to (3) positive physical effects and (4) positive regulatory effects.

The consideration of flanking measures must take into account that *negative physical environmental effects* of the FTA in one country may be offset by positive environmental effects in the other country or elsewhere. The typical example is that production may over time move from one country to the other. The consideration of flanking measures should therefore be based on an assessment of environmental effects in both Norway and China, and possibly also elsewhere. One example of effects elsewhere is the import to Norway through China of timber based products that have been produced from illegally logged timber (Lawson & MacFoul, 2010 at 105). This part of the final report must be based on close cooperation between the Norwegian and Chinese assessment teams. The Norwegian assessment team will primarily focus on physical effects in Norway.

The consideration of flanking measures relating to *negative regulatory effects* must take into account that regulatory effects will differ significantly among Norway and China due to differences between their environmental policies. Hence, this part of the consideration can essentially be carried out independently for Norway and China. However, flanking measures taken to safeguard against negative regulatory effects in one country, such as a right to maintain high environmental standards, are likely to have regulatory consequences also for the other country. The final decisions on flanking measures must therefore take into account the need to strike a reasonable balance between Norwegian and Chinese interests.

We may distinguish between two groups of flanking measures taken to *enhance positive physical environmental effects* of the FTA. The first is flanking measures based on so-called win-win relationships between trade and environment, such as measures taken to increase trade in environmentally beneficial goods and services. Such flanking measures are part of the FTA and shall be subject to the main assessment process as outlined in the Green Trade Scenario above, and will not be addressed in further detail here.

The second group of environmentally beneficial flanking measures would consist of measures to improve the environment. Such measures could overlap with existing bilateral environmental

⁵ See <http://www.chinafta.govt.nz/1-The-agreement/1-Key-outcomes/6-Labour-and-environmental-agreements/index.php>.

cooperation between Norway and China. The extent to which bilateral environmental cooperation should be included in the FTA is a policy issue, and a decision to include such elements in the FTA depends on the agreement of both parties. According to the concluding remarks of the Feasibility Study (at 99),

there are significant complementarities of demand and competence between Norway and China in the field of renewable energy technologies and other areas of environmental cooperation. The benefits of this, both for the economy and the environment, may be facilitated through appropriate language in a future free trade agreement. Both Governments also recognise a possible future FTA as a useful tool to achieve their common goal of sustainable development and harmonious development of nature and human society.⁶

Existing bilateral environmental cooperation between China and Norway include:⁷

1. The 1995 and 2008 Memoranda of Understanding (MoUs) on environmental cooperation between Norway and China. The focus of this cooperation has been to support China's implementation of multilateral environmental agreements, including in particular control with hazardous substances, fresh water management and air pollution control. Biodiversity issues are becoming increasingly important.
2. The 2008 MoU on Cooperation and Dialogue on Climate Change between the Ministry of Foreign Affairs of Norway and the National Development and Reform Commission (NDRC) of China. The focus of this cooperation is on carbon capture and storage and the Clean Development Mechanism of the Kyoto Protocol.
3. The 2006 MoU between Norway's Ministry of Petroleum and Energy (MPE) and NDRC on cooperation in energy saving and renewable energy. This MoU follows up a 1997 Letter of Intent on Cooperation on development in hydropower between the MPE and China's Ministry of Water Resources.

It is the view of the assessment team that integrating existing bilateral environmental cooperation into the FTA may carry positive and negative effects for the cooperation. Therefore, in order to maximize positive and minimize negative environmental effects, there is a need to make separate assessments of the extent to which benefits can be derived from integrating the existing bilateral cooperation into a separate "environmental chapter" of the FTA . Since our mandate does not explicitly call for such assessments, we have decided that the main report will not include any further assessment of integration of existing bilateral environmental cooperation into the FTA.

Finally, flanking measures taken to *enhance positive regulatory effects* would consist of substantive, procedural or institutional provisions that aim at making domestic environmental policy more effective. One example could be the establishment of a consultation procedure for cases where one party to the FTA considers that the other party fails to effectively implement domestic environmental policies. Such a procedure can be limited to cases where the failure to implement environmental policies are considered to have adverse trade or investment effects for the party. The main report will provide an overview of such measures and a discussion of their effectiveness based on experience with such measures under other FTAs as a part of the Green Trade Scenario.

Against this background, there is a need to further identify the flanking measures that are candidates for a Sino-Norwegian FTA in light of flanking measures that have been taken in the context of other

⁶ See also pp. 93 ff. of the Feasibility Study.

⁷ See the Norwegian Ministry of the Environment web-site informing about the cooperation (only in Norwegian): http://www.regjeringen.no/nb/dep/md/tema/internasjonalt_miljosamarbeid/miljosamarbeid-med-utviklingsland/miljosamarbeid-med-kina.html?id=426596.

FTAs. A useful starting point is the 'OECD checklist (2008)'. It identifies the following main flanking measures:⁸

1. Key statements on the environment: Such statements include in particular statements concerning the objectives of the FTA as related to the environment. Such statements may be included in the preamble and the main body of the FTA.
2. Environmental cooperation: The final report will address the following issues: What are the objectives of environmental co-operation between the Parties? How can areas of co-operation best be identified and dealt with? How will Parties implement co-operation arrangements under the agreement? How will Parties ensure that co-operation under the FTA complements ongoing co-operation efforts? How will Parties review, assess and update co-operation efforts? How should such co-operation relate to obligations under multilateral environmental agreements? Should such co-operation relate to environmental aspects of natural resource pricing?
3. References to environmental laws and standards: Such references would include provisions on 'not lowering environmental standards' as well as mechanisms to enhance environmental performance by the parties, e.g. mechanisms to enhance the effectiveness of national measures taken to secure prior informed consent in trade of environmentally sensitive goods and services. The final report will address the following issues: How can references to environmental laws and standards contribute to secure a 'level playing field' among economic actors? How to integrate references to environmental laws and standards in initiatives to harmonize technical standards and regulations?
4. Procedural guarantees, enforcement and dispute settlement: There are two basic types of enforcement mechanisms: state-to-state consultations, and mechanisms involving public submissions. The final report will address the following issues: What kind of enforcement mechanisms, if any, would be appropriate for the FTA? Will the FTA allow for public submissions regarding a party's compliance with its own environmental laws? Which mechanisms might be put in place to settle environmental disputes under the FTA? Will experts be involved in environmental dispute settlement?
5. Environmental exceptions and safeguard clauses: The final report will address the following issues: What kind of provisions should be included in the FTA to reflect each party's right to determine the levels of environmental protection within its jurisdiction? Will the FTA include environmental exceptions and safeguard clauses?

As indicated above, the main report will be based on one scenario referred to as the 'Green Trade Scenario'. The discussion above of flanking measures relating to enhancing positive physical and regulatory environmental effects represents the main starting point for the drafting of this scenario (see appendix 3). Factors of relevance when determining the extent to which flanking measures shall be included in the Green Trade Scenario include the following:

1. The respective level of development of Norway and China.
2. There are no common borders between Norway and China, i.e. no border problems arise.
3. Existing and prospective cooperation on implementation of MEAs.
4. Existing environmental cooperation.
5. The general nature of the FTA: in accordance with the Feasibility Study, the FTA will be addressed as a broader cooperation agreement rather than a narrow trade agreement.

⁸ See OECD Joint Working Party on Trade and Environment, Checklist for Negotiators of Environmental Provisions in Regional Trade Agreements, 23 September 2008, OECD Doc. COM/TAD/ENV/JWPTE(2007)35/FINAL at 9-14. See also OECD, Environment and Regional Trade Agreements (2007) at 27.

2.5 Methodologies for assessment of impacts

2.5.1 Assessment of economic and physical environmental impacts

UNEP (2005) points out that ‘trade flows and trade liberalization have at least four types of physical and economic impacts on environment and development: product effects, scale effects, structural effects and direct effects.’ A similar typology is found in other handbooks and in the academic literature.

The categorization follows from the definition of GDP (from the supply side). If e is the environmental variable of interest, x is GDP, β is the share of polluting industries in GDP and α is the pollution intensity of the polluting industries, then by definition

$$e = \alpha\beta x$$

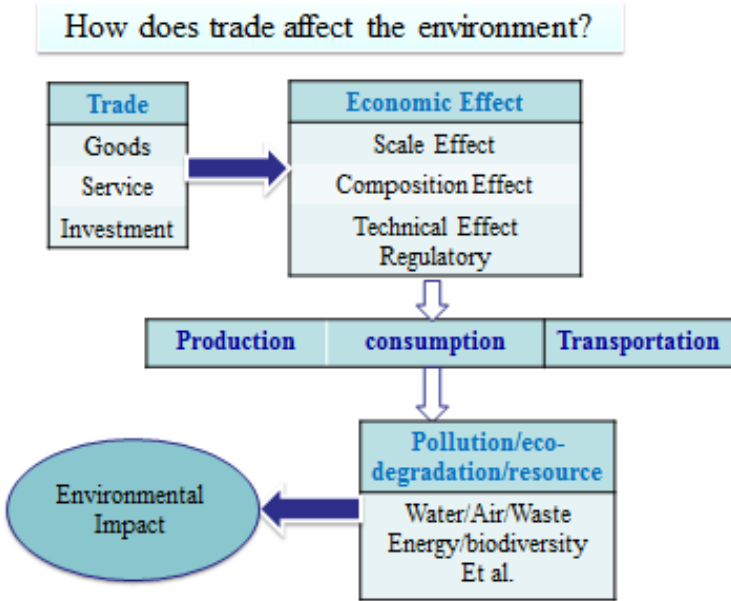
and

$$\hat{e} = \hat{\alpha} + \hat{\beta} + \hat{x}$$

A hat over a variable denotes percentage change. If the changes are not too big, the overall percentage change in an environmental variable of interest is found by adding the product effect $\hat{\alpha}$, the structural (or composition) effect $\hat{\beta}$ and the scale effect \hat{x} . The direct effect mentioned by UNEP is the environmental effect of the physical act of trading, most commonly the impact of transportation of goods and services.

The approach to EAs of FTAs developed at Beijing Normal University (BNU) acknowledges the scale, structure and product effects. In their visualization the product effect is sub-divided into a regulatory and a technical effect, as is done in some other parts of the literature as well. The regulatory effect deals with impacts of the FTA on the regulation of the environmental properties of product. For instance, an FTA may induce a stricter end-of-pipe regulation of some products. The chain of events behind such a development is a topic of the regulatory assessment.

Figure 2.1 Assessment of economic and physical environmental effects



Source: Professor Mao Xianqiang, BNU (2010)

In order to evaluate the environmental impact and manifestations in scale, composition, product and direct effect one needs methods and often models. A model is a description of how variables of

interest influence each other. It usually consists of accounting identities, statements about technological interdependencies, statements about household and industry behavior, and statements about how markets work.

The table below surveys different methods that may be used for environmental assessments of FTAs. It describes activities performed in a method and features of the methods with respect to time, monetary resources and accessibility for the public. Simple and accessible methods are grouped first, complicated but potentially more accurate methods are grouped second.

Table 2.3 Examples of techniques to be used to identify, describe and assess impacts

Technique	EA activity					Key factors			
	Identify impacts	Baseline	Develop alternatives	Assess impacts	Compare alternatives	Information demand	Cost and time use	Accessibility for the public	Handle uncertainties
Review of available data on environment, policy, laws and regulations	X	X				•	\$	⊕	
SWOT analysis	X	X			X	•	\$	⊕	X
Check lists	X					•	\$	⊕	X
Accounting matrix	X		X	X	X	•	\$	⊕	X
Dose-response analysis, decision trees	X	X			X	•	\$	⊕	
Expert judgement	X	X	X	X	X	•	\$	⊕	X
Trend analysis, extrapolating		X		X		•	\$	⊕	X
Life cycle analysis	X	X	X	X	X	••	\$\$	⊕	
CBA		X	X	X	X	••	\$\$	⊕	X
GIS	X	X	X	X	X	••	\$\$	⊕	
Partial equilibrium modelling	X	X	X	X	X	•	\$	⊕	
General equilibrium modelling	X	X	X	X	X	••	\$\$	⊕	X
Vulnerability analysis		X		X	X	••	\$\$	⊕	X
Risk assessment and analysis	X		X	X	X	••	\$\$	⊕	X
Multi-criteria analysis			X	X	X	••	\$\$	⊕	X
Carrying capacity, ecological footprint	X	X		X	X	••	\$\$	⊕	

Source: Based on Naturvårdsverket (2009), UNECE (2007), Therivel (2004)
 • Small to medium data needs, •• large data needs
 \$ low costs and time use, \$\$ high costs and time use
 ⊕ easy to understand for the public, ⊕ relatively easy to understand, ⊕ hard to understand

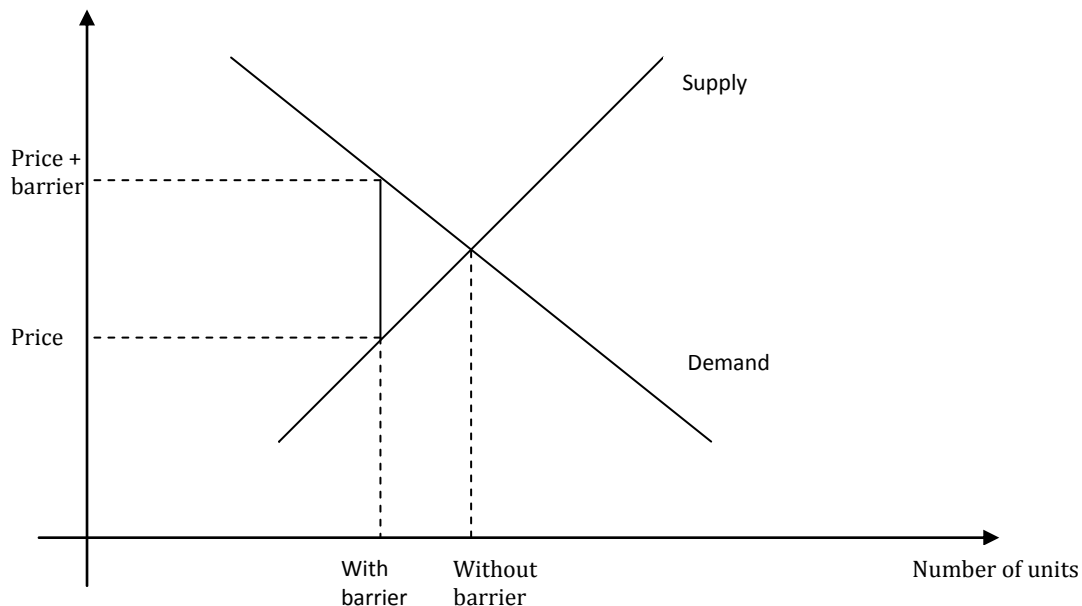
Among these we elect to discuss the partial equilibrium modeling method, the general equilibrium method and the life cycle analysis method. These seem to us as having the greatest potential. Moreover, they are commonly used.

2.5.2 Partial equilibrium method

The partial equilibrium method is used, e.g., by the EU in its study of the Partnership and Cooperation Agreement between China and the EU.⁹

The partial equilibrium model is a model of a market. It may be the market for fish, the market for cement or any other market. A generic representation of a market is presented in the figure below.

Figure 2.2 Generic representation of a market



In order to think of something concrete we may call this market ‘the market for Norwegian salmon in China’. That is of course only an example to aid understanding at this point.

The model assumes that both the supply of Norwegian salmon to China, and the demand for Norwegian salmon in China are functions of the price of salmon. If the price of salmon is very high, China buys little salmon. If it is very low China buys much salmon. This gives a downward sloping demand curve. The situation with regard to supply is the reverse. If the price is low supply is low as well. If the price is high supply is high. This gives an upward sloping supply curve.

The supply and demand curves are of course functions of other things than price, but we suppress those here. This suppression is what gives the analysis its partial character.

Prior to the FTA there is a tariff and/or non-tariff barrier imposed on the sales of Norwegian salmon in China. Since demand is a function of price the barrier reduces sales. Now assume that the FTA eliminates the tariff and/or non-tariff barrier. The partial equilibrium model then predicts that production of salmon in Norway will increase from the ‘with barrier’ to the ‘without barrier’ level.

This increase in salmon rearing and salmon production may have environmental implications in Norway. These could for instance be implications related to the scale of production such as land (or fjord) use, fish health etc.

In terms of the product, structure, scale and direct impacts of trade, the partial equilibrium model captures the scale effect. However, it is a scale effect related to production in the industry under

⁹ The EU partial equilibrium model is called TAPES.

scrutiny, for instance the Norwegian salmon industry. Hence, it indirectly informs about the structure effect as well.

A particular feature of the partial equilibrium model is that it considers *both* the demand and supply response when calculating the size of the scale effect. In general the impact is greater the more demand and supply respond to price. In addition it is of course greater the greater is the trade barrier reduction. A limiting case is to say that demand is extremely flexible with respect to price. This would be the case, e.g., if Chinese consumers have many close substitutes to choose from (e.g., domestic salmon, Scottish salmon, Chilean salmon). If demand is extremely flexible it will on the limit become horizontal in the figure and the change in quantity will just depend on the supply response.

Another limiting case is to say that despite the reasoning above demand is independent of price. This could be the case if one believes Norwegian salmon is a luxury item that is sold to restaurants and to consumers who don't worry about price. Perhaps a high price is a sign of status and a motivation for some to purchase *more* Norwegian salmon. Others may have the ordinary price response, but on aggregate demand is independent of price.

If demand is independent of price it is vertical in the figure and it follows that a lower tariff will not change demand for Norwegian salmon in China. Hence, production will not change and there will be no impacts on Norwegian fjords and fish health.

In general it is an important task of the partial equilibrium model to determine the price-response of supply and demand curves. The price response is often denoted in price elasticities: the percentage change in quantity in response to a per cent change in price.

2.5.3 General equilibrium model

The general equilibrium model basically consists of several markets that are linked. For instance, the household demand for Norwegian salmon in principle depends on the prices of all consumer goods and on income, in addition to the price of salmon itself. On the other hand the price of salmon in principle enters as an explanatory factor in all consumer markets. In this way a lower tariff on Norwegian salmon will increase demand for salmon and products associated with salmon (e.g. white wine) but it will reduce demand for other products (e.g. Chilean salmon, red meat).

General equilibrium models also tie markets together through labour supply and the capital market. For instance, increased demand for one good may encourage higher production of that good. This may bid labour away from the production of other goods.

General equilibrium models include accounting identities. The input-output matrix is perhaps the most important of these. It posits where the inputs to producing outputs come from in the economy (and where the inputs to producing inputs come from...). Through the input-output matrix an original stimulus such as an FTA is spread throughout the economy.

Another accounting identity of importance for EA of FTAs is the current account. When performing an EA using a general equilibrium model the analyst must consider whether the act of the FTA will change the balance of the current account for any of the countries. Most analysts agree that in practice this balance may change some in the short run, but in the long run surpluses on the current account is a form of saving, and deficits a form of loan that countries will balance out. Hence the long run account is not changed. This also means that any additional surplus induced by the FTA is likely to be temporary and offset by an additional deficit later on. For practical purposes it is a reasonable modeling choice to assume that not even the short run current accounts in the two countries will change from the FTA.

The linkage between markets means that general equilibrium models include the product, structure and scale effects mentioned above. If bilateral trade is modeled (two-country or regional model) it will also include the direct effect. However, the level of attention to any one market is usually lower

in a general equilibrium model than in partial models and the treatment of the product effect, in particular, is cruder. In other words, comprehensiveness is gained at the expense of detail.

General equilibrium models are widely used in assessments of FTAs. For instance, the FTA between China and New Zealand was studied using a model called APG-cubed, (see Joint Study, 2004). A possible FTA between China, Korea and Japan was studied using a CGE model based on the GTAP database (see Liu et al., 2010). The PCA between China and the EU was studied using the GLOBE regional CGE model (see EU, 2008).

2.5.4 Life cycle analysis

While the partial equilibrium and general equilibrium assessment models emphasize the role of markets, the objective of a life cycle analysis is to map environmental burdens of a product from ‘the cradle to the grave’. The analysis does so by tracking the production of inputs to production; and production of the inputs to those inputs, and so on all the way back to the ‘cradle’ of products, e.g. in iron mines, coal mines and agricultural land.

Sometimes the life cycle analysis also includes linkages on the demand side, e.g. the environmental implications of any reduction in demand for Scottish salmon if demand for Norwegian salmon grows.

By covering the impact of a product through the life cycle, the analysis is similar to an analysis of ecological footprint and ecological space.

A life cycle analysis typically accounts for a broad range of environmental impacts in terms of, e.g. biodiversity and pollution of trace chemicals. Sometimes the analysis attempts to merge several or all impacts into an overall indicator using an index of the relative importance of each impact.

Another noteworthy feature of the life cycle analysis is that it rarely stops the investigation of environmental implications at national borders. For instance, an FTA that increases production of Norwegian salmon would in the next instance increase demand for fodder for the salmon. The fodder is mostly produced by marine products collected by an international fishing fleet. This leads the investigator to assess the demand for diesel oil in Spanish fishing vessels, etc. In the final life cycle analysis the nationality of the various environmental impacts is usually suppressed.

The life cycle analysis usually assumes that every increase in demand is accommodated by an increase in supply. In the language of supply and demand curves this assumption corresponds to the case of a horizontal supply curve.

2.5.5 Combining methods

It appears from the description of the methods that given the necessary time and resources they may fruitfully be combined. For instance, the partial equilibrium method has a strong point in depicting the quantity reactions to a change in tariffs or non-tariff barriers, but it does not, as a rule, pursue the further environmental implications of this change into the next market, and the next, and the next... The life cycle analysis tries to do that. Hence a fruitful combination could be to allow a partial equilibrium model to describe the quantity impact of a given change imposed by the FTA, and use life cycle analysis to pursue the environmental implications of that quantity impact backwards to the ‘cradle’ and forward to the ‘grave’ if consumption and waste is an issue.

As another example, the general equilibrium model may be combined with the partial equilibrium model. For instance, while the general equilibrium model pictures the whole economy it may lack the details to model the complex ways the FTA may influence a particular market. The partial equilibrium model may provide the required details. At the same time, results from the general equilibrium model may provide a consistency check on the partial equilibrium results.

To complete the set of combinations the general equilibrium model and the life cycle analysis may be combined. For instance, the input-output core of the general equilibrium model may be of great help

to the life cycle analysis in its endeavor to track products back to their cradle. The input-output analysis has a similar purpose, and through its basis in national accounts it has a wealth of consistent data that makes for accurate tracking.

2.5.6 Implications of different methods

The choice of method to use for any particular analysis is far from innocuous. Econ Pöyry (2008) shows by example the implications of a) including in the analysis only the impact that arises from a partial equilibrium model, b) including the life cycle impact and c) including the general equilibrium impact (see table 2.4 below). The partial equilibrium impact in the example is an increase of 22 000 tons of CO₂ per billion Yuan additional export of textile & apparel products. The life cycle impact, including all repercussions in production throughout the input-output chain, is 207 000 tons or ten times as much. But the general equilibrium impact, considering repercussions in all markets, is only 7 000 tons.

Table 2.4 Impact on Chinese CO₂ emissions of increasing textile & apparel exports from China to Norway

Pollutant	Partial equilibrium impact	Life cycle impact	General equilibrium impact
CO ₂	22 000	207 000	7 000

Source: ECON (2008). Unit is ton per billion Yuan. Experiment shows impact of an exogenous increase in exports.

Why is the general equilibrium impact so much smaller than in particular the life cycle impact? The reason is that while the life cycle analysis implicitly assumes that all supply curves are horizontal, the general equilibrium model assumes that in the markets for labour and capital the short run supply curve is vertical. These are crucial markets since they give the economy its dimensions. It is possible to lure resources over to producing for instance inputs for textile and apparel, but then less will be produced of other goods and services. Hence, there exists a ‘debit’ entry that more or less compensates the ‘credit’ entry introduced to the environmental account when exports of textile and apparel expands. This kind of thinking is not present in the life cycle analysis, which implicitly assumes that everything that is demanded will be produced using idle resources.

2.5.7 Regulatory assessment

There has been limited focus on assessment of regulatory effects in guidelines, assessment reports and the literature. One reason may be that the assessment of direct regulatory effects of FTAs is a core element of negotiation processes. Another reason may be that there are no agreed methodologies for assessing regulatory effects. This is in part because it is often hard to predict with a high degree of certainty the outcome of processes of legal interpretation, but also because the assessments will generally be carried out before the final wording of the FTAs has been established.

OECD (1999:6-7) describes two distinct methodologies for regulatory assessment; one based on the methods used in carrying out strategic environmental assessments, which includes a pre-negotiation phase, the assessment itself, and a follow-up phase, and another based on an FTA rule-by-rule approach, which examines the constraints on environmental policy making posed by the FTA. Given that Norway can be expected to ensure a thorough regulatory assessment during the negotiation phase through processes ensuring information exchange and coordination among relevant authorities, and that Norway has been significantly involved in the general discussion in international fora such as the WTO and the OECD of the relationship between FTAs, investment treaties and the environment, we regard the former methodology as the most appropriate starting point for the purpose of this assessment.

Our mandate implies that we shall assess consequences for the exercise of public authority in a broad sense, e.g. including public involvement through voluntary agreements and economic instruments. A central objective of environmental measures is to ensure internalization of environmental costs among market actors. The polluter pays principle is one important principle for Norwegian environmental policy.

There will be a main focus on ‘negative’ regulatory effects in the sense that the FTA may restrict the use of environmental measures. Positive regulatory effects will be addressed in the context of flanking measures, as indicated above. One factor that is particularly important for the extent of regulatory effects of the FTA is the procedures and mechanisms to be established under the FTA for ensuring implementation of, compliance with and enforcement of the FTA. On the one hand, if such mechanisms are ‘non-confrontational’ and state based, in the sense that only the states can bring cases onto the agenda of relevant organs, the regulatory impact of the FTA will most likely be insignificant. On the other hand, if such mechanisms include tribunals that may decide cases brought by private parties, the regulatory impact of the FTA will most likely be significant. The exogenous scenarios take as their starting point the practice of China and Norway under similar FTAs. Details of the scenarios are set out in appendices 2 and 3.

The regulatory assessment will be based on a prediction of how the provisions of a future FTA will be interpreted and applied. This part of the regulatory assessment will be carried out in cooperation with the Chinese assessment team. The second element is the assessment of the effects of the relevant provisions of the FTA for domestic environmental policy. Due to the significant differences between Norwegian and Chinese environmental policy, this part of the assessment will be carried out separately for the two countries.

The prediction of how the provisions of a future FTA will be interpreted and applied will be based on methodology of law, more specifically on methodology of international law as applied in the context of international trade law and bilateral trade agreements. One important issue is the extent to which the countries can rely on tacit mutual agreement or implicit intentions when questions concerning interpretation arise. While public international law in general and international trade law in particular favor an objective approach to treaty interpretation, in the sense that tacit agreement or implicit intentions will be of limited significance, it can be argued in favor of a more subjective approach to treaty interpretation in cases of bilateral treaties. In order to avoid underestimating potential negative regulatory effects, the main report will be based on an objective approach to treaty interpretation and on the assumption that any tacit mutual agreement and implicit intentions of the parties will not be accepted as decisive interpretive arguments.

Another important issue is the extent to which case law related to the WTO, regional and bilateral free trade agreements and investment agreements should be taken into account when assessing the effects of provisions under the FTA. So far, there seems to be broad agreement that such case law is relevant and may be decisive for interpretation of corresponding provisions in bilateral FTAs. The main report will be based on the assumption that the provisions of the FTA will be interpreted and applied in accordance with the main trends in case law of the WTO and *ad hoc* international investment tribunals.

We distinguish two main groups of environmental policy measures: existing policy measures and future policy measures. The assessment of the regulatory effects of the FTA for *existing* environmental policy measures will address direct effects, i.e. analyze whether certain policy measures or decisions implementing such measures arguably could be in conflict with provisions of the FTA. In addition, the assessment will address indirect and long-term effects for such policy measures, i.e. effects that are associated with initiatives or pressure to weaken existing environmental policy. The latter assessment will be based on the following assumptions:

1. The FTA will provide incentives for Norway and China to coordinate their environmental policies. This means that long term regulatory effects are likely to occur where the

differences between Norwegian and Chinese environmental policy are the most significant.

2. The FTA will lead to increased competition in markets that previously were partially sheltered from imports. Such increased competition may lead to call for the reduction of public intervention that may negatively affect the competitiveness of domestic market actors, including some environmental policy measures. This means that long term regulatory effects could occur within sectors where the FTA will lead to increased competition among Norwegian and Chinese market actors.
3. The FTA will offer Chinese investors mechanisms to challenge environmental policies that reduce or limit the income of their investments. This means that long term regulatory effects are likely to occur within sectors where we expect increased Chinese investment.

Against this background, the main report will identify sectors that are likely to be vulnerable to long-term regulatory effects, and possible measures to avoid or offset such effects.

The assessment of negative effects on *future* environmental policy measures must be based on scenario(s) concerning future environmental policies. Such scenario(s) can be established on the basis of the following factors:

1. Existing reform plans in the form of policy documents.
2. International legal and political commitments to reform existing policies.
3. The need for environmental policy reform based on domestic and international reports on the state of the environment and the costs and effectiveness of existing policy measures.
4. The need to retain flexibility for development of future policies – the extent of such needs depends on, *inter alia*, the cost of existing measures, and uncertainty of environmental and economic impacts as well as the effectiveness of existing measures.

The main report will set out a preliminary scenario for future reform of Norwegian environmental policy. It will consider whether and how the FTA is likely to negatively affect reform efforts (often referred to as ‘chilling effect’), and consider possible measures to offset such impacts.

3. Review of ‘Preliminary guideline of EIA of trade policy’

Having reviewed the approach to environmental assessments of trade policy in the international literature, it is of interest to review the approach that is emerging in China. A study team at Beijing Normal University led by professor Mao Xianqiang and professor Hu Tao has developed a *Preliminary guideline of EIA of trade policy*. This section reviews the guideline for its modalities and methodologies.¹⁰

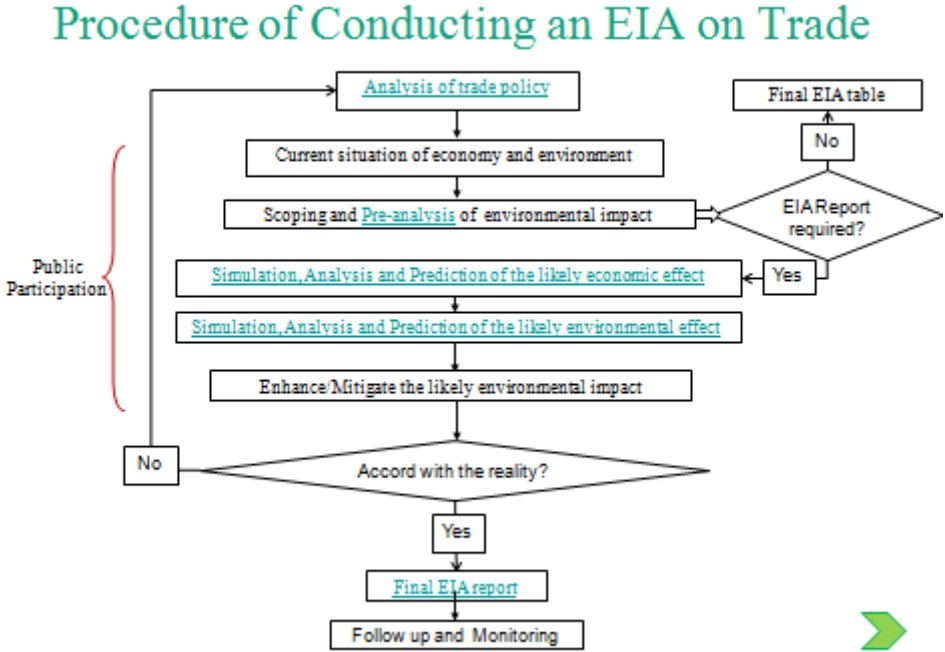
3.1 Modalities in the Preliminary guideline of EIA of trade policy

The guideline suggests the following phases in an EIA of trade policy (see figure below)

- Analysis of trade policy
- Current situation of economy and environment
- Scoping and pre-analysis of environmental impact
- Simulation, analysis and prediction of the likely economic effect
- Simulation, analysis and prediction of the likely environmental effect
- Enhance/mitigate the likely environmental impact
- Reality check with public participation
- Final EIA report
- Follow up and monitoring

¹⁰ The review is based on an English-language ppt-presentation of the guideline, Mao et al (2010).

Figure 3.1 Steps in an EA according to the Preliminary guideline on EIA of trade policy



The step ‘Analysis of trade policy’ introduces the content of the trade policy and discusses whether or not the objectives are in accordance with other policies. It also discusses issues of implementation and whether or not the implementation of trade policy influences on actual design of the policy.

This step is followed by the ‘Current situation’, which analyses and evaluates the current environmental situation as well as tendencies and trends.

The step ‘Scoping and pre-analysis of environmental impact’ is in part intended to judge whether a full EIA report is necessary, or whether a more limited EIA review in the form of a table is sufficient. The table-format is integral to the Chinese system for project EIAs. More than 180 000 EIAs are carried out annually, and the majority has the simple table format. The Scoping and pre-analysis stage also includes a discussion of the environmental objective and evaluation standards. It develops an environmental impact matrix, identifies the significance of environmental objectives and classifies environmental impacts according to the objectives.

The step thereafter is ‘Simulation, analysis and prediction of the likely economic effects’. This step and the next, ‘Simulation, analysis and prediction of the likely environmental effects’, together make up the core of the assessment. Methodologies for performing these steps are discussed below. The step ‘Simulation, analysis and prediction of the likely economic effects’ discusses the influence of liberalization, tariff and non-tariff barriers on significant economic sectors, on GDP, sales and employment, and on imports and exports. The step ‘Simulation, analysis and prediction of environmental effects’ is based on findings from the step on economic effects. It includes impacts on natural resources, on energy, on pollution and emissions, and current as well as cumulative effects. It also includes a risk analysis. Finally it discusses government regulation and protection of the environment.

The step ‘Simulation, analysis and prediction of environmental effects’ prepares for the next, which is to ‘Enhance/mitigate the likely environmental impact’. This step concludes the first iteration of the EIA.

Results from the first iteration are then presented to the public in order to obtain participation. Suggestions and comments from the public are taken into account and the analysis is modified until convincing results are reached. Then the full EIA report is completed. The full EIA report includes a program for monitoring and follow-up.

3.2 Methodologies in the Preliminary guideline of EIA of trade policy

The guideline mentions a set of methodologies that may be used to assess impacts of trade policy, see figure 3.2. In an actual application the team uses the CGE model and a transmission matrix from economic to environmental entities (Liu et al., 2010). Verbal reasoning is also used, in particular for so-called direct effects. See below.

Figure 3.2 Methodologies for assessment of environmental impacts according to the Preliminary Guideline

- Annex 2 Recommended Methods and Models
 - Computable general equilibrium model (CGE)
 - Partial equilibrium model
 - Energy-Economy-Environment model (3E model)
 - Cost-benefit analysis (CBA)
 - Life cycle analysis (LCA)
 - Risk analysis
 - Econometric methodology
 - System Dynamic methodology (SD)
 - Input-output methodology (IO)
 - Behavior matrix methodology

3.3 The guideline at work: The EA of the CJK-FTA

To illustrate the content of the guideline further we review the EA of a possible free trade agreement between China, Japan and Korea, see Mao et al (2010) and Liu et al (2010). This analysis is divided into eight steps. Taken together the steps cover the modalities of the guideline, but they are grouped slightly differently (table 3.1 below).

Table 3.1 Steps in an EA of trade policy according to the guideline and in the assessment of a CJK-FTA

The guideline	Environmental assessment of CJK-FTA
Analysis of trade policy	Preliminary analysis
Current situation of economy and environment	Analysis of CJK-FTA
Scoping and pre-analysis of environmental impact	Analysis of current regional environmental issues
Simulation, analysis and prediction of the likely economic effect	Economic effects
Simulation, analysis and prediction of the likely environmental effect	Environmental effects
Enhance/mitigate the likely environmental impact	Recommended suggestions and mitigation countermeasures
Public participation	Public participation
Final EIA report	Summary
Follow up and monitoring	Not available

The EA starts with a ‘Preliminary analysis’, which covers issues like the background of the CJK-FTA, the current environmental policy of China, a matrix of environmental effects and a statement of methodology. This step is like an introduction, but it contains elements from the step ‘Scoping and pre-analysis’ of the guideline.

The second step of the EA is an ‘Analysis of the CJK-FTA’ including economic and environmental objectives of the CJK-FTA and the likely environmental challenge of a CJK-FTA to China. This step includes elements from the ‘Scoping and pre-analysis’ stage of the guideline. The step in the guideline called ‘Trade policy analysis’ is also relevant here.

The third step in the EA is an ‘Analysis of current regional environmental issues’. This step discusses the macro-economic situation in the three countries, the current environmental policy of each country, the status and tendency of environmental issues in China including sensitive environmental issues. It concludes with a preliminary assessment of main effects of a CJK-FTA on China’s sectors. This step mainly corresponds to the step in the Guideline called ‘Current situation of economy and environment’, but it also contains elements of the ‘Scoping’ step and the ‘Analysis of trade policy’.

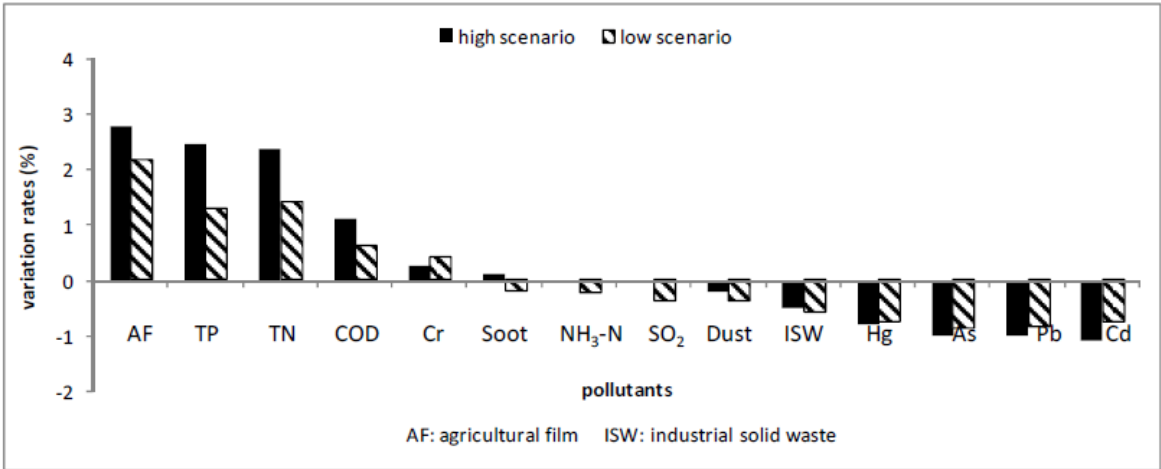
The fourth step in the EA is the ‘Assessment of economic effects of the FTA’. A CGE model is used as the main methodology. The GTAP database is the main source of data for the analysis. Two policy scenarios and a reference scenario are worked out. The two policy scenarios differ in the degree of trade liberalization among the three countries.

Step five ‘Environmental effects’ uses a ‘chain reaction assessment method’ to account for indirect environmental effects of the scale, composition and product varieties. Verbal reasoning is used to illuminate direct environmental effects. The chain reaction assessment method is based on a ‘transmission matrix’ from economic indicators to environmental ones. Impacts on 15 pollutants (including CO₂) are shown.

Step six, seven and eight in the EA concern ‘Recommended suggestions and mitigation countermeasures’, ‘Public participation’ and a ‘Summary’.

Key results from the analysis in terms of impacts of the policy scenarios (high/low liberalization) are shown in figure 3.3. Impacts in China range from an increase of 2-3 per cent in the case of agricultural film and total particles, to a decrease of roughly 1 per cent in the case of lead (Pb) and Cadmium (Cd).

Figure 3.3 Impacts of the policy scenarios



4. Recommendations

4.1 Modalities

The modalities or steps for conducting an EA are in our view similar in guidance documents from the EU, OECD, etc., and the ‘Preliminary guideline of EIA of trade policy’ from Beijing Normal University (Mao et al. 2010). Compare table 4.1.

Table 4.1 Steps in an environmental assessment of trade policy. International guidance documents and the Draft guideline to EIA of trade policy

EU, OECD etc	EIA of trade policy
Screening	Analysis of trade policy
Scoping	Current situation of economy and environment Scoping and pre-analysis of environmental impact
Assessment	Simulation, analysis and prediction of the likely economic effect Simulation, analysis and prediction of the likely environmental effect
Flanking measures	Enhance/mitigate the environmental impact
Public participation	Public participation
Monitoring	Monitoring

It is of course reassuring that the modalities are similar. It indicates that a common best practice approach is in fact in use globally. In our analysis we will use the terms screening, scoping, assessment and flanking measures, while acknowledging that other terms may be used to cover a similar content.

4.2 Scenarios

We find it useful to develop one Free Trade Scenario and one Green Trade Scenario in addition to the Baseline Scenario. Proposals for elements of such scenarios are set out in appendices 1 to 3.

4.3 Screening and scoping

Screening will be based on preliminary exogenous scenario input as set out in appendices 2 and 3 below. The aim of the screening process is to distinguish between sectors and activities that are significant and insignificant from an environmental impact perspective. A preliminary proposal for screening is set out in appendix 4 below.

The scoping will be based on the outcome of the screening. The objective of the scoping process is to define an assessment program, including by identifying the sectors and issues to be assessed and the issues to be addressed in the assessment. A preliminary proposal for scoping is set out in appendix 5 below.

4.4 Methodologies

Physical effects: Both the guideline and the international literature find it useful to employ the terms ‘scale’, ‘composition’ and ‘product effect’, as well as ‘direct effect’. Further, a comparison of ‘long-lists’ of methodologies from the international guidance literature and the BNU guideline indicates that the menus of methodologies are similar. In our review of the international evidence we have emphasized the partial equilibrium method, the general equilibrium method and the life cycle method. The BNU guideline and the assessment of the CJK-FTA make use of the general equilibrium method in combination with verbal reasoning about direct effects of trade.

Based on this evidence our decision for the main phase of the project is to employ the partial equilibrium method in combination with life cycle methodology to assess scale, composition and product effects. According to the mandate, environmental impacts in Norway and China should be emphasized, with a main focus on effects in Norway for the Norwegian team, and the life cycle methodology will be applied to meet this objective. To assess direct effects we will use verbal reasoning.

It may be asked why we are not in addition making use of general equilibrium methodology. The general equilibrium methodology is, after all, a common methodological denominator in almost all assessments that have been scrutinized for this project.

The reason why we are not suggesting a general equilibrium model is simply that we for this project are unsure that the benefits of such a model would exceed the cost. The cost is significant both in terms of time and in actual monetary costs since such a model is not available at our institutions, FNI and Vista Analysis. The benefits, on the other hand, are comparatively low since quite a few assessments have been carried out already. That includes an assessment of CO₂–emissions in China flowing from increased exports of textiles to Norway (ECON, 2008). The previous assessments allow our analysis to be informed by general equilibrium reasoning and model results from such reasoning – without performing our independent general equilibrium modeling exercise.

Regulatory effects: There has been limited focus on assessment of regulatory effects in literature, guidelines and past assessments. The first element of the regulatory assessment will be based on scenarios involving negotiation results regarding the expected substantive obligations of the FTA and the implementation, compliance and enforcement mechanisms to be established under the FTA. This part of the assessment will use interpretative methods as developed in general public international law.

The second basic element of the regulatory assessment will be the existing and future development of domestic environmental policy. Our definition of environmental policy will include measures taken by public authorities as well as measures taken by private parties with some degree of involvement of public authorities. This element will be based on a review of existing environmental policy measures, as well as a scenario for the future development of environmental policy. This scenario will be developed on the basis of relevant plans as well as documented needs.

Appendix 1 Inputs to Baseline Scenario

General issues

This scenario and the scenarios presented in appendices 2 and 3 do not cover environmental policy (see section 2.4 above). Environmental policy will be included in the Main Report.

The baseline is defined by the existing legal commitments of the negotiating partners; in the context of these negotiations the commitments that Norway and China have undertaken in the WTO as well as bilateral agreements in force between the parties. This starting point is adjusted based on relevant unilateral decisions of the negotiating parties to liberalize, in particular the application of lower tariffs than those set out in the WTO Schedule of Concessions.

Trade in goods

The baseline scenario assumes that the current MFN¹¹ applied tariff rates as detailed in WTO (2010) will continue into the future. Key facets of the current tariff rates are:

Import tariffs Norway

Norwegian tariffs on goods are concentrated on a subset of agricultural goods. According to WTO (2010) the simple MFN average of import duties on agricultural goods is 43.2 percent. About half of the agricultural import volume is toll-free (Table 2). For non-agricultural goods the average tariff rate is only 0.5 percent and 97 percent is toll-free. Import duties are unimportant for tax revenue in Norway. Only 0.3 percent of tax revenue is from import duties.

Among agricultural products animal products have the highest MFN duties at almost 140 percent on average. Among animal products some products have very high tariff rates such as live ducks weighing less than 185 grams (555 percent) and frozen boneless meat of bovine¹² animals (119 NOK/kg). The tariff on dairy products is also high at 64 percent on average but may be less well suited for imports from far away countries such as China. Physical conditions for imports may be better for cereals and preparations, which have an average MFN applied duty of 52 percent (max 494 percent). Rice has a tariff of 1.74 NOK/kg, but half of the tariff lines in this subheading are toll-free.

China has a strong industry in oilseed fats and oils. The Norwegian average MFN applied duty on such items is 31 percent (max 295 percent).

Among non-agricultural goods clothing is almost the only category with a significant tariff. Most clothing has a tariff of 10.7 percent. The tariff is confined to processed products - textiles have an average tariff of 0.5 percent.

Table 2 Average applied MFN import tariffs per main category

Norway		China	
Agricultural goods	Non-agricultural goods	Agricultural goods	Non-agricultural goods
43.2	0.5	15.7	8.7

Import tariffs China

Norwegian export faces an average import tariff to China of 9.0 percent (WTO, 2010). Twenty percent of export is toll-free.

¹¹ MFN=most favoured nation

¹² Bovine=cattle

China has an average MFN applied tariff on agricultural goods of almost 16 percent. Only 0.7 percent of its import is toll-free. The country has an average tariff on non-agricultural goods of almost 9 percent. Around half of non-agricultural import is toll free. Three percent of Chinese tax revenue comes from import duties.

The average tariff on agricultural goods is fairly evenly distributed among subcategories and China does not impose really high tariffs on any good. The average import duty on fish is lower than the average for (other) agricultural goods, at 10.7 percent.

The import duties on the different categories of fish are of interest to Norway. Frozen Atlantic salmon faces an import duty of 10 percent. Fresh or chilled salmonidae (excl. species of trout) faces 12 percent, prepared and preserved salmon also 12 percent. Frozen mackerel, cod and haddock are also important to Norway (Ministry of trade and industry, 2008a). These face import duties of 10 percent except haddock, which faces 12 percent.

Among non-agricultural goods the average MFN tariffs are also quite even across goods. Non-electrical machinery, which is an important category for Norway, has an average tariff of 7.8 percent with a maximum of 35 and a toll-free rate of 9 percent. Transport equipment has a tariff of 11.5 percent.

Some papers have argued that the effective tariff rates in China are lower than the nominal tariff rates (Fisman and Wei, 2004; Vennemo et al., 2008).

Non-tariff barriers (NTBs) Norway and China

The World Economic Forum publishes the Global Enabling Trade Report (WEF, 2010). It includes a system of indexes where countries are scored on several parameters including non-tariff barriers (NTBs). The score on the non-tariff barrier indicator is explained as follows:

This index is constructed as the average of two NTM-related variables. The variables included are the percentage of trade affected by non-tariff measures (NTMs) and the average number of notifications for products affected by NTMs, for products with imports larger than 0. Politically motivated NTMs, such as embargos, have been excluded.

In 2010 China obtains a score for non-tariff barriers of almost 24, which puts it at no. 34 in the world (34th best). Norway obtains a score of almost 4 and is no. 9 in the world.

UNCTAD is said to maintain a database for NTBs as part of its TRAINS database. We accessed TRAINS and we are not able to find information on NTBs as far as China and Norway are concerned.

A document from the EU DG Trade (EU, 2006) argues that EU exporters are facing NTBs in China along the following dimensions:

- Standards: 'Many of the Chinese standards such as the CCC standard require certification by the Chinese authorities before a product can be put on the Chinese market. Important information has to be submitted and the factory has often to be inspected at the expense of the exporter. This is a lengthy and costly procedure ... the delays can also provide counterfeiters with a fantastic period of opportunity to put the fakes on the Chinese market even before the EU real products can be sold.'
- Sanitary and phytosanitary obstacles: 'For example, EU exports of one (agricultural) product can only take place after a protocol is concluded between the member state wishing to export, and China. These protocols take years to negotiate, require the provision of burdensome information and are very expensive for the operators who have to pay for the inspection visits'

The document also complains that 'the application of laws is often not uniform and regional variations in customs procedures have a negative impact on trade.' Non-tariff barriers add to the

generalized cost of transferring goods across borders, and in principle they may be turned into tariff equivalent *effective rates of protection*.¹³ See Fæhn (2002) for an explanation of the theory. Fæhn estimates effective rates of protection for the Norwegian economy in 1989, 1991 and 1994. This was prior to Norway's WTO accession, in which import quotas were turned into tariff equivalents. For instance, in 1994 the tariffs on agricultural goods were zero and domestic production was protected by quotas. Hence these estimates do not inform us about the tariff equivalents of the non-tariff barriers today. The pattern of protection registered by Fæhn is similar to that of WTO (2010): extensive protection of agricultural goods and almost free trade otherwise.

We have so far not come across estimates of effective rates of protection in China. Like in Norway the system of tariffs and quotas has changed markedly in China in recent years.

The Agreement between Norway and China on economic, industrial and technical cooperation, signed 25-09-1980 in Beijing, as well as the Long Term Trade Agreement between the Government of the Kingdom of Norway and the Government of the People's Republic of China, signed 15-06-1982 in Oslo, established a Mixed Commission which, inter alia, is charged with addressing NTBs. The only bilateral agreement between Norway and China concerning NTBs that we are aware of is the Protocol between Norway and China on certification and inspection procedures regarding fertilizers, signed 30-06-2000 in Oslo. The Feasibility Study (p. 82) points out that Norway and China has had close cooperation on sanitary and phytosanitary issues, and that they have negotiated a MoU on sanitary and phytosanitary measures. As far as we are aware the MoU has not been finalized.

Trade in services

Trade in services between Norway and China is regulated by the GATS, including the respective Schedules of specific commitments of Norway (WTO doc. GATS/SC/66/) and China (WTO doc. GATS/SC/135). Our focus in the following is on the specific commitments as set out in the Schedules. Such commitments distinguish between horizontal commitments and specific commitments. There are further distinctions according to the obligations of market access (article XVI of GATS) and national treatment (article XVII of GATS).

Horizontal commitments

According to the Norwegian Schedule, there are for all sectors general restrictions on modes 3 and 4 of supply of services (commercial presence and presence of natural persons) in the form of general authorization procedures for acquisition and a reservation concerning extension of beneficial treatment of branches and agencies of companies established within the European Economic Area. There are general exemptions regarding extension of subsidies to foreign services or service providers. Restrictions apply to the presence of natural persons.

According to the Chinese Schedule, mode 3 of supply is subject to some general market access restrictions, involving in particular establishment of equity joint ventures, branches and representative offices, as well as the ownership and rental of land. Mode 4 of supply (presence of natural persons) is in general unbound, except for some categories of managers, executives, specialists and services salespersons. All the existing subsidies to domestic services suppliers in the sectors of audio-visual, aviation and medical services are unbound with regard to national treatment and mode 3 of supply.

Specific commitments

Norway has in general undertaken extensive commitments in most sectors. The main exception, in addition to the horizontal reservations mentioned above, is restrictions on mode 4 of supply, where Norway has noted that this mode remains unbound for almost all sectors. In addition, there are

¹³ Usually, estimates of effective rates of protection include the explicit tariffs as well.

some sectors of interest to the environment where Norway has not undertaken commitments in its Schedule. These include the following:

- 1) Research and development services on natural sciences as well as interdisciplinary research and development services
- 2) Real estate services involving own or leased property
- 3) Services incidental to mining
- 4) Services incidental to energy distribution
- 5) Postal services
- 6) Health related and social services
- 7) Maritime transport services
- 8) Internal waterways transport
- 9) Pipeline transport

In addition, there are some restrictions applying to environmental services, including a horizontal restriction setting out that commitments in this sector 'do not include public service functions whether owned and operated or contracted out by local, regional or central government'. Moreover, mode 1 of supply (cross-border supply) remains unbound for both market access and national treatment within all sub-sectors of environmental services. Finally, there are specific reservations concerning market access for mode 3 of supply (commercial presence) for refuse disposal services and cleaning services of exhaust gases regarding the existence of monopoly situations. Norway has significant potential for undertaking further commitments in the transportation sector.

China has in general undertaken fewer commitments than Norway in most sectors. China has extensive reservations concerning mode 3 of supply (commercial presence) in particular requirements concerning joint ventures. The Feasibility Study states (p. 51) that: 'By the end of 2006, China has opened more than 100 services sectors, accounting for 62.5% of the WTO's Service Sectoral Classification List (W/120). Considering China's status as a developing economy, the services market of China is quite liberalised.' As is indicated by this statement, many of these reservations have been phased out over time, and we may thus assume that they have been eliminated.

There are some sectors of interest to the environment where China has not undertaken commitments in its Schedule. These include the following:

- 1) Veterinary services
- 2) Research and development services (all)
- 3) Market research and public opinion polling services
- 4) Services related to management consulting
- 5) Services incidental to mining
- 6) Advisory and consulting services related to manufacturing
- 7) Services incidental to energy distribution

- 8) Investigation and security activities
- 9) Building-cleaning services
- 10) Postal services
- 11) Health related and social services
- 12) Pipeline transport

In addition, there are some restrictions that are of particular interest in an environmental context. These include the following:

- 1) Architectural services, engineering services, integrated engineering services, urban planning services: Mode 1 (cross-border supply) – co-operation with Chinese professional organisations is required (except scheme design).
- 2) Related scientific and technical consulting services – focusing on on- and offshore petroleum exploitation: Mode 3 (commercial presence) – Only in the form of petroleum exploitation in cooperation with Chinese partners.
- 3) Construction and related services – same restrictions apply to the whole sector: Mode 3 (commercial presence): Limited to projects with specified rates of foreign funding.
- 4) Distribution services: Mode 1 (cross-border supply): unbound for several commission agents' services, wholesale trade services and retailing services.
- 5) Environmental services – same restrictions apply to the whole sector: Mode 1 (cross-border supply, market access): unbound except for environmental consultation services. Mode 3 (commercial presence): Foreign service suppliers engaged in environmental services are permitted to provide services only in the form of joint ventures, with foreign majority ownership permitted.
- 6) International maritime transport services – except cabotage: Mode 3 (commercial presence): Chinese flag requires joint venture not exceeding 49 percent foreign investment and the chairman of board of directors and the general manager of the joint venture shall be appointed by the Chinese side. Other forms of commercial presence for the supply of such services are unbound. Auxiliary services require joint ventures allowing in most cases foreign majority ownership. Norway and China have signed a bilateral agreement on marine transportation, see below.
- 7) Internal waterways transport services – limited to freight transport: Mode 1 (cross-border supply): Limited to international shipping in ports open to foreign vessels. Mode 3 (commercial presence): unbound.
- 8) Air transport services – limited to repair and maintenance services and computer reservation systems: Restrictions apply to mode 1 and mode 3 of supply.

To our knowledge, Norway and China have entered into one bilateral agreement related to services: the Agreement on Maritime Transport between Norway and China, signed 04-12-2003 in Shanghai. Article 5 provides for national treatment regarding access to ports and other facilities, but is limited to ports that are open for the entry of foreign vessels. Article 8 offers rights of non-discrimination regarding multimodal transport services. Article 9 extends the right to commercial presence and article 10 extends rights related to key personnel beyond what follows from the GATS Schedules.

Articles 14-20 contain rules concerning personnel on board ships, including their rights of entry and conditions for employment.

Investment

The Agreement Between the Government of the People's Republic of China and the Government of the Kingdom of Norway on the Mutual Protection of Investment (hereinafter the BIT) was signed on 21-11-1984 and remains in force. The definition of investment in the BIT is broad, and includes 'concessions to search for and exploit natural resources' (article 1). Each party undertakes to admit investment from the other party in accordance with its laws and regulations, while offering the investors fair and equitable treatment and protection (article 3). Article 5 para. 3 of the Long Term Trade Agreement between the Government of the Kingdom of Norway and the Government of the People's Republic of China is also relevant for the right of establishment as it states that: 'The Contracting Parties shall, in accordance with laws and regulations in their respective countries, permit organizations, enterprises and firms of the other country engaged in foreign trade between the two countries to establish permanent representations, offices or joint offices by two or more firms in respective countries.' According to the Feasibility Study (p. 92): 'China and Norway have already carried out effective cooperation on trade and investment promotion under the framework of the Sino-Norwegian Mixed Commission for Economy and Trade, established in 1980. A sub-committee to the commission, for promoting bilateral investments, was formed in September 2006.'

The BIT contains a general MFN obligation which does not apply to free trade areas, taxation and frontier trade (article 4). Expropriation or similar measures shall only be undertaken for public purposes, in accordance with legal procedures, in a non-discriminatory manner, and pursuant to compensation without undue delay (article 5). The right of transfer is protected with the reservation 'in accordance with its laws and regulations' (article 6). There is mandatory dispute settlement between the state parties after a period of consultations lasting 6 months (article 8). In cases where there is disagreement regarding the amount of compensation pursuant to an act of expropriation, the private party may choose to bring the case before the domestic courts of the party in question or to bring it before an international arbitral tribunal (Protocol para. 2). There are no other rights of investor-state dispute settlement under the BIT, but the MFN obligation can possibly extend the right to investor-state dispute rights in accordance with commitments of the parties under other BITs (Norway has accepted mandatory investor-state dispute settlement in several BITs, including its BIT with Hungary, see article IX).

Appendix 2 Inputs to the Free Trade Scenario

General issues

This scenario does not cover environmental policy (see section 2.4 above). Considerations of environmental policy will be included in the Main Report.

Trade in goods

Tariff issues

The Feasibility Study states (p. 48):

An FTA would be expected to eliminate all tariffs on industrial goods between China and Norway as early as possible and make tariff elimination and reductions for agricultural products

Based on this statement it seems reasonable to assume that on the Norwegian side the import tariff on clothing is eliminated for Chinese products. Tariffs on other industrial goods hardly exist in Norway. On the Chinese side the end results agreed in trade agreements with New Zealand, Chile and Peru inform about the likely outcome of the negotiations with Norway.

The Feasibility Study does not make further comments on the negotiation outcome with respect to agricultural products. It seems clear that China will be wishing for a reduction of the quite high Norwegian tariffs, and particularly on the agricultural goods that may be profitably exported the long distance from China. That would include frozen meat as well as oils and grains. Live animals and dairy products are probably not that important to China. The question is how much Norway is willing to concede. The outcome of negotiations between EFTA and third countries provides some guidance on this question. It will be easier for Norway to give concessions on agricultural products that hardly are produced in Norway, for instance rice.

Chinese concessions on non-agricultural goods may be glanced from the outcome of previous agreements with third countries. In particular, the results obtained by Chile when it comes to export of Chilean salmon and other fish to China, is a benchmark for Norway.

Regulatory issues

The question is whether Norway and China will negotiate more specific rules regarding trade in goods than those that follow from obligations under the WTO Agreement. Among the most significant issues from an environmental perspective are the elaboration of rules regarding technical barriers to trade as well as sanitary and phytosanitary measures. According to the Feasibility Study (p. 48), negotiations aim at 'ensuring that non-tariff measures are not more trade-restrictive than necessary to fulfill legitimate national policy objectives.' The ambitions of the negotiations with regard to technical barriers to trade are set out as follows in the Feasibility Study (p. 85):

In the context of a possible FTA, China and Norway will have the opportunity:

- To encourage wider application of international standards through bilateral cooperation;
- to identify and eliminate existing unjustified technical barriers to promote bilateral trade;
- to improve information-exchange mechanisms between the related government authorities of the two countries and to enhance transparency in the regime of technical regulations, standards and conformity assessment;
- to strengthen cooperation on mutual recognition of conformity assessment; and
- to carry out bilateral cooperation in the field of technical regulations, standards and conformity assessment.

Previous agreements will also provide a lead when it comes to reduction of non-tariff barriers. Norway's participation in the EEA Agreement, which means that Norway is part of the internal market of the EU, has significant consequences for the possibility of establishing bilateral arrangements concerning TBT issues. For example, Norway can only be expected to negotiate bilateral mutual recognition agreements with China if EU has negotiated or is negotiating parallel agreements with China.

As regards sanitary and phytosanitary measures, the ambitions of the negotiations have been set out as follows in the Feasibility Study (p. 82):

In the context of a possible free trade agreement China and Norway would have the opportunity to strengthen cooperation on SPS issues and establish common understanding to related principles and implementation mechanisms.

- The opportunities for bilateral cooperation may include, but are not limited to: Dealing with SPS issues in a framework of enhanced consultation and cooperation;
- improving the understanding of each other's measures and regulatory systems;
- work together to improve SPS operations and associated regulatory practices and to address problems as they arise;
- agreeing on the principles to be applied by both sides with respect to inspection, testing and certification procedures;
- working together to ensure that SPS measures or other standards do not result in unjustifiable restrictions on trade; and
- without prejudice to the EEA Agreement, agreeing on the principles of harmonization, equivalence, transparency and regionalization to address relevant SPS issues.

As with regard to TBT, Norway's participation in the EU internal market limits its ability to enter into binding agreements with China on a unilateral basis.

In addition, Norway has not entered into substantive TBT and SPS commitments in some relevant EFTA treaties (see EFTA-Singapore FTA articles 12 and 13, EFTA-Korea FTA articles 2.7 and 2.8, and EFTA-Chile FTA articles 16 and 17). Moreover, the China-New Zealand FTA contains separate chapters with detailed provisions on sanitary and phytosanitary measures (chapter 7, articles 73-88) and technical barriers to trade (chapter 8, articles 89-102). Against this background, it is likely that the Norway-China FTA will contain TBT and SPS rules, but it is unlikely that such rules will go significantly beyond existing commitments in the WTO.

Trade facilitation has also been raised as an issue of potential importance in the negotiations. According to the Feasibility Study (p. 42):

Efficient and simplified customs procedures are crucial in contributing towards trade facilitation between China and Norway. Cooperation can ensure that customs requirements are met, while minimizing any disruption to the flow of goods, and avoiding any unnecessary costs to traders. Under the framework of the future FTA, China and Norway Customs could strengthen their existing relationship to further facilitate bilateral trade. Furthermore, the inclusion of provisions on customs procedures and trade facilitation in a future FTA would be beneficial to Sino-Norwegian goods trade.

The issue of trade facilitation will have to be assessed in light of proposals made during the Doha Round, as well as commitments undertaken in bilateral FTAs.

The decision on concrete assumptions to be made for the Free Trade Scenario is deferred to the assessment phase of the project.

Trade in service

The Feasibility Study states (p. 64):

While the two countries have made commitments in the WTO, there are still some restrictions in the services sectors on both sides. It is recommended that that these issues are addressed in future FTA negotiations. All potential impacts on both countries services sectors should be taken into account in any FTA negotiations. ... Services trade liberalisation should seek to reduce barriers to trade while taking into account legitimate national policy objectives in areas such as protecting the environment, ensuring human health and promoting cultural diversity.

Norway's initial and revised offers made during the Doha Round of Negotiations are public (WTO doc. TN/S/O/NOR/Rev.1). We may assume that these offers, as a minimum, will be included in a FTA with China.

China has not made its offers during the Doha Round of Negotiations public. According to the Feasibility Study (p. 52): 'The Agreement on Trade in Services of the Framework Agreement on Comprehensive Economic Co-Operation between China and ASEAN was signed in January 2007, which is the first agreement on trade in services under a FTA framework between China and other countries.' Subsequently, China has agreed the FTA with New Zealand, and this FTA includes a chapter on services. For the purpose of this Report, we will use Chinese commitments under this FTA as a starting point for our scenarios.

Horizontal commitments

Norwegian offers in the Doha Round include the opening up for purchases of real property in Norway. Importantly, Norway maintains reservations regarding access to subsidies. It is considered unlikely that Norway will undertake significant additional horizontal commitments vis-à-vis China.

The Chinese Schedule in its FTA with New Zealand does not cover mode 4 of supply of services. Otherwise, the horizontal commitments are the same as in its WTO Schedule. It is considered unlikely that China will undertake significant additional horizontal commitments vis-à-vis Norway.

Specific commitments

In the Doha Round, Norway has made the following offers that may be of interest from an environmental perspective:

1. Services incidental to mining: bound for modes 1-3 for both market access and national treatment.
2. Related scientific and technical consulting services: commitments extended to offshore activities.
3. Distribution services: extending commitments to commission agents; exempting first hand sales of raw fish; and limitations on mode 1 for electricity sale.
4. Environmental services: opens up for mode 1 on advisory services regarding wastewater, waste and remediation and cleanup of soil and water; no longer monopoly for waste (mode 3); protection of ambient air and climate opened for all modes except mode 4; and noise, protection of biodiversity and landscape as well as other environmental and ancillary services open up for mode 1.
5. Transport services: introduction of a broad range of new bindings for maritime transport services; mode 1 opened up for maintenance and repair services for air and rail transport;

pipeline transportation opened up, except for mode 3; and cargo-handling and storage and warehouse services opened up.

The free trade scenario will include the above changes to the Norwegian Schedule. The following are potential additional elements that may be included (to be discussed):

1. New commitments regarding research and development services on natural sciences as well as interdisciplinary research and development services.
2. New commitments regarding services incidental to energy distribution.
3. New commitments regarding health related and social services.

China has undertaken a few additional commitments of interest in its FTA with New Zealand:

1. Services related to management consulting within all sub-sectors except construction: market access for mode 1 and 2, and joint ventures with foreign majority ownership for mode 3, subject to an economic needs test.
2. Environmental services: wholly foreign-owned enterprises will be permitted under mode 3 for all sub-sectors.
3. Sporting and other recreational services excluding golf: mode 3 for market access will allow wholly foreign-owned enterprises pursuant to an economic needs test.
4. Maintenance and repair services of motor vehicles: opened up for modes 1-3, including wholly foreign-owned subsidiaries.

The free trade scenario will include the above changes to the Chinese Schedule. The following are potential additional elements that may be included (to be discussed):

1. New commitments regarding veterinary services.
2. New commitments regarding research and development services.
3. Additional commitments regarding services related to management consulting, in particular construction.
4. New commitments regarding services incidental to mining.
5. New commitments regarding advisory and consulting services related to manufacturing.
6. New commitments regarding services incidental to energy distribution.
7. New commitments regarding investigation and security activities.
8. New commitments regarding building-cleaning services.
9. New commitments regarding health related and social services.
10. New commitments regarding pipeline transport.

Regulatory issues

In addition to the above, one remaining question is whether Norway and China will negotiate more specific rules regarding some of the regulatory issues under the GATS, such as in particular the

provision on ‘domestic regulation’ in article VI of GATS. In light of the fact that the China-New Zealand FTA contains more specific rules concerning domestic regulation in article 111.3, we assume that similar issues will be brought up in these negotiations. In addition, the China-New Zealand FTA contains a provision on qualifications recognition cooperation in article 113 which indicates that such issues are likely to be addressed in these negotiations. The free trade scenario will include these issues.

The decision on concrete assumptions to be made for the Free Trade Scenario is deferred to the assessment phase of the project.

Investment

According to the Feasibility Study (p. 73):

The future FTA between China and Norway would provide an improved investment environment for bilateral businesses. Both countries could benefit from an increase in bilateral investment, and the exchange and transfer of knowledge, technology, ideas and export opportunities that would flow from increased investments. Furthermore, the future FTA would be expected to promote bilateral investment not only by strengthening investor confidence, but also by positively affecting market perceptions and lead to increased investor interests in new business opportunities in the other country. In the long run, more integrated markets forged by the FTA could improve the competitive capacity of enterprises, the efficient distribution of resources, and further promote two-way investment.

China and Norway should reaffirm their desire to consider the potential for further cooperation opportunities in the FTA and to increase the mutual benefits through the further facilitation of bilateral investment.

This statement focuses on increased bilateral investment. Accordingly, it can be asked whether the FTA can be assumed to cover establishment. For the purpose of this study, and in light of past experiences with Norwegian and Chinese investment treaties, as well as in light of the third version of the Chinese Model BIT (1997) and the draft Norwegian Model BIT, we assume that the FTA will only contain soft obligations (recommendatory) regarding establishment.¹⁴

In light of the third version of the Chinese Model BIT (1997) and the draft Norwegian Model BIT, the free trade scenario will assume that the FTA will contain the following obligations in addition to those contained in the 1984 BIT between Norway and China (i.e. fair and equitable treatment, most favored nation treatment, expropriation and transfer):

1. National treatment.
2. Extended investor – state dispute settlement.

The decision on concrete assumptions to be made for the Free Trade Scenario is deferred to the assessment phase of the project.

¹⁴ The main exception in this context is the EFTA-Singapore FTA which contains rules regarding establishment, in particular in the provision concerning national treatment (see articles 40 and 46 and Annex XI).

Appendix 3 Inputs to Green Trade Scenario

General issues

This scenario does not cover environmental policy (see section 2.4 above). Considerations of environmental policy will be included in the Main Report.

The basis for the Green Trade Scenario will be the Free Trade Scenario. We assume that some environmental provisions will be included in the FTA under the Free Trade Scenario. In the Green Trade Scenario the measures to secure free trade are complemented by additional measures to enhance trade's positive environmental impacts, and safeguard against negative impacts.

We assume that the general provisions concerning the relationship between environment and trade in the preamble and general provisions of the FTA will further underline and specify the objective of ensuring that the FTA contributes to improved environmental conditions under a Green Trade Scenario. One element in this context is the inclusion of a provision stating that the FTA shall not affect the parties' obligations parties under existing environmental agreements.

A working group under EFTA has issued draft a sustainability chapter to be included in future EFTA free trade agreements (EFTA Paper, 2010). In order to safeguard against negative environmental impacts of trade the working group suggests an article of the following kind:

A Party shall not a) weaken or reduce the level of environmental or labour protection provided by its laws, regulations or standards with the sole intention to encourage investment from another Party or to seek or to enhance a competitive trade advantage of producers or service providers operating in its territory, or b) waive or otherwise derogate from, or offer to waive or otherwise derogate from, such laws, regulations or standards in order to encourage investment from another Party or to seek or to enhance a competitive trade advantage of producers or service providers operating in its territory.

In order to enhance trade's positive environmental impacts the working group suggests articles of the following kind:

The Parties shall strive to facilitate and promote foreign investment, trade in and dissemination of goods and services beneficial to the environment, including environmental technologies, sustainable renewable energy, energy efficient and ecolabelled goods and services, including through addressing related non-tariff barriers.

The Parties shall strive to facilitate and promote foreign investment, trade in and dissemination of goods and services that contribute to sustainable development, including goods and services that are the subject of schemes such as fair and ethical trade.

The Green Trade Scenario shall include such general provisions, of which some are binding and some are recommendatory. Furthermore, information provided in section 2.4 will be integrated in the scenario. In addition, we propose the Green Trade Scenario to include additional more specific elements as indicated below.

Trade in goods

Identification of "green goods"

The EU, the US, Canada, Japan and other countries including Norway have presented to the negotiations under the Doha Ministerial Declaration a list of 153 goods (by HS entry) (Committee on Trade and Environment Special Session, 2009) that according to the sponsors should '(1) be particularly important – even critical – for environmental protection, and workable from a customs facilitation perspective; (2) have the potential for a high degree of convergence among Members; and (3) serve as a basis for further work and negotiation under paragraph 31 (iii) of the Doha

Declaration.’ The list includes, e.g. ‘Air compressors mounted on a wheeled chassis for towing’, which is considered an example of air handling equipment for polluted air; ‘industrial mufflers’ to reduce engine noise, etc. In other words, it is a detailed and concrete list. None of the 153 goods are explicitly suggested by Norway. There are many other initiatives to isolate environmental goods and many problems along the way (see e.g. Sugathan, 2009). It is assumed that Norway and China will agree on a further refined list of environmental goods within the framework of the bilateral negotiations. Such a list will extend to other goods, such as biofuel.

Tariffs

Since Norway has zero import tariff on most industrial goods a ‘green’ initiative to exempt the green goods from import tariff is unlikely to produce any change for the country, unless such a list is extended to agricultural goods. According to Sugathan (2009) China has an average import tariff between five and ten percent on the goods listed in the 153-list. It is assumed that the green trade agreement will eliminate those as well as tariffs on other green goods.

Non-tariff barriers

The Green Trade Scenario will focus on inclusion of environmental issues in the provisions on technical barriers to trade and sanitary and phytosanitary measures. Such provisions will address two issues: the rights of the parties to take measures in light of relevant environmental principles, in particular based on prevention and precaution, life cycle assessments, the polluter should pay, and the duty of the parties to ensure integration of environmental perspectives in the technical regulation and standards that they apply or propose.

Trade in services

Environmental services represent one main category of services, i.e. category 6, of the WTO Services Sectoral Classification List (MTN.GNS/W/120). According to the Feasibility Study (p. 63):

Several Norwegian businesses in the environmental services sector are already engaged in the Chinese market, providing various services such as advanced solutions enabling recovery and recycling of materials, biological wastewater treatment for both the industrial and municipal sectors. There is, moreover, reason to believe that given favourable conditions, the trade of environmental services between Norway and China has potential to grow substantially.

The Norwegian and Chinese Schedules specify the following sub-categories of environmental services:

Norway	China
A. <u>Sewage Services</u> (CPC 9401)	A. Sewage Services (CPC 9401)
B. <u>Refuse Disposal Services</u> (CPC 9402)	B. Solid Waste Disposal Services (CPC 9402)
C. <u>Sanitation and Similar Services</u> (CPC 9403)	C. Cleaning Services of Exhaust Gases (CPC 9404)
D. <u>Other</u> - Noise abatement services (CPC 9405) - Nature and landscape protection services (CPC 9406) - Other environmental protection services (CPC 9409) - Cleaning services of exhaust gases (CPC 9404)	D. Noise Abatement Services (CPC 9405)

	E. Nature and Landscape Protection Services (CPC 9406)
	F. Other Environmental Protection Services (CPC 9409)
	G. Sanitation Services (CPC 9403)

While Norway and China differ somewhat in how they organize their classification of environmental services, we observe that they include the same broad categories.

We will proceed on the assumption that further liberalization of trade in environmental services may be both to the benefit and to the disadvantage of the environment, depending on the commitments undertaken and the domestic measures affected by the commitments in question. For example, commitments regarding market access for refuse disposal services may affect domestic measures taken to protect the environment in this sector positively or negatively.

In the Main Report, we will further develop a Green Trade Scenario in relation to services on the basis of the WTO document Background Note on Environmental Services (WTO doc. S/C/W/320 of 20 August 2010). The Scenario will also take into account relevant OECD documents on environmental services. The Green Trade Scenario will also address environmental perspectives of other categories of services. Finally, the Green Trade Scenario will include a discussion of the need for additional provisions regarding trade in services and the environment. We envisage that issues such as general exception, use of subsidies, domestic regulation and standards are particularly relevant.

Investment

The Green Trade Scenario regarding investment will take as its starting point the environmental elements included in the Norwegian Model BIT, which are the following:

- Identifying sustainable development as a basic objective.
- Including the objective of making investment and environmental protection mutually supportive.
- Specification of the relationship between national treatment and measures taken to protect the environment.
- If a provision concerning performance requirements is included, the right to take such measures for environmental purposes.
- The right to take measures of financial security to remedy environmental damage under the provision on transfer.
- A provision on not lowering environmental standards (if not included elsewhere in the FTA).
- A provision on the right to regulate (if not included elsewhere in the FTA).
- Measures to ensure that dispute settlement proceedings take appropriately into account environmental perspectives.

In addition, the Green Trade Scenario will consider how additional elements related to the environmental performance of investors can be integrated into the FTA. Such elements will be based

on the OECD Guidelines for Multinational Enterprises in light of the current consultation on an update of the Guidelines.¹⁵

The decision on concrete assumptions to be made for the Green Trade Scenario is deferred to the assessment phase of the project.

¹⁵ See http://www.oecd.org/document/27/0,3746,en_2649_34889_46568795_1_1_1_1,00.html.

Appendix 4 Details of Screening

General

This appendix provides some of the material and considerations that will go into the actual screening process. This appendix does not cover environmental policy (see pp. 12-13 above). An environmental policy screening will be included in the Main Report.

The preliminary screening is based on the following criteria:

- 1) The assumed negotiation result will not constitute any significant change to the incentives of relevant actors, because:
 - a) the sector or issue is already subject to similar commitments under the WTO Agreement,
 - b) the negotiation result will not lead to any changes of current relevant measures, or
 - c) a specific assessment of the negotiation result concludes that it is unlikely to lead to significant changes of the incentives of relevant actors.
- 2) The assumed changes in behavior of relevant actors will not have significant negative or positive effects for the physical environment, because:
 - a) the environmental effects are considered irrelevant for the purpose of the environmental assessment, or
 - b) there is no significant environmental effects of the activities in question or associated activities.

The criteria are applied in the following order: 1)a), 1)b), 2)a), 2)b) and 1)c).

Trade in goods

Preliminary screening according to the above criteria, Norway

The table below is based on the classification of goods into agricultural and non-agricultural that is used earlier in the text.

Sectors	1a)	1b)	2a)	2b)	1c)
Dairy and live animals		x			
Other agricultural					
Clothing					
Other non-agricultural	x				

Regarding agricultural goods we expect tariffs on goods outside of China's core interests to more or less stay the same, see Appendix 1. This applies at least to dairy and live animals. Other agricultural goods cannot be excluded at this point. Norwegian import tariffs are high and we have no reason to assume they will remain constant. Trade in agricultural goods generally has environmental consequences. Clothing also has significant Norwegian import tariffs and a production technology that may be detrimental to the environment, especially in a life cycle perspective. Clothing is the main export category from China to Norway. Other industrial goods, by contrast, have zero or near zero import tariffs to Norway.

Preliminary screening according to the above criteria, China

Sectors	1a)	1b)	2a)	2b)	1c)
Fish and fish products					
Other agricultural		x			
Non-agricultural					

Our conjecture is that export of agricultural products outside of fish is not a core interest to Norway. After all, Norwegian exports of meat and similar products to China constituted 590 thousand NOK in 2010, against 2.2 billion NOK for fish (two-digit code 03).

In the green trade scenario it would seem likely that Norway argues for tariff elimination on the 153 designated environmental goods and other goods as agreed. Also, the main export categories (see below) would seem important. However, we do not have information at this point to exclude any of the non-agricultural goods during screening.

Trade in services

The tables below are based on the WTO Services Sectoral Classification List (WTO doc. MTN.GNS/W/120) adjusted according to how it has been applied in the Norwegian Schedule of specific commitments (WTO doc. GATS/SC/66) and the Chinese Schedule of specific commitments (WTO doc. GATS/SC/135), respectively.

An # in the tables signifies that the sector has not been subject to any commitment in the Schedule, i.e. that the sector has been left out of the Schedule.

Ad criterion 1)a) (The assumed negotiation result will not constitute any significant change to the incentives of relevant actors, because the sector or issue is already subject to similar commitments under the WTO Agreement):

- It is assumed that the existing level of liberalization of mode 1 of supply (cross border supply), i.e. ‘unbound’, will remain unchanged where it is noted in the Schedule that it is ‘Unbound due to lack of technical feasibility’.
- It is assumed that existing level of liberalization of mode 4 of supply (presence of natural persons) will be unchanged under the FTA. The general phrase used for mode 4 is ‘Unbound except as indicated in the horizontal section’.

Preliminary screening according to the above criteria, Norway:

Sectors	1a)	1)b)	2)a)	2)b)	1)c)
1.A. Business and professional services					
a. Legal services (legal advice on foreign law)	x				
b. Accountancy				x?	
c. Taxation	x				
d. Architectural services	x				
e. Engineering services	x				
f. Integrated engineering services	x				
g. Urban planning and landscape architectural services	x				
h. Medical and dental services	x				
i. Veterinary services	x				
j. Deliveries and related services, nursing services, physiotherapeutic and para medical services	x				
k. Other #		x?			
B. Computer and Related Services					
a. Consultancy services related to the installation of computer hardware	x				
b. Software implementation services	x				
c. Data processing services	x				
d. Data base services	x				
e. Other: Maintenance and repair services for office equipment including computers and other computer services	x				

C. Research and Development Services					
a. R&D services on natural sciences #				?	?
b. R&D services on social sciences and humanities	x				
c. Interdisciplinary R&D services #				?	?
D. Real Estate Services					
a. Involving own or leased property #				?	?
b. Real Estate Services on a fee or contract basis	x				
E. Rental/Leasing services without Operators	x				
a., b., c. Relating to ships, aircraft, other transport equipment					
c. Car-hiring	x				
d. Non-transport: computers, construction/demolition	x				
F. Other Business Services					
a. Advertising services	x				
b. Market research and public opinion polling services	x				
c., d. Management and administrative services (including management, consultancy)	x				
e. Technical testing and analysis services	x				
f., g. Advisory and consulting services related to agriculture, forestry and fishing	x				
h. Services incidental to mining #				?	?
i. Advisory and consulting services related to manufacturing	x				
j. Services incidental to energy distribution #				?	?
k. Placement and supply services of personnel			x?		
l. Investigation and security activities			x?		
m. Related scientific and technical consulting services	x				
n. Maintenance and repair of equipment (not including maritime vessels, aircraft or other transport equipment)	x				
o. Building-cleaning services	x				
p. Photographic services	x				
q. Packaging services	x				
r. Printing and publishing	x				
s. Convention services #			x?	x?	x?
t. Other	x				
2. Communication services					
A. Postal services #				?	?
B. Courier services	x?				
C. Telecommunication services	x				
D. Audiovisual services #			x?	x?	x?
E. Other #					
3. Construction and related services					
A. General construction work for buildings	x				
B. General construction work for civil	x				

engineering					
C. Installation and assembly work	x				
D. Building completion and finishing work	x				
E. Other	x				
4. Distribution services					
A. Commission agents' services #				x?	x?
B. Wholesale Trade Services (Import and trade in alcohol, arms, pharmaceuticals, fish and grain exempted)	x				
C. Retailing Services (Import and trade in pharmaceutical products, alcohol and arms exempted)			x?		
D. Franchising	x				
E. Other #	?			?	?
5. Educational services					
- Educational services leading to the conferring of State recognized exams and/or degrees	x				
- Educational services not leading to the conferring of State recognized exams and/or degrees	x				
6. Environmental services					
A. Sewage Services				?	?
B. Refuse Disposal Services				?	?
C. Sanitation and Similar Services				?	?
D. Other: Noise abatement services, Nature and landscape protection services, Other environmental protection services				?	?
D. Other: Cleaning services of exhaust gases				?	?
7. Financial services					
A. Insurance and insurance-related services	x?				
B. Bank and other financial services (excluding insurance)	x?				
C. Other #	x?				
8. Health related and social services					
A. Hospital services #	?			x?	x?
B. Other human health services #	?			x?	x?
C. Social services #	?			x?	x?
D. Other #	?			x?	x?
9. Tourism and travel related services					
A. Hotels and restaurants	x				
B. Travel Agencies and Tour Operators Services	x				
C. Tourist Guides Services	x				
D. Other #	?				
10. Recreational, cultural and sporting services					
A. Entertainment services #	?			x?	x?
B. News agency services	x				
C. Libraries, archives, museums and other cultural services #	?			x?	x?
D. Sporting and other recreational services #	?			x?	x?

E. Other #	?			x?	x?
11. Transport services					
A. Maritime transport services #				x?	x?
B. Internal waterways transport #				x?	x?
C. Air Transport Services	x?				
D. Space transport #	x				
E. Rail transport services	x?			?	?
F. Road transport services	x?			?	?
G. Pipeline transport #	x?			x?	x?
H. Services auxiliary to all modes of transport #	?			?	?
I. Other transport services #	?			?	?
12. Other services not included elsewhere #					

In light of the above table, we may identify some preliminary points of particular interest:

- Environmental services: points of interest are mode 1 of supply; some reservations concerning government monopoly; and the horizontal reservation: 'These commitments do not include public service functions whether owned and operated or contracted out by local, regional or central government'
- Transport services
- Business services related to mining and energy distribution
- Health services to the extent that they address environment-related health
- Maritime transport: this must be assessed in light of the existing bilateral agreement between Norway and China

Preliminary screening according to the above criteria, China

Sectors	1a)	1)b)	2)a)	2)b)	1)c)
1.A. Professional services					
a. Legal services	?			x?	x?
b. Accounting, auditing and bookkeeping services	?			x?	x?
c. Taxation	x				
d., e., f., g. Architectural services, engineering services, integrated engineering services, urban planning services (except general urban planning)	?				
h. Medical and dental services	x?			x?	x?
i. Veterinary services #	?			?	?
j. Deliveries and related services, nursing services, physiotherapeutic and para medical services #	x?			x?	x?
k. Other #	x?				
B. Computer and Related Services					
a. Consultancy services related to the installation of computer hardware	x				
b. Software implementation services	x?			x	x
c. Data processing services	x				

d. Data base services #	?			x?	X?
e. Other #	x?				
C. Research and Development services					
a. R&D services on natural sciences #	?				
b. R&D services on social sciences and humanities #	?				
c. Interdisciplinary R&D services #	?				
D. Real estate services	x?				x?
a. Involving own or leased property					
b. Real estate services on a fee or contract basis	x?				x?
E. Rental/Leasing services without Operators - Rental and leasing services (included separately)	?			?	?
F. Other Business Services	x?			x?	x?
a. Advertising services					
b. Market research and public opinion polling services #	x?			x?	x?
c. Management consulting services	x				
d. Services related to management consulting #	x?				
e. Technical testing and analysis services (excluding statutory inspection services for freight inspection services)	x?			x?	x?
f., g. Services incidental to agriculture, forestry, hunting and fishing	x?			x?	x?
h. Services incidental to mining #	?				
i. Advisory and consulting services related to manufacturing #	?				
j. Services incidental to energy distribution #	?				
k. Placement and supply services of personnel #	x?			x?	x?
l. Investigation and security activities #	x?				
m. Related scientific and technical consulting services	x?			?	?
n. Maintenance and repair of equipment (included separately)	?				
o. Building-cleaning services #	?				
p. Photographic services	x?			x?	x?
q. Packaging services	x?				
r. Printing and publishing #	?			x?	x?
s. Convention services	x?			x?	x?
t. Other: translation and interpretation services	x?			x	x
2. Communication services					
A. Postal services #	?			?	?
B. Courier services	x				
C. Telecommunication services	?			?	?
D. Audiovisual services	x?			x?	x?
E. Other #	x?				
3. Construction and related services - General commitments for the whole	x?			x?	x?

sector					
4. Distribution services					
A. Commission agents' services (excluding salt, tobacco)	x?			?	?
B. Wholesale Trade Services (excluding salt, tobacco)	x?			?	?
C. Retailing Services (excluding tobacco)	x?			?	?
D. Franchising	x				
E. Wholesale or retail trade services away from a fixed location	x				
5. Educational services (Excluding special education services e.g. military, police, political and party school education)					
A. Primary education services (excluding national compulsory education in CPC)	x?			x?	x?
B. Secondary education services (excluding national compulsory education in CPC)	x?			x?	x?
C. Higher education services	x?			x?	x?
D. Adult education services	x?			x?	x?
E. Other education services (including English language training)	x?			x?	x?
6. Environmental services (excluding environmental quality monitoring and pollution source inspection)					
A. Sewage services					
B. Solid waste disposal services					
C. Cleaning services of exhaust gases					
D. Noise abatement services, , Other environmental protection services					
E. Nature and landscape protection services					
F. Other environmental protection services					
G. Sanitation services					
7. Financial services					
A. All insurance and insurance-related services	x?			?	?
B. Bank and Other Financial Services (excluding insurance and securities)	x?			?	?
C. Other	x?			x?	x?
8. Health related and social services					
A. Hospital services #				x?	x?
B. Other human health services #				?	?
C. Social services #				x?	x?
D. Other #				x?	x?
9. Tourism and travel related services					
A. Hotels (including apartment buildings) and restaurants	x				
B. Travel agencies and tour operator	x?			x?	x?
C. Tourist guides services #	?				
D. Other #	?				
10. Recreational, cultural and sporting services					
A. Entertainment services #	?			x?	x?
B. News agency services #	?			x?	x?

C. Libraries, archives, museums and other cultural services #	?			x?	x?
D. Sporting and other recreational services #	?			x?	x?
E. Other #	?			x?	x?
11. Transport services					
A. Maritime transport services (freight and passengers, less cabotage transport services) (Maritime cargo-handling services, Customs clearance services for maritime transport, Container station and depot services, Maritime agency services)	?				
B. Internal waterways transport	?			?	?
C. Air Transport Services	x?				
D. Space transport #	x?				
E. Rail transport services	x				
F. Road transport services	x				
G. Pipeline transport #	?			?	?
H. Services auxiliary to all modes of transport (Storage and warehousing services, Freight forwarding agency services)	x?			?	?
I. Other transport services #	x?			x?	x?
12. Other services not included elsewhere #					

In light of the above table, we may identify some preliminary points of particular interest:

- Professional services: points of interest are potentially architectural services (d), engineering services (e), integrated engineering services (f), urban planning services (g) and veterinary services (i)
- Research and development services
- Other business services: points of interest may be management consulting (d) and (i), services incidental to mining (h) and energy distribution (j)
- Environmental services: points of interest are market access mode 1) (cross-border supply) – Unbound except for environmental consultation services; mode 3) (commercial presence) – Foreign services suppliers engaged in environmental services are permitted to provide services only in the form of joint ventures, with foreign majority ownership permitted
- Maritime transport: some liberalization opportunities, in particular joint venture requirements, but this must be assessed in light of the existing bilateral agreement between Norway and China

Investment

It must be noted that the relevant baseline here is not the WTO Agreement, but the existing BIT between Norway and China from 1984. This BIT applies equally to both countries, and the screening will therefore to a significant extent be the same for both countries. Against this background, we have at this stage chosen to address both countries in the same table.

Provisions	1a)	1)b)	2)a)	2)b)	1)c)
-------------------	------------	-------------	-------------	-------------	-------------

A general MFN obligation		x(?)			
National treatment					
Fair and equitable treatment	?			?	?
Expropriation	x				
Transfer	x(?)			x(?)	x(?)
Performance requirements		?			?
Mandatory state-state dispute settlement	x				
Mandatory investor-state dispute settlement					
Additional provisions identified in the Green Trade Scenario					

Appendix 5 Details of Scoping

This appendix provides some of the material that will go into the actual scoping process.

Trade in goods

According to Norwegian statistics the main export categories to China at the two-digit level are fish & related products, industrial machines and equipment, and metals except iron and steel.

Main traded goods 2010, billion NOK

Exports from Norway to China		Imports to Norway from China	
Fish etc (03)	2.2	Clothing and accessories (84)	7.2
Metal except iron and steel (68)	2.0	Office machines, PCs etc (75)	5.8
Industrial machines and equipment (74)	1.9	Telecom-equipment (76)	5.1
Organic chemical products (51)	1.5	Various goods (89)	3.5
Mineral oil and – products (33)	0.9	Electrical machines etc (77)	2.8
		Means of transport except for roads	2.1
TOTAL	14.1	TOTAL	39.6

Note: The data is according to Norwegian trade statistics. Numbers in parenthesis refer to HS two digit level categories. There is a discrepancy between Norwegian and statistics, but the general pattern is similar (Ministry of trade and Industry, 2008a). Source: Statistics Norway 2011.

Our hypothesis is that Norway will put more emphasis on those categories of goods where export is high prior to a FTA. China will have a similar tendency. Recalling which sectors that face significant tariffs to Norway it seems clear that clothing will be important for China, and fish, metals, industrial machines and (petro) chemicals are important for Norway.

-According to the Feasibility Study (p. 48):

- Norway: ‘would include fish and marine products as well as technological products related to the fisheries industry; petroleum and gas related products including the upstream supply industry as well as the chemical products of the downstream industry; and metals, machineries and equipment for the Chinese construction and shipbuilding sectors.’
- China: ‘labour intensive manufactures such as textile and apparel, machinery and electronic equipments, as well as primary agriculture products are important.’
- General: ‘The sectoral surveys of trade in machinery and electronic equipment, textiles and apparel, petroleum and chemicals, metals, fish and fishery products, and primary agriculture products illustrate some of the net benefits of expanding market access for goods between China and Norway.’

Sectors:

- Seafood, tariffs: Feasibility Study (p. 43): ‘China and Norway are ranked as the world largest and second largest exporters of seafood, respectively. China plays an important role in the global production and trade in fish and fisheries products.’ (p. 45) ‘In February 2006, the Government of China issued a Programme of Action on Conservation of Living Aquatic resources of China. It aims to reverse the trend of deterioration of the aquatic environment,

decline of fisheries resources and the increasing number of endangered species, reduce overcapacity and improve the efficiency of fishing operations and economic benefits.’

- Preliminary assessment: Significant potential for increased trade. Fish products are currently exported from Norway to Asia and then reexported back to Norway. This kind of trade may increase with China as a hub in Asia. Issues concerning energy intensive transportation of seafood.
- Agriculture, tariffs: Feasibility Study (p. 45): ‘China is the world’s fourth largest importer and the fifth largest exporter of agriculture products. Latest statistics from Ministry of Agriculture show that the total value of agriculture product trade reached US \$ 63.5 billion in 2006, of which, export accounted for US \$ 31.4 billion, import accounted for US \$ 32.1 billion.’ ‘Although almost being self-sufficient in meat, poultry and dairy products, Norway imports more than 50% of its food products. ... The food, beverage and tobacco industry is the second largest industrial sector in Norway, surpassed only by the engineering industry.’ (p. 57) ‘With regard to the import regime for agriculture, Norway maintains a comparatively high level of protection, but the tariff structure is not so transparent due to the extensive use of specific tariffs, i.e. tariffs expressed in NOK/kg or the like, which constitutes an important impediment to the export of China’s agricultural products.’
 - Preliminary assessment: The relevance of this sector depends on whether there is significant probability that results will be achieved, see above. In order to conduct studies here, it would be an advantage to get access to information concerning status of negotiations.
- Agriculture and seafood, non-tariff (SPS): Feasibility Study (p. 79): ‘Non-discrimination is one of the core principles followed by Chinese authorities in the implementation of the WTOs SPS Agreement. The local SPS authorities are directly monitored by the AQSIQ to ensure that SPS laws and regulations are uniformly adhered to.’ ‘a “Memorandum of Understanding” (MoU) has been negotiated, and a full text has been developed at the administrative level. The signatory ceremony of the Memorandum is expected to take place in the near future. The parties to that MoU are the General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China (AQSIQ), and on the Norwegian side, the Ministry of Fisheries and coastal Affairs and the Ministry of Agriculture and Food.’ ‘without prejudice to the EEA Agreement, agreeing on the principles of harmonization, equivalence, transparency and regionalization to address relevant SPS issues.’
 - Preliminary assessment: This issue seems to be of some interest, and may be likely to move forward. It is an important policy issue and has potential significance for the acceptability of the final FTA. Need to assess the MoU and pin down the concrete manifestations of the SPS
- Industrial goods, non-tariff: Feasibility Study (pp. 83-5): ‘A possible FTA between China and Norway would develop bilateral cooperation through identifying principles, disciplines and procedures for dealing with technical requirements, standards and conformity assessment that affect bilateral trade. The FTA could also promote technical cooperation and capacity building in the TBT area, including information sharing, seminars and exchange visits.’ ‘to strengthen cooperation on mutual recognition of conformity assessment; and to carry out bilateral cooperation in the field of technical regulations, standards and conformity assessment.’
 - Preliminary assessment: It is unclear how far these efforts will go beyond WTO and what they entail in practice. It seems like there will be future cooperation but it is not spelled out what should be the outcome of seminars and exchange visits.
- Environmental goods: Nothing in particular concerning environmental goods in the Feasibility Study, but there are several references to environmental technologies
 - Preliminary assessment: It seems to be of interest to explore the potential for liberalization of trade in environmental goods. However, the potential for further

removal of trade barriers is limited in light of the high degree of liberalization within this sector. Options for trade promotion will be explored in our Green Trade Scenario.

Trade in services

Trade facilitation is ‘regulatory’ in the sense that commitments will most probably concern national treatment and market access in line with Articles XVII and XVIII of the GATS.

Sectors:

- **Maritime services:** Feasibility Study (p. 51): Special rules in China. At pp 56-8: China ‘plans to make its ocean-going fleet the third largest in the world by 2010. The total deadweight tonnage of Chinese-flag flying ocean vessels, which is 44 million at present, will reach 100 million by 2010.’ ‘A bilateral agreement of shipping between China and Norway was signed in December 2004 in Shanghai, China. The agreement, which includes, among other issues, regulations for hiring crew and adherence to international law, is an important addition to the two countries’ level of cooperation. The Norwegian shipping industry is heavily involved in China and the agreement will ensure better access to the Chinese markets and more preferable deals for Norwegian companies. An FTA between China and Norway could provide considerable scope for further cooperation and mutual benefit in the area of maritime transport services.’
 - Preliminary assessment: In light of the bilateral agreement, maritime services do not seem to be of any significant interest.
- **Energy services:** Feasibility Study (pp. 58-9): ‘There is already a substantial degree of cooperation between Norway and China in the energy field, mainly focusing on oil and gas exploitation services and environmental services.’ ‘A memorandum of understanding between Norway’s Ministry of Petroleum and Energy and the National Development and Reform Commission (NDRC) of China on cooperation in energy saving and renewable energy was signed in 2006. The potential for further cooperation between Norwegian and Chinese companies in the oil and gas sector is significant, and will be an area of priority in the future of Sino-Norwegian economic cooperation.’ (p. 99) ‘This report illustrates that there are significant complementarities of demand and competence between Norway and China in the field of renewable energy technologies and other areas of environmental cooperation. The benefits of this, both for the economy and the environment, may be facilitated through appropriate language in a future free trade agreement. Both Governments also recognise a possible future FTA as a useful tool to achieve their common goal of sustainable development and harmonious development of nature and human society.’
 - Preliminary assessment: In light of the lack of commitments within this sector, and its potential importance, this sector is a significant candidate.
- **Mining services:** This sector is not mentioned in the Feasibility study.
 - Preliminary assessment: New legislation has recently been passed in Norway, and Norway has made relevant offers for this sector in the Doha Round. This sector is very important in China. This sector is a significant candidate.
- **Construction services:** Feasibility Study (p. 60): ‘Considering the comparative advantages of Norway in design and project management and that of China in construction and labour resources, construction and related engineering services industry has the potential to become an important contributor to the bilateral trade in services between China and Norway. Therefore, bilateral cooperation should be further enhanced in this sector. An FTA is expected to address a number of barriers including mobility of natural persons, market access issues and recognition of professional qualifications, which would create an improved environment for the business in this area.’
 - Preliminary assessment: This sector needs further study before any tentative

conclusions can be drawn. Potential issues include in advisory and design-related services where China may undertake further commitments.

- Environmental services: Feasibility Study (p. 63): ‘Since the accession to the WTO, China has opened all categories of environmental services except environmental quality monitoring and pollution source inspection.’ ‘Several Norwegian businesses in the environmental services sector are already engaged in the Chinese market, providing various services such as advanced solutions enabling recovery and recycling of materials, biological wastewater treatment for both the industrial and municipal sectors. There is, moreover, reason to believe that given favourable conditions, the trade of environmental services between Norway and China has potential to grow substantially.’
 - Preliminary assessment: There remain some restrictions in the environmental services sector, and this sector thus needs further consideration. Both positive and negative effects of liberalization should be explored for these sectors.

Investment

According to the Feasibility Study (pp. 72 and 73):

The main sectors for Norwegian investments in China are the maritime sector, the energy and environment sector, oil and gas, aquaculture, and the processing industry.” “To this date (December 2007) three Chinese companies are established in Norway; ZTE, COSCO and Air China.

The future FTA between China and Norway would provide an improved investment environment for bilateral businesses. Both countries could benefit from an increase in bilateral investment, and the exchange and transfer of knowledge, technology, ideas and export opportunities that would flow from increased investments. Furthermore, the future FTA would be expected to promote bilateral investment not only by strengthening investor confidence, but also by positively affecting market perceptions and lead to increased investor interests in new business opportunities in the other country. In the long run, more integrated markets forged by the FTA could improve the competitive capacity of enterprises, the efficient distribution of resources, and further promote two-way investment.

China and Norway should reaffirm their desire to consider the potential for further cooperation opportunities in the FTA and to increase the mutual benefits through the further facilitation of bilateral investment.

In light of the screening, the following issues remain potential candidates for the main report:

- National treatment provision
- Fair and equitable treatment provision, depending on whether it will be subject to investor-state dispute settlement
- Mandatory investor – state dispute settlement
- Provisions identified in the Green Trade Scenario
- Other elements, depending on the likelihood of inclusion: MFN obligation, performance requirements and umbrella clause

Other elements

Potential topics:

- Feasibility Study (p. 101): regarding ‘other areas of cooperation’ than goods, services and

investment: ‘The study also identifies the following sector-specific issues and broader areas and opportunities for facilitation and cooperation with the objectives of strengthening bilateral linkages through an FTA: Trade facilitation, E-commerce, sanitary and phytosanitary measures (SPS), technical regulations and standards (TBT), intellectual property rights (IPR) SME cooperation, temporary movement of natural persons, trade and investment promotion, environment and technology cooperation and development cooperation. The study recommends that building on existing cooperation in the above areas, an FTA would be expected to intensify further bilateral trade and economic cooperation with a view to achieve mutual benefits.’

- - Preliminary assessment: Among the topics indicated above and which have not been addressed elsewhere, the following may be appropriate to consider for inclusion in the EA:
 - intellectual property rights,
 - environment and technology cooperation
 - development cooperation

Appendix 6

Terms of Reference for a cooperation project on assessment of environmental impacts of a Free Trade Agreement between China and Norway

Between

the Ministry of Environmental Protection, China (also referred to as MEP), and the Ministry of Environment, Norway (also referred to as MoE)

China and Norway are negotiating for Free Trade Agreement (FTA) based on a feasibility study of FTA. The proposed project is intended to contribute to a better understanding of environmental impacts of the China-Norway FTA and to suggest mitigation measures to reduce negative environmental impacts and recommendations to enhance positive environmental impacts.

The purpose of the project will be to

- Assess environmental consequences of an FTA, benefitting from both sides' expertise and experiences in this field as well as international sources including other countries' experiences with such assessments;
- Develop a guideline of EIA on trade policy, which can be used for China-Norway FTA and which can be widely used in other regions;
- Make suggestions to both sides on how to avoid potential for negative environmental impacts, and to enhance positive environmental impacts; and
- Provide input on how the FTA-agreement may achieve this.

The project will cover the following tasks:

- 1 A brief review of the current methodologies of trade policy EIA, focusing on various methodologies, including EU, UNEP, OECD and others.
- 2 Improve the preliminary guideline of EIA on trade policy developed by Policy Research Center of MEP based on review of current methodology (in I)
- 3 Workshops, within the limits of available time and resources, to improve and finalize the draft of guideline developed by both sides
- 4 Based on this guideline, perform an EIA on China-Norway FTA;
- 5 Based on the results of study above, to provide suggestions for both governments on how to avoid potential for negative environmental impacts, and to enhance positive environmental impacts of the FTA.
- 6 Workshops, within the limits of available time and resources, to improve the China-Norway FTA EIA results and finalize the guideline of EIA on trade policy which can be used internationally in the future

The scope of the study may be expanded through common agreement if time and resources allow.

The project team will consist of experts appointed by each side. The project team will report on the progress of the work to MEP and MoE on a regular basis, preferably prior to each FTA negotiation round. These reports may be delivered both in written and oral form. The final report and suggestions shall be forwarded in a written report. Further detailed guidance to the work of the project team may be provided by MEP and MoE jointly.

The experts in the project team, the Ministry of Environmental Protection of China, and the Ministry

of Environment of Norway, and any guests each side may wish to invite, may meet at regular basis. Video and telephone conference can be used for this purpose.

The project consists of two phases

Phase 1: to conduct Task I, II and III

Phase 2: to conduct Task III, IV and V

The cost of the project will be covered as follows

Phase 1: Each of the parties will cover the costs of respective research teams

Phase 2: Each of the parties will cover the costs of respective research teams

Timeframe of the project

Phase 1: "preparatory project": start September 20th, rough draft December 1st 2010, conclusion January 31st 2011

Phase 2: "main project": start January 31st and conclusion December 1st 2011.

References

- Canada Handbook 2008: Canada, Handbook for Conducting Environmental Assessments of Trade Negotiations, March 2008 (version 4)
- Committee on Trade and Environment Special Session 2009: Communication under paragraph 31 (III) of the Doha Ministerial Declaration. JOB(09)/132, 9 October.
- ECON Report 2008: ECON, Environmental consequences of a Norwegian-Chinese Free Trade Agreement, ECON-Report no. 2008-148
- EFTA Paper: EFTA, Consolidated draft model provisions concerning the environment and labour standards in EFTA Free Trade Agreements, 7 June 2010
- EIA MAI 1998: Environmental Impact Assessment of the Draft Multilateral Agreement on Investment, 1998, paper on file with authors.
- EU Handbook 2006: European Commission, Handbook for Trade Sustainability Impact Assessment, March 2006. Available at http://trade.ec.europa.eu/doclib/docs/2006/march/tradoc_127974.pdf.
- EU 2008: Trade sustainability impact assessment of the negotiations of a Partnership and Cooperation Agreement between the EU and China. Final report, August 2008.
- Feasibility Study: Ministry of Trade and Industry, Norway-China Free Trade Agreement – Joint Feasibility Study. Report, Norwegian Ministry of Trade and Industry. <http://www.regjeringen.no/upload/NHD/Handelsavtaler/Forstudien%20med%20Kina.pdf>
- Fisman, R., Wei, S.-J. 2004: Tax rates and tax evasion: evidence from “missing imports” in China. *Journal of Political Economy* 112 (2), 471–496.
- Fæhn, T. 2002: The Qualitative and Quantitative Significance of Non-Tariff Barriers: an ERP study of Norway, *Economic Systems Research*, 14, 1, 35-57.
- Joint Study 2004: A joint study report on a free trade agreement between China and New Zealand. Prepared by the Ministry of Commerce, China and the Ministry of Foreign Affairs and Trade, New Zealand.
- Lawson & MacFaul, 2010: Sam Lawson and Larry MacFaul: Illegal Logging and Related Trade. Indicators of the Global Response, Chatham House report, July 2010 (available at http://www.chathamhouse.org.uk/files/16950_0710pr_illegallogging.pdf).
- Liu et al. 2010: Zhaoyang LIU, Xianqiang MAO, Wei TANG, Tao HU, Shuqian YANG and An ZENG, An assessment of China-Japan-Korea Free Trade Agreement’s economic and environmental impacts on China, 2010, Draft paper on file with authors.*
- MAO Xianqiang et al. 2010: Brief introduction to the Draft Guideline to the Environmental Impact Assessment of Trade Policy. Ppt on file with the authors.
- Ministry of Trade and Industry 2008b: Model for future investment agreements. <http://www.regjeringen.no/nb/dep/nhd/dok/Horinger/Horningsdokumenter/2008/Horing---Modell-for-investeringsavtaler/-4.html?id=496026>
- Naturvårdsverket (2009): *Handbok med allmänna råd om miljöbedömning av planer och program* (Guidebook with general advice on Strategic Impact Assessment of plans and programs). Handbok 2009:1, The Swedish Environmental Protection Agency, Stockholm.
- OECD 1999: OECD Joint Working Party on Trade and Environment, Methodologies for Environmental Assessment of Trade Liberalisation Agreements, OECD doc. COM/TD/ENV(99)92/FINAL.
- OECD 2007: Environment and Regional Trade Agreements

OECD 2008a: OECD Joint Working Party on Trade and Environment, Environment and Regional Trade Agreements: Developments in 2007, OECD Trade and Environment Working Paper N° 2008-02, OECD doc. COM/TAD/ENV/JWPTE/RD(2007)40/FINAL

OECD 2008b: Cristina Tebar Less and Joy Aeree Kim, Checklist for negotiators of environmental provisions in regional trade agreements, OECD Trade and Environment Working Paper 2008-02, OECD doc. COM/TAD/ENV/JWPTE(2007)35/FINAL

OECD 2009: OECD Joint Working Party on Trade and Environment, Environment and Regional Trade Agreements: Developments in 2008, OECD Trade and Environment Working Paper N° 2009-01, OECD doc. COM/TAD/ENV/JWPTE(2008)41/FINAL

OECD 2010: OECD Joint Working Party on Trade and Environment, Environment and Regional Trade Agreements: Developments in 2009, OECD Trade and Environment Working Paper N° 2010-01, OECD doc. COM/TAD/ENV/JWPTE(2009)23/FINAL

Statistics Norway 2010. Foreign trade in goods. Imports and exports to China. Statistikkbanken, ssb.no.

Sugathan, M. 2009: Trade and Climate Change: WTO Negotiations on Environmental Goods and the IPR Dimension. EU-Civil Society Dialogue on Trade and Climate Change, Brussels, 13 May 2009. Available at <http://trade.ec.europa.eu/doclib/html/143168.htm>

Therivel, R. (2004): *Strategic Environmental Assessment in Action*. Earthscan, London

UNECE (United Nations Economic Commission for Europe) (2007): Protocol on SEA, Resource Manual to Support Application of the UNECE protocol on Strategic Environmental Assessment, Draft Final April 2007. (www.unece.org/env/sea)

UNEP 2005a: UNEP, Environment and Trade. A Handbook (2nd ed., 2005). Available at http://www.unep.ch/etb/areas/pdf/envirotrade_handbook_2005.pdf.

UNEP 2005b: UNEP, Handbook on Integrated Assessment of Trade-related Measures. The Agriculture Sector (2005). Available at <http://www.unep.ch/etb/publications/intAssessment/HandBookAgriSector.pdf>.

U.S. 2000: Office of the United States Trade Representative, Council on Environmental Quality, Guidelines For Implementation Of Executive Order 13141 Environmental Review Of Trade Agreements, Federal Register, Vol. 65, No. 244, December 19, 2000.

Vennemo, Haakon; Kristin Aunan, Jianwu He, Tao Hu. Shantong Li, Kristin Rypdal 2008. Environmental impacts of China's WTO-accession, *Ecological Economics*, 64, 893-911.

WEF 2010: The global enabling trade report 2010. The World Economic Forum, Davos, Switzerland. <http://gcr.weforum.org/getr2010/>

WTO 2010: Tariff profiles China and Norway. <http://stat.wto.org/tariffprofile/wsdbrtariffpfview.aspx?language=e&country=cn> and <http://stat.wto.org/tariffprofile/wsdbrtariffpfview.aspx?language=e&country=no>