



Baltic Sea Region Testing Ground Facility

Status after 10 year

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Preface

This report gives an overview of the technical and political work of the Nordic Council of Ministers since 1993 to create a Joint Implementation set-up that mitigates greenhouse gas emissions at least costs with mutual benefits for both the Nordic countries and the countries in the Baltic Sea Region. With the establishment of BASREC in 2000, negotiations started to prepare for the Testing Ground Agreement. In parallel, negotiations were initiated between the Nordic countries and Germany to establish a Nordic Carbon Fund, the ‘Testing Ground Facility’. The fund became operational in 2004 with an initial capitalisation of €15 million. In 2006, the fund was extended to include private sector investors with a total capitalisation of €35 million. The fund is set to terminate by the end of 2012 but can be continued if investors are interested. The report discusses the various post-2012 options of the Testing Ground Facility and includes views of stakeholders involved in the setting up of the Carbon Fund and the JI mechanism.

The Climate Change Policy Working Group does not necessarily share the views and conclusions of the report, but looks at it as a contribution to our knowledge about TGF in the Baltic Sea Region.

Oslo, November 2007

Jon Dahl Engebretsen

Chairman of the Climate Change Working Group

Summary

The Nordic cooperation on climate issues began with the establishment of the Ad Hoc Group for Energy Related Climate Change Issues in 1993 under the Nordic Council of Ministers. It was originally led by representatives of energy ministries in the Nordic countries and later in 1996 extended to also include representatives for the environment ministries with the creation of the Environment and Energy Group, now known as the Climate Group.

Numerous workshops, conferences and publications have been organised and produced since 1993 analysing and testing the feasibility of Joint Implementation in the Nordic countries and in the other Baltic Sea Countries, as well as looking at emission trading within the Nordic countries and the effects of the EU ETS on the Nordic economies. The first publication on a cooperation on JI between the Nordic countries and the Baltic Sea neighbours dates back to 1994.

Five years later, BASREC was established and negotiations at the civil servant and political level to prepare for the Testing Ground Agreement between the BASREC members started. The aim was to stimulate an early follow-up of the Kyoto Protocol and to help the countries in the Baltic Sea Region position themselves favourably in respect of fulfilling their own commitments under the Kyoto Protocol. In parallel, negotiations were initiated between the Nordic countries and Germany to establish a Nordic carbon fund, the Testing Ground Facility, which would be closely linked to the Testing Ground Agreement.

The Testing Ground Facility, managed by NEFCO, became operational in 2004. By several stakeholders, this is considered too late for the fund to fully have been able to reap the benefits of JI credits, especially given the rapidly closing window of opportunity with the new EU member countries joining in 2004, the EU ETS coming into place in 2005 and the linking Directive limiting the potential for JI projects within the EU member countries. Further difficulties in the JI market have included delayed or lacking domestic approval procedures in Russia and Ukraine.

The first public subscription round in 2004 provided the Facility with €15 million, which was later extended to include private sector investors in 2006. Today the fund has a capitalisation of €35 million of which about 50 % is under contract. This corresponds to emission reduction of approximately 2.8 million tCO_{2e}. Although the Facility is relatively small compared to other international carbon funds, the fund has a number of competitive advantages including the synergy effects with the pipeline, regional experience and financing opportunities through NEFCO in the Baltic Sea Region and the dynamics of a management based on a Public

Private Partnership. Another specific feature of the Facility is the multi-lateral energy cooperation between the national states in the Baltic Sea Region and the Testing Ground Agreement, which created a common framework for the implementation of JI projects in the region.

The JI market counts presently 154 advanced projects, representing annual emission reductions of 27 million tCO_{2e}, which is modest, compared to the CDM pipeline. Despite the delayed JI approval procedures in Russia, the country hosts the majority of planned JI projects with 50% of total ERUs in the pipeline and 84% of track 2 ERUs.

Future prospects of JI after 2012 largely depend on whether or not Russia and Ukraine choose to develop and link an emission trading scheme to the EU ETS and how extensive the sector coverage of such a scheme could be. Irregardless of how the comprehensive coverage of targets will be in a future climate regime, there will most likely be some countries, sectors and/or sources that will not be covered by other market-based mechanisms and hence be amenable to JI-type activities. The potential for 'hard' versions of greening AAUs may also be substantial after 2012. The perspectives for GIS as JI-type activities depend on a clear set of definitions and a willingness to create a market for GIS in the host countries.

The TGF is set to terminate its fund activities by end of 2012 unless part of or all of the investors decide to continue the business of the Facility after 2012. A continuation of the TGF could follow three different tracks: maintaining the current TGF mandate; extending the current TGF mandate geographically; or changing the current TGF mandate towards experimental and/or project research activities.

The attractiveness of continuing the current TGF mandate after 2012 depends on the perspectives for JI-type activities in Russia and Ukraine. A possible development of emission trading schemes in the two countries would reduce the potential for JI while a creation of a 'hard' version of greening AAUs could increase the possibilities for JI-type activities. The JI potential in the EU accession countries would not be sufficient in order to justify the fund activities.

An extension of the current TGF mandate could be focused on including Stan countries to the current geographical coverage or the extension could theoretically involve all CDM host countries. This would place new requirements on the fund manager organisation and necessitate a close cooperation with the Nordic Investment Bank to share the project pipeline. In addition, an extension of the current mandate could involve purchasing emission reductions for a crediting period after 2012.

A change to the current TGF mandate could involve developing project research activities that test novel approaches, new technologies or sectors and regions that are largely ignored in the current carbon market. Integrative approaches could also be included, for instance by combining carbon projects with wider sustainability issues such as adaptation and

biodiversity or developing novel schemes of payment for environmental services or linking ODA with carbon finance streams. A future TGF could also combine the different tracks.

Key issues which would need to be addressed if the TGF is to continue after 2012 include a political and/or private sector interest in the perspectives of a continued Facility; a clarification of the public sector role in a maturing carbon market and the necessary capitalisation of the fund to meet the challenges after 2012. The name of the Facility would probably need to be adjusted according to the direction chosen for the fund activities after 2012.

10 years with the Testing Ground Facility

Background

The Nordic countries ratified the Climate Framework Convention in 1993 and 1994, seeing climate change as “an important challenge that must be met with concrete measures to reduce emissions of greenhouse gases” (TemaNord 1995:534, p10).

In the early 1990s the energy sector was expected to play a major role in the design of international and national climate measures as fossil fuel combustion accounts for a major proportion of CO₂ emissions. The Nordic Council of Ministers (NCM) therefore decided in the spring of 1993 to form an Ad Hoc Group for Energy Related Climate Change Issues with the objective to discuss and study various environmental and climatic challenges facing the energy sector in the Nordic countries. This group has since 1993 contributed significantly to the functional, cost efficient and legal development of national and international climate policies and measures through the Nordic Council of Ministers.

Main areas of work have included analysing the effects of the EU emission trading system on Nordic countries, setting up the Testing Ground Facility of Joint Implementation projects in the Baltic Sea Region and Russia and debating future commitments of GHG emission reductions.

This note provides an overview of activities and experiences in the Climate Group since its inception in 1993 with particular focus on the development of the Testing Ground Facility (TGF) under the BASREC mandate. The note also offers an analysis of the status of TGF and JI projects in general as well as perspectives for TGF in a future post 2012 regime.

The Climate Group and their work since 1993

The Ad Hoc Group for Energy Related Climate Change Issues was formed in 1993 with representatives from ministries of energy in the Nordic countries. As the work with climate related issues developed both within the NCM and internationally, the environment ministries became interested in joining the Ad Hoc Group, which led to the creation of the Environment and Energy Group. The group changed name in 2002 to the Climate Group. Members include civil servants from energy and envi-

ronmental ministries in each of the Nordic countries and are chaired in turn by each of the Nordic countries.

The most important task of the Climate Group has been to look into international climate change policy issues and enhance co-operation between Nordic countries in this field and in the Baltic Sea Region. An important part of the group's work was developing the Baltic Sea Region as a "Testing Ground" for the use of flexible mechanisms under the Kyoto Protocol. The Climate Group is also responsible for implementing the climate section of the Nordic Strategy for Sustainable Development "Sustainable Development – New Bearings for the Nordic Countries".

The work programme and the mandate of the Group are annually by the NCM of Energy and Environment. Annual activity reports summarise activities undertaken, workshops and publications.

Analyses and reports produced or commissioned by the Climate Group are presented to the NCM of Energy and Environment during their yearly meetings. The Group also organises conferences and workshops on a regular basis for a wide range of stakeholders in the Baltic Sea Region in order to disseminate results of analyses and further develop novel concepts.

The Climate Group has worked closely with BASREC's Ad Hoc Group for Climate Questions since its inception in 2000. This has in particular included preparing the legislative and administrative framework and developing procedural instruments for the implementation of the Testing Ground. Cooperation has also included capacity building activities and joint workshops and conferences.

Work of the Climate Group related to Joint Implementation

The Ad Hoc Group for Energy Related Climate Change Issues and the subsequent Climate Group have worked intensively with analysis of benefits and potentials of Joint Implementation within the Nordic countries and between the Nordic Countries and the Baltic States, Poland and Russia. This has included identifying and testing methods to set up a reliable, simple and transparent system and working out the functional set up of a clearing house to reduce transaction costs and spread investment risks. Reports and analyses were partly contracted out to academia and consultancies, partly produced by the Group itself. Highlights of the Group's publications in relation to JI between 1994 and 1997 are described below.

The analysis 'Efficiency Implications of FCCC Joint Implementation – With special Reference to Carbon Emission Reduction' (TemaNord 1994:628) was carried out by Professor Peter Bohm and addressed the cost-effectiveness implications of different types of JI-cooperation for industrialised and developing countries. Implications analysed were in terms of the level of net emission reductions likely to be achieved

through JI, limits to the level of crediting of JI, the potential reallocation of ODA funds towards JI investment, and the role of JI in a possible future global system of tradable emissions quotas. The report also treated the perspectives of a Nordic JI clearing house and prospects of a JI trial period.

In the report 'Joint Implementation as a Measure to Curb Climate Change' (TemaNord 1995:534/1995:537) the Ad Hoc Group provided a comprehensive analysis of the potential for JI. It discussed the benefits of JI the Nordic economies and proposed various possible uses of JI within the Nordic countries as well as between the Nordic countries and the Baltic Sea Region. Most importantly, the Group proposed a joint Nordic implementation of JI in the Baltic States, Poland and Russia using NEFCO as a possible clearing house during a pilot phase and building on the experience of NEFCO and other bilateral aid programmes in projects with climate relevance.

The report 'Felles implementering av klimatiltak' (TemaNord 1995:616) was carried out by ECON Energi and provided an analysis of central JI issues at the time and discussed the possibilities of JI cooperation among the Nordic countries, and between the Nordic countries and the Baltic States, Eastern Europe and CIS. The report analysed a practical set up with NEFCO as the responsible organisation for the development of Nordic JI projects in Eastern Europe and included procedures based on GEF documentation used during a pilot JI project phase.

The study from 1996 'Samarbete mellan Baltikum och de nordiska länderna för reduction av koldioxidemissioner' (TemaNord 1996:537) looked at the technical and economic opportunities in cooperation with the Baltic countries in terms of JI and power exchange. The study concluded that while emission reduction investments in the Baltic countries are cost effective, economically feasible and thus suitable for JI, the effects of JI on regional emissions would be moderate, in the order of 3% of the total emissions in the Baltic Sea Region.

Between 1995 and 1997, the Group conducted a number of analyses to estimate the climate components of 10 Nordic financed environment and energy projects in the Baltic countries and Eastern Europe (TemaNord 1996:566, TemaNord 1996:573, TemaNord 1997:543). Five of the ten projects were part of the NEFCO portfolio of projects. This was the first time NEFCO was actively involved in the prospects of using JI in the BSR. Objectives were to gain experience on which international criteria and rules could ensure a sound basis for future JI projects, covering aspects of project design, approval procedures, calculation of baseline, and monitoring of emission reductions. Based on the experience from the project analyses, the Ad Hoc Group for Energy Related Climate Change Issues recommended that a common Nordic proposal for JI project criteria should be developed for the international climate negotiations. This would necessitate a close cooperation between the environment and en-

ergy groups within the Nordic Council of Ministers. This was, however, never included as a mandate of the Group.

Work of the Climate Group related to Emission Trading

From 1997 onwards, the publications of the Environment and Energy Group focused primarily on aspects of emission trading between the Nordic countries and the Baltic Sea States and eventually on the effects of a European wide emission trading system on the Nordic economies.

The Group produced two reports during 1997 on testing and assessing the potential and possibilities of international CO₂ emission reduction trade to lower the costs of reaching a Nordic objective of stabilising emissions at 1990 levels by 2000.

The Group investigated whether tradable carbon emission quotas were internationally acceptable on the background that negotiators in Europe and developing countries in the 1990s were hesitant towards tradable carbon emission quotas as a means for reducing emissions compared to introducing CO₂ taxes (Nord 1997:8). The results of the study indicated that given comprehensive information about the properties of a potentially fair tradable-quota treaty proposal, a majority of the surveyed countries could accept such a proposal, representing some 50% of global carbon emissions. However, none of the dominant 'non-rich' countries (China, India and Russia) approved of the hypothetical proposal.

The potential for tradable emissions quotas between the Nordic countries was tested in practice (Nord 1997:4). A 4-day trading test was made between Denmark, Finland, Norway and Sweden to gain insights into the order of magnitude of potential trading gains. Trading turned out to save ca. 50% emission reduction costs with Finland and Denmark as buyers and Sweden and Norway as sellers.

In 1998, the Environment and Energy Group looked at experience in tradable emission or production quotas from the US, Iceland and New Zealand and sketched a first proposal for a common Nordic tradable quota system (TemaNord 1998:564).

Following up on the first proposal for a common Nordic tradable quota system from 1998, the Climate Group produced two reports in 2001 looking at how to set up a pilot emission trading system in the energy sector among the Nordic countries (TemaNord 2001:510) as well as between the Nordic and the Baltic Sea countries (TemaNord 2001:528). The development at the European level with the proposal of the European Commission in 2001 to establish a European wide emission trading system changed the focus of the Group towards the implications of a European trading system on the Nordic industries including the prospects of Nordic CO₂ taxes and voluntary agreements (Report 2002:449).

In 2003, a report commissioned by the Climate Group analysed the effects of introducing both green certificate systems and emission trading systems in the Nordic countries (TemaNord 2003:535).

With the event of the EU ETS, the Climate Group published in 2004 an analysis looking at the probable effects the emission allowance prices would have on the Nordic electricity markets during the first EU ETS trading period (TemaNord 2004:548). In 2005 the Group commissioned an update study on the developments of the EU ETS and organised a workshop with industry and market actors to discuss the developments (TemaNord 2005: 570) and in 2006 a report analysing the developments during the first year of operation of the Emission Trading Scheme (TemaNord 2006:514).

The latest report commissioned by the Climate Group looks at the effects of taxes on decoupling CO₂ emissions from energy intensive industries in the Nordic countries (TemaNord 2006:528).

Other reports and analyses carried out by and for the Climate Group have included an inventory of climate change indicators for the Nordic countries (TemaNord 1999:505); ways of reducing consumption and emissions of industrial greenhouse gases (TemaNord 2001:594); climate policy and burden sharing (TemaNord 1996:572, TemaNord 1997:562) and strategies and costs to achieve the Nordic climate targets by 2000 (1994:548).

The Process of Establishing TGF

The Establishment and Objectives of TGF

Already in 1994/1995 the Nordic Council of Ministers discussed the possibilities of establishing a JI cooperation between the Nordic countries and the neighbouring Baltic Sea States with NEFCO as a Nordic clearing house. One of the most important tasks of the Environment and Energy Group of the NCM was to prepare and analyse the ways in which such cooperation could be established. In 1997, NEFCO was invited by the Environment and Energy Group to analyse five energy projects for the climate components. This was the first time NEFCO was actively involved in the prospects of creating a pilot scheme for JI in the Baltic Sea Region.

With the decision in 1999 by the energy ministers of the Baltic Sea Region Countries and the European Commission to create the Baltic Sea Region Energy Cooperation (BASREC), the practical work of creating a formal cooperation on JI in the Baltic Sea Region could begin. A Working Group on Climate Policy was established under BASREC with a mandate, inter alia, to “make Testing Ground (TG) known and to stimulate involvement and participation in TG activities.” The Climate Group under the NCM and the BASREC Working Group worked closely to-

gether from 2000 to 2002 to prepare the legislative and administrative framework, as well as help develop procedural instruments for the implementation of the Testing ground.

In June 2002, in Haugesund the Council of Ministers for Business, Energy and Regional Affairs (MR-N) decided to establish a Testing Ground Facility JI Fund with a capitalisation of at least €10 million. The Council of Ministers for the Environment (MR-M) stated their agreement to create the TGF at their meeting in August 2002. This was followed up and consolidated in November 2002, where the ministers of energy of the BASREC countries decided to make the region a Testing Ground for Joint Implementation projects. The Testing Ground Agreement for Flexible Mechanisms of the Kyoto Protocol, which created a common framework for the implementation of JI projects in the Baltic Sea Region, was signed on 29 September 2003 by 7 members of BASREC: Denmark, Finland, Germany, Iceland, Lithuania, Norway and Sweden. Latvia signed later the same year (12. December 2003.) The Agreement came into force in February 2004 and since then Estonia and Poland have acceded to the agreement (3 March 2004 and 28 December 2004 respectively). Russia has yet to sign.

At the outset, the objectives of the Testing Ground were to:

- build capacity and competence to use the Kyoto mechanisms and promote common understanding of concepts, rules and guidelines for use of the flexible mechanisms of the Kyoto Protocol, and to promote realisation of high quality projects in the energy sector generating emissions reductions;
- collaborate in addressing administrative and financial barriers and the level of transaction costs, especially regarding small-scale; and
- facilitate generation, ensure issuance and transfer of ERUs and AAUs related to or accruing from JI projects and Emissions or governmental authorities.

The Subscription to the TGF

The first subscription round for the TGF carbon fund opened in December 2003 and closed at the end of 2004. Six Governments - Denmark, Finland, Germany, Iceland, Norway and Sweden placed €15 million. The second round closed in March 2006 and attracted nine large heat and power and industrial companies from Denmark, Finland and Germany, increasing the capitalisation of the fund to the current €35 million. Figure 1 below shows the proportion of capital by investor in the TGF.

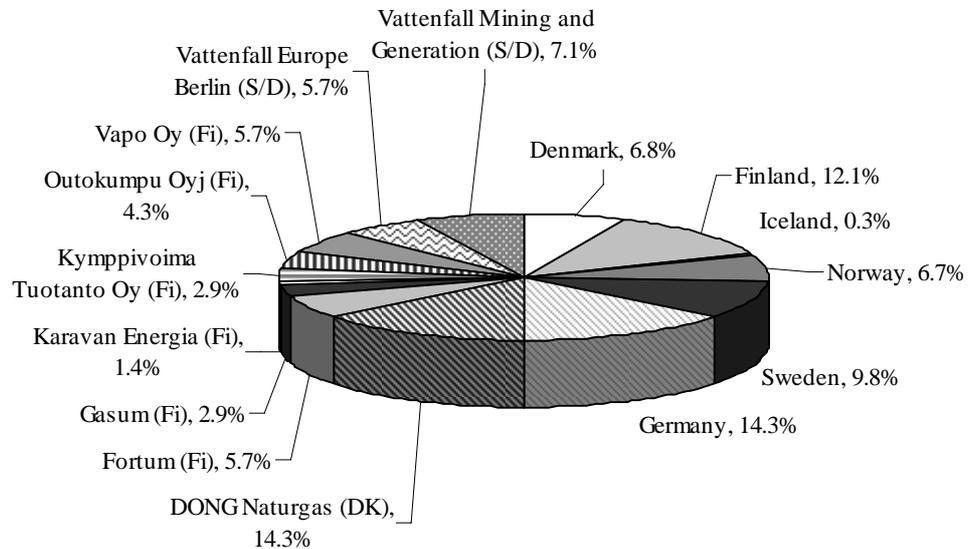


Figure 1 Baltic Sea Region Final TGF Subscriptions

Source: TGF Operational Review 2006

Organisation and Operation of the TGF

The Baltic Sea Region Testing Ground Facility is an open trust fund based on a Public Private Partnership and managed by NEFCO. The fund invests in projects owned and operated by private enterprises, public utility companies, public-private partnerships and municipal, regional or governmental authorities by purchasing AAUs or ERUs for the account of the investors.

The Facility is overseen by an Investor's Committee (IC) and regulated according to a set of Operating Guidelines. The IC usually meets four times a year. The Chair of the Committee is a revolving post with the Swedish Energy Agency chairing the post from 2004 to 2006. The Founding Investors each have one seat in the IC and new investors from the second subscription round that contributed more than €2 million are each entitled to a seat at the IC. Other investors, invited experts and observers from the BASREC secretariat and the Secretariat of the NCM can attend the IC meetings as observers.

Since 2005, the Facility employs a full time fund manager and with the extension of the fund in 2006 also a legal council, a technical advisor, a financial and project manager and a local representative from Ukraine. Overall, the Facility employs four full time equivalents.

The Fund Manager screens Project Idea Notes (PINs) for the portfolio criteria and submits these to the TGF IC as investment proposals. Members of the IC vote on the approval of the PINs, with each member holding one vote. A majority of IC members present at a meeting constitutes a quorum for the approval of projects.

Given the origin of BASREC, energy related projects with a focus on renewable energy, fuel switch, supply side energy efficiency and cogeneration and demand side energy efficiency and conservation are given high priority. But also other sectors such as waste management and projects related to reduction of other greenhouse gases are eligible for financing from the TGF.

Other project selection criteria include the regional coverage, currently the Baltic countries, Poland, Ukraine and Russia; quantifiable environmental performance of the projects in terms of greenhouse gas emission reduction and reduction of transboundary airborne pollution; eligibility of the projects under the Kyoto Protocol, and standard viability criteria – economic, financial, technical and institutional feasibility. The TGF does not operate with a minimum size of emission reduction units per project nor is it bound by clean technology transfers having to come from the investor countries.

Status and experience so far

TGF in the market

The TGF differs from most carbon purchasing funds in several distinct ways:

Origin of TGF - The Facility has its origin in multilateral energy co-operation in the Baltic Sea Region with the establishment of the Baltic Sea Region Energy Cooperation and the Testing Ground Agreement that created a common framework for the implementation of JI projects in the Region. The conditions for the establishment of the TGF were the political will to cooperate on a Testing Ground among the Baltic Sea States.

Mixed Fund – The Facility is operating since 2006 as a Public Private Partnership with capital from Governments of six Nordic countries and nine private utility and industry companies. The mixture of members of the Investor Committee has proven to be a positive and dynamic experience without disagreement on objectives or on approval of JI projects.

Geographic Coverage – The Facility is limited to the Baltic Sea States, Russia and Ukraine. Belarus may be included in the future. This country focus of the TGF follows the geographic focus of the other activities of NEFCO, thus allowing for substantial synergy effects in terms of project pipeline, country knowledge, branding etc. On the other hand, the geographic coverage has also limited the work of the Facility with the advent of the EU ETS, which reduced the potential for JI projects in the Baltic countries and Poland, and with the uncertainty of Russian JI approval procedures, delaying project developments. Ukraine has been included in the host country portfolio to alleviate these effects.

Projects – The Facility focuses primarily on energy related projects, without necessarily excluding other types of projects such as waste management. The fund has focused on small scale JI projects and public sector projects given the relatively limited level and public origin of capital from the 1st subscription round, which had a certain ideological component of supporting projects that the market would not easily sustain. However, the fund sought early on to become functional with cost-efficient carbon credits and with the private investor capital in 2006, the fund is now more flexible in constructing a project portfolio with both small, medium and large scale JI projects.

Management – The Facility is managed by NEFCO, an international financial institution with experience in energy project investment in the Baltic Sea Region since 1990. The placement of the Facility at NEFCO has allowed the fund to be more readily operational, profiting from the existing infrastructure of legal, financial and project development experi-

ence. The Facility also profits from NEFCO's pipeline of projects in the Baltic Sea Region and the possibilities of NEFCO providing equity financing or risk loans to JI projects, while remaining free to seek equity capital and loans from other institutions than NEFCO.

The TGF JI project portfolio

At present the project portfolio of the TGF counts 14 projects from Estonia, Lithuania, Russia and Ukraine. The projects will reduce emissions by nearly 7 million tCO_{2e}, of which the Facility has contracted, made option agreements or is currently negotiating contracts for ca. 2.8 million tCO₂. Approximately 50% of the fund capital has now been committed.

The Facility does not have an official target for how many emission reductions should be purchased, but the Facility estimates that it will purchase in the order of 5 million tCO_{2e}. A summary of the current project portfolio is presented in Table 1 below.

Table 1 TGF Portfolio Summary as of January 2007

Country	Number of projects	Total ERs (tCO _{2e})	Average ERs per project (tCO _{2e})	Project categories
Estonia	5	1,142,000	228,400	Renewable energy, waste treatment, CHP
Lithuania	3	464,000	154,667	Waste management, energy generation, renewable energy
Russia	4	1,416,000	354,000	Energy efficiency (supply side), wastewater treatment, biogas CHP, renewable energy, fuel switch
Ukraine	2	3,960,000	1,980,000	Renewable energy, supply side energy efficiency
Total	14	6,982,000	498,714	

Note: TGF has contracted ca. 2.8 million of the nearly 7 million tCO_{2e}.

Source: TGF Operational Review 2006.

Since 2005 a total of 47 PINs have been proposed to the TGF IC of which three have been rejected. 79% of the proposed PINs are based on renewable energy or energy efficiency related projects.

The Facility uses a number of channels to identify and develop projects:

- the NEFCO/ NIB pipeline, especially the NEFCO Investment Fund and the Special Finance Facilities (Cleaner Production Facility, Energy Savings Credits etc.;
- working with local and international intermediaries e.g. the regional energy efficiency centres in NW Russia, the Cleaner Technology Centre in Kiev etc. as well as the likes of DENA (German Energy Efficiency Agency) and Nordic and German consultants;
- co-purchasing with other buyers;

- soliciting projects through an open call for projects, and promotional activity; and
- speaking at and sponsoring conferences in the host countries and internationally. A list of presentations made by the Facility is included in Annex 2b.

The Facility manages the variety of risks in relation to project development and implementation, financial risks and delivery of ERUs. The Facility identifies and characterises the risks at the due diligence stage and looks at ways in which to mitigate any identified risk. At project level, there is a wide variety of risks that can be mitigated, for instance the financial risk can be offset by having long term heat and power agreement, long term ERPA agreements and construction risks can be managed through e.g. turn key contracts. Risks related to the delivery of ERUs are typically managed through the ERPA by ways of penalties and by purchasing less ERUs than the project is likely to produce but with an option agreement on the remaining quantities. As an overall risk mitigation approach, the Facility is also working towards best practices in ERPAs and keeps itself up-to-date with the latest developments in ERPAs.

Box 1 Mile stones in the Climate Group Work & TGF

1993	- The Ad Hoc Group on Climate Strategies in the Energy Sector is formed
1994	- First discussions and analysis of cooperation on JI between the Nordic countries and the Baltic Sea neighbours [TemaNord 1995:537]
1995	- First proposal for a joint Nordic pilot project with NEFCO as the Nordic Clearing House [TemaNord 1995:534, 1995: 537]
1996	- The Environment and Energy Group is established - Analysis of technical and economic possibilities to reduce CO ₂ in the Baltic countries through JI and power exchange - Workshop: Pilot project on Joint Implementation
1997	- Evaluation of 10 Nordic Energy Projects - Conference: Climate Change Negotiation - Burden Sharing and Cost Effective Implementation Mechanisms and Protocols
1998	- Analysis on tradable emission quotas [TemaNord 1998:564]
1999	- Baltic Sea Region Countries and the EU Commission decide to create BASREC (Baltic Sea Region Energy Cooperation), October 1999 ¹
2000	- BASREC and its ad hoc Climate Group is established
2001	Work on reducing emissions of industrial gases [TemaNord 2001:594]
2002	- The Environment and Energy Group becomes to the Climate Group. - Climate Conference in cooperation with BASREC Ad Hoc Group on Climate Issues. - The Nordic Council of Energy Ministers decides to establish a 'Testing Ground Facility' JI fund ² . - The Nordic Council of Environment Ministers agrees to establish a 'Testing Ground Facility' JI fund ³ . - BASREC parties decide to establish the Testing Ground for Joint Implementation in the BSR ⁴ .

¹ BASREC members comprise Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia, Sweden and the EU Commission represented by the Directorate General for Transport and Energy (DG TREN).

² Meeting of Nordic Council of Ministers for Energy, Haugesund, Norway, June 2002.

³ Meeting of Nordic Council of Ministers for Environment, August 2002.

2003	- 7 BASREC parties sign the Testing Ground Agreement ⁵ - BASREC Parties approve Guidelines for the TGF
2004	- The Testing Ground Agreement comes into force on 1. February 2004 - The first TGF Committee meeting is held, March 2004 - First subscription to the TGF closes December 2004 ⁶
2005	- The first JI project negotiation closes
2006	- Second subscription to the TGF closes March 2006 ⁷ - The TGF is transformed into a Public Private Partnership
2007	- ca. 50% of the TGF capital is committed

⁴ Meeting of Ministers of Energy of the Council of the Baltic Sea States and the European Commission, Vilnius, Lithuania, 20. November 2002.

⁵ Denmark, Finland, Germany, Iceland, Lithuania, Norway, and Sweden sign the TGA during the ministerial meeting in Göteborg on 29 September 2003

⁶ Subscribers are Denmark, Finland, Germany, Iceland, Norway and Sweden

⁷ New Subscribers are Vattenfall Mining and Generation, Vattenfall Europe Berlin, Vapo, Outo-kumpu, Kymppivoima, Keravan Energia, Gasum, Fortum and Dong Energy.

Joint Implementation

Status for JI

The UNEP Risø Centre maintains a monthly updated list of CDM and JI projects in the CDM/JI Pipeline. These are projects that have been published for a 30-day comment period under validation/determination. The Joint Implementation Supervisory Committee (JISC), the governing body in the UNFCCC, launched the verification procedure under track 2 on October 26 2006 and since then, 34 projects have entered the Pipeline or ten new projects per month. This can be compared to the about 100 new CDM projects per month. Prior to the verification procedure, 120 early mover JI projects were announced on the Climate-L email list for public comments. In total, 154 JI projects have been published for public comments since 2003.

A Two-track System

The documentation and verification procedures of JI projects is organised in a two-track system. The track 1 system is a strongly simplified process with no international requirements other than the additional criteria. The host country performs the verification of the track 1 projects and subsequently credits its national register with the amount of verified Emission Reduction Units (ERUs). The host country must comply with a number of requirements in order to apply the simplified JI process as listed in Table 2.

If only the basic requirements are in place (See Table 2), the JI projects must comply with a number of international requirements similar to the requirements of the CDM projects and the verification procedure is carried out by the Joint Implementation Supervisory Committee, the governing body of the UNFCCC, before the host party can credit its national register. To date, there have been no track 1 JI projects.

Table 2 Requirements for Track 1 and 2 JI Project Procedures

Conditions	Track 1	Track 2
1. It is an Annex-I Party and a Party to the Kyoto Protocol;	+	+
2. Its assigned amount has been calculated and recorded;	+	+
3. It has in place a national registry;	+	+
4. It has in place a national system for estimation of greenhouse gas emissions;	+	
5. It has submitted annually a GHG inventory report;	+	
6. It submits the supplementary information on assigned amounts.	+	
Verification procedure	Host Party	JISC

Project categories, Emission Reduction Levels and Regional Coverage

The present 156 advanced JI projects that have been published for public comments as part of the determination procedures represent yearly emission reductions of more than 29 million tCO_{2eq}. Of these, 47 projects follow the verification procedure of the JISC since October 2006, representing ca. 18 million tCO_{2eq}. The TGF has submitted seven projects under the Track 2 procedure.

Russia dominates in terms of number of projects and emission reductions, covering ca. 50 % of ERUs of the total number of JI projects and 70% of the track 2 ERUs. The average project size in Russia is more than four times larger than the remaining average JI project sizes. Bulgaria, Ukraine and Hungary represent ca. one third of ERUs. JI projects in Estonia and Lithuania are among the smallest average size projects. Latvia is the only Annex I Parties with no JI projects in the Pipeline (besides other OECD countries than Germany and New Zealand). Table 3 lists number and size of projects for all tracks (i.e. early movers and track 2) and for track 2 projects only.

Table 3 JI Projects Published for Public Comments Since 2003

Host country for JI projects	All Tracks		JI Track 2	
	Number of projects	ERUs per year (1000s)	Number of projects	ERUs per year (1000s)
Russia	31	14468,379	23	12,879
Ukraine	14	4869,5814	5	4,073
Bulgaria	22	3382,1026	5	465
Romania	15	1589,9055	2	222
Hungary	11	1436,934	1	141
Poland	14	878,6024	3	191
Czech Republic	21	813,9062	0	0
Estonia	11	601,5052	3	211
New Zealand	5	510,6	0	0
Slovakia	3	285	0	0
Lithuania	6	215,6582	4	126

Germany	3	194,348	1	57
Latvia	0	0	0	0
Total	156	29,246	47	18,370

Source: UNEP Risø JI Pipeline, April 2007.

The largest amounts of emission reductions are found in the category coal mine/beds, cement, fugitive and landfill gas projects, which account for only 37 of the published 156 JI projects but nearly half (45%) of ERUs. Projects reducing fugitive emissions in Russia represent more than half of ERUs in this category. To date, there are no published cement JI projects in the pipeline.

Renewable technology dominates the JI Pipeline in terms of number of projects (76), primarily hydro, wind power and biomass energy (18-26 projects in each category). A few JI projects have applied geothermal and biogas technology (4 projects respectively). In terms of emission reductions, renewable technology projects represent the third largest category with 19% of expected emission reductions. Energy efficiency represents ca. one fifth of the number of projects and amount of ERUs. This category covers primarily energy distribution and energy efficiency activities in industry and supply side energy efficiency. The JI Pipeline includes eight fossil fuel switch projects representing 8% of ERUs and three N₂O projects (6% of ERUs). Finally, the list counts one afforestation project in Romania. Figure 2 and Figure 3 illustrate the distribution of current advanced JI projects in terms of number of projects and ERUs by category.

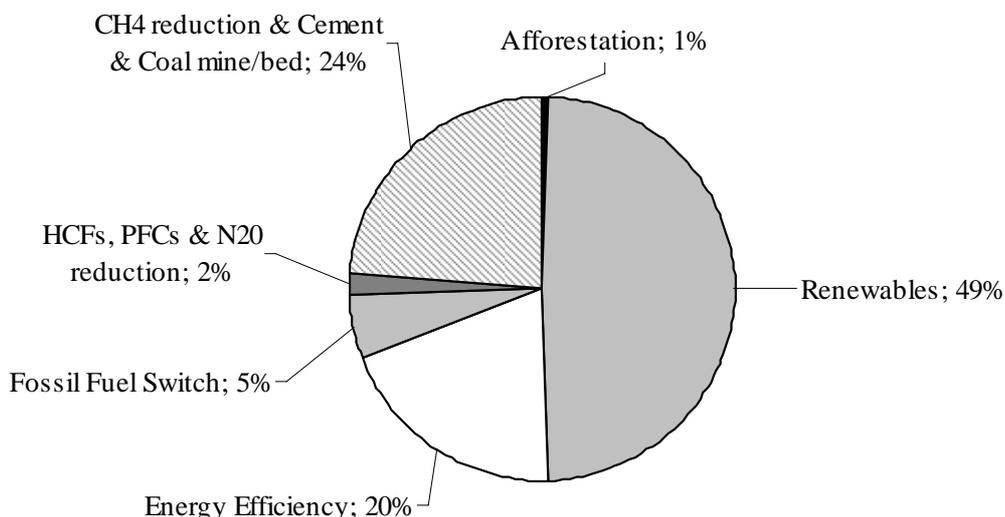


Figure 2 Number of JI projects by category

Source: UNEP Risø JI Pipeline, April 2007

Figure 3 Emission Reduction Units by Category

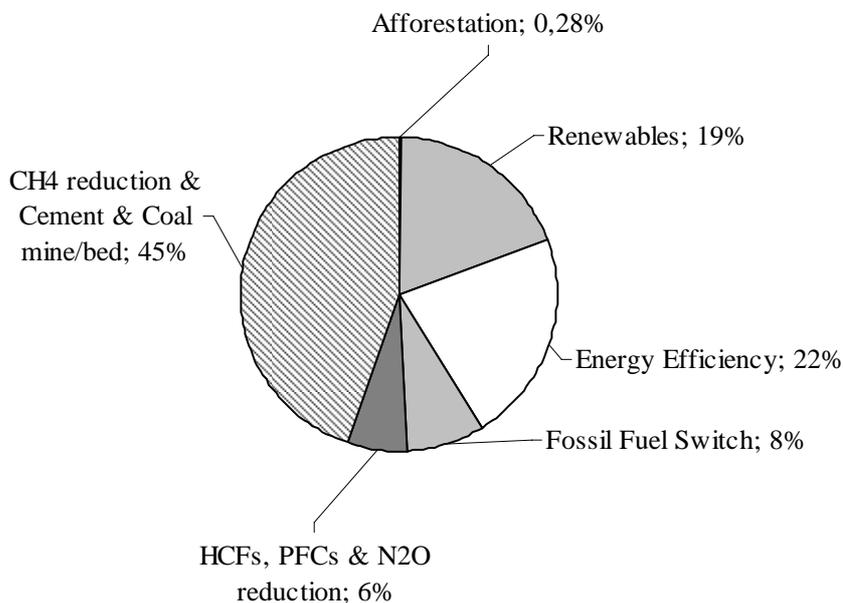


Figure 4 Emission Reduction Units by Category

Source: UNEP Risø CDM/JI Pipeline, April 2007.

Perspectives for Joint Implementation in a Post 2012 regime

A future climate framework may develop as a patchwork of complementary elements reflecting that different countries select different policies according to their national circumstances. These may include binding fixed emission targets, binding sectoral and transnational sectoral targets, voluntary baselines for specific sectors and project based crediting mechanism. Linking domestic and regional trading systems in the future will be essential for a cost efficient and effective carbon market.

No matter how comprehensive the coverage of targets will be in a future climate regime, there will most likely be some countries, sectors and/or sources that will not be covered by other market-based mechanisms and hence would be amenable to a project-based mechanism like JI-type activities. The perspectives for JI in a post 2012 regime depends largely on whether or not Russia and Ukraine choose to develop and link an emission trading scheme to the EU ETS and how extensive the coverage of such a scheme would be.

There may also continue to be a significant role for a second track JI-like mechanism post 2012 if some countries are unable to meet emission trading eligibility requirements. The opportunity to link purchases to specific reduction or removal projects may also continue to be important to some buyers, especially if the domestic emission trading system in the seller country is small or non-existent.

There is in any case a need for an early signal that emission reductions will also have a value after 2012 for the international carbon market to have an impact on investment decisions related to long-lived capital stock such as energy and transportation. The EU Commission confirmed in the Emission Trading Scheme (ETS) Review (COM (2006)676 Final) that it is committed to maintaining a recognition of the Kyoto Protocol's project-based mechanisms after 2012 to ensure a regulatory certainty for companies. The EU ETS Directive (2003/87/EC) also provides for the continued recognition of credits from the Kyoto Protocol's project-based mechanisms after 2012 and the EU has signalled that its ETS will continue after 2012. On the project level, the World Bank is among a few purchasers of emission reductions after 2012. On a case by case basis, the World Bank may choose to purchase emission reductions up until 2015.

Green Investment Schemes (GIS) were proposals from the EU, Canada and Japan to green AAUs before purchasing these from economies in transition. The potential is significant up to 2012 and may remain substantial after 2012. GIS is not yet well-defined and there are, as yet, no real markets for greened AAUs. GIS can be found in a 'hard' and 'soft' version. 'Hard' GIS resemble JI-type activities with a direct relationship between the quantity of emission reductions generated by the activity and the corresponding number of AAUs that are greened. The 'Soft' GIS include a wide range of policies, programmes, technology and capacity building initiatives where the effects of the target activities may not necessarily achieve near-term measurable emission reductions.

Russia and Ukraine dispose of large emission surpluses; even at a conservative estimate the combined total easily exceeds 500 million tCO_{2e} per year. Emission reductions through JI could theoretically generate another 500 million tCO_{2e} per year⁸. Given the institutional delays in Russia and Ukraine, IGES, however, suggests that only 30 million tCO₂ emission reductions can be generated per year in both countries over the period 2008-2012. The current pipeline of JI projects, however, shows a much more humble level of emission reductions with 13.9 million tCO_{2e} per year in Russia and 2.9 million tCO_{2e} per year in Ukraine (See Table 3). Other estimates of realistic potentials for emission reductions through JI projects in Russia lie in the range of 50 million tCO_{2e} per year⁹ to 100 million tCO_{2e} per year¹⁰ between 2008 and 2012. For Ukraine, estimates have been published with AAU surplus in the order of 300 million tCO_{2e}¹¹ and estimates of the potential JI emission reductions have been

⁸ IGES, 2005. Option Survey for Japan to acquire credits from abroad, Japan.

⁹ Kajaste, 2006. How renewable Energy Technology Investments Can Benefit from Joint Implementation. Baltic Sea Region Testing Ground Facility. NEFCO [Turku, June 13th 2006] ICF International, 2006. Creating Value with Joint Implementation Projects in Russia. [http://www.icfi.com/Markets/Energy/doc_files/ji-projects-russia.pdf]

¹¹ The National Strategy of Ukraine for Joint Implementation and Emission Trading. Kiev. Ministry of the Environment and Natural Resources, 2003.

assessed in the order of 150 million tCO_{2e} per year¹². The very wide diversity in estimated emission surpluses and JI potential in Russia and Ukraine indicates that on the one hand there is a very large potential for greening AAUs and reducing emissions through JI and on the other hand this potential is not likely to be realised within the first commitment period. This potential is therefore, at least in theory, likely to be available after 2012.

The future perspectives of JI-type activities in any significant scale depend largely on two aspects: Firstly, the willingness and extent to which Ukraine and Russia will utilise AAUs through the Green Investment Scheme applying the 'hard' GIS version and secondly the potential development of emission-trading schemes in Ukraine and Russia and the sectoral coverage of the trading regime.

¹² Canada-Ukraine Environmental Cooperation Program, Joint Implementation Project Database, 2005.

TGF - Perspectives for the future

There are two main directions the TGF could take after the first Kyoto Commitment period: the Investors could either choose to terminate all fund activities by 2012 or they could choose to continue the fund after 2012 in one form or another.

The Operational Guidelines of the TGF allow for a continuation of the fund after 2012. §13.1 of the Operational Guidelines state that „*All or part of the Investors may decide to continue the business of the TGF after 31 December 2012 on such terms as they may determine.*”

A continuation of the TGF fund activities will both depend on the development of the international climate regime and on the political and private sector support for a continued Baltic carbon fund.

The EU determination to continue the EU ETS and the recent decision of the Council of Ministers to commit to binding emission reduction targets by 2020 strongly indicate that there will also in future be a demand for flexible mechanisms to ensure cost efficient emission reductions. Uncertainties relate to the design and geographical coverage of a future international climate regime as well as domestic decisions of major carbon emitters such as Russia and Ukraine.

Box 2 Russia and Ukraine Domestic Decisions for the Period 2008-2012

The Russian JI domestic rules and procedures have been under development since the first draft resolution of the Government was prepared in September 2005 by the Ministry of Economic Development and Trade. The final agreement is at the time of writing still pending. Uncertainties of the timing and final procedures of the domestic JI rules make investors in carbon finance look for alternative sources of emission reductions.

TGF has drawn the consequence and extended its regional scope to Ukraine. Here, domestic rules and procedures were implemented in August 2006 with the Ministry of Environmental Protection acting as the Focal Point. To date, the Ukrainian Focal Point has signed 66 Letters of Endorsement and five Letters of Approval. In March 2007, a new agency ‘National Agency for Environmental Investment’ was established with the aim to coordinate the sale of AAUs and distribution of funds to selected activities and programmes under the Green Investment Schemes (GIS). The Agency is planned operational within 2–3 months.

There are presently very few mixed funds functioning as Public Private Partnerships on the carbon market. PPP carbon funds like the TGF profit from a combination of private sector experience and capital, and pipelines

from public sector development banks such as NEFCO. Such combinations would continue to represent a window of opportunity for the Facility after 2012.

Despite the uncertainties related to future climate regimes, there are a number of future strategies, which TGF investors could consider at the present stage, in order to start discussions on whether or not to continue the TGF fund activities after 2012. The strategies could include finalising the current mandate (Model 0), extending the current mandate after 2012 (Model I); extending the current mandate geographically (Model II) focusing on experimental and research activities (Model III) or a combination of these.

Model 0: Finalise the Current TGF Mandate

The Operational Guidelines foresee a termination of TGF activities by 31 December 2012, unless investors decide to continue the business of TGF (§13.1). A limitation of the current activities to the first commitment period would represent a conservative course of action. From a public sector perspective, a limitation of the TGF mandate to the first commitment period may reflect the opinion that public sector budgets should not be utilised in a maturing carbon market unless the activities and projects would justify this.

Model I: Extending the Current TGF Mandate after 2012

By maintaining the current mandate of the TGF to facilitate generation and ensure issuance and transfer of ERUs from the Baltic Sea States, Russia and Ukraine, the Facility would remain loyal to the original mandate and continue to capitalise upon the pipeline, experience and local knowledge of NEFCO in host countries after 2012.

An additional activity for TGF could be a facilitator role in the transaction of AAUs under the GIS in order to ensure that projects being developed with the sale of the AAUs have environmental integrity. This activity is not depending on a fund structure per se, but would benefit from the knowledge and expertise of TGF and NEFCO for Scandinavian governments.

A fundamental requirement under Model 0 is the possibility to successfully develop JI projects in Russia and Ukraine after 2012. In case of a linked emission trading system between the European Union and Russia/Ukraine, the opportunities for JI in Russia and Ukraine would significantly reduce the attractiveness of the TGF activities and therefore seriously restrict the business area of TGF to sectors outside the emission trading system.

Model II: Extending the Current TGF Mandate Geographically

A future TGF could extend its mandate to include more countries in order to increase the opportunities for facilitating and generating cost efficient

carbon credits, while maintaining its current set of activities. There could be two avenues in such an extension of the mandate:

- Include Stan Countries in Central Asia under the CDM in addition to the current geographic coverage; or
- Include CDM host countries globally in addition to the current geographic coverage.

A more or less radical extension of the geographical coverage of the Facility will have new managerial and operational implications for the fund manager in terms of region and country knowledge, sectors, and project risk assessments.

The more the mandate opens up to developing projects globally, the more the fund would need to make use of the synergy potential with the project pipeline of the Nordic Investment Bank (NIB), where a large proportion of investments already relate to environment and energy projects in developing countries.

There would necessarily be a need for a significant increase in financial capacity if the TGF scope is extended geographically.

An additional extension of the current TGF mandate could be to follow the example of the World Bank and contract emission reductions in projects with crediting periods after 2012, which would improve the monetised value of carbon projects. The price per emission reduction is typically lower than in a contract that covers the period until 2012, but the overall contracted value of the emission reductions in the longer time period could be comparable or greater.

Model III: Changing the Current TGF mandate, e.g. towards experimental and/or project research activities

The original philosophy of the TGF at the end of the 1990s was to test projects within the Joint Implementation mechanism and gain experience in an emerging carbon market. However, by the time the Facility started operating in 2004, 'implementation' of projects was more relevant than 'testing' the JI concept.

A future TGF could remain true to the origin of the Testing Ground Facility by testing novel concepts and experimenting with new technologies, sectors, and/or approaches, including programmatic activities and Green Investment Schemes. This would mean that the current TGF would change character from the current management objectives to become e.g. a project research facility.

The experimental Facility could for instance seek to integrate other sustainability objectives into the carbon market and/or focus on sectors and regions that are largely ignored by the current international carbon market. Issues which could be interesting if following for instance an integrative approach could include developing:

- projects with clear synergy effects between mitigation and adaptation to climate change;

- projects with clear synergy effects between carbon projects and biodiversity conservation or enhancement;
- projects that provide seed money from carbon finance revenues to payment schemes for environmental services;
- projects that are linked to traditional ODA funded projects by providing sustainable revenue streams.

The Facility could also focus wholly or partly on projects and countries that are not interesting for the commercially run carbon funds, as there is a significant need for supporting the engagement of less developed country participation in the carbon market. There would, for instance, be a need to explore options of how to expand and complement the CDM in ways that recognise the differing national circumstances.

Combining Tracks

A future TGF could also combine some of the different tracks described, for instance by extending the current mandate geographically and also working with experimental aspects of the carbon market. Box 3 summarises the different proposed options.

Box 3 Summary of Potential Future Options for TGF**Model 0: Finalise the current TGF mandate****Motive**

- Conservative course of action in relation to original TGF mandate and TGA

Conditions

- Investors have little or no interest in a continued business in TGF after 2012

Implications

- Knowledge and expertise in TGF will move elsewhere
- Pipelines and contacts will remain in NEFCO

Model I: Extend the current mandate after 2012**Motive**

- Loyalty to original mandate and TGA

Conditions

- JI continues to be an attractive option in Russia and Ukraine

Implications

- Continue to capitalise upon expertise and pipeline of NEFCO
- Fund capitalisation need to be increased

Model II: Extend the current mandate geographically
A – extend to Stan countries in Central Asia
B – extend to CDM host countries globally**Motive**

- Expand the opportunities of TGF

Conditions

- CDM continues to be an attractive mechanism.
- Future JI opportunities less crucial to TGF
- TGF can capitalise upon expertise and pipeline of NIB

Implications

- New managerial and operational implications
- Fund capitalisation need to be increased

Model III: Change the Current Mandate**Motive**

- Remain true to the origin of the Testing Ground Facility
- Change orientation of TGF towards testing activities, e.g. experimental project research activities

Conditions

- Typical public sector remit

Implications

- New managerial and operational implications
- Private sector interest reduced

Requirements and Issues

If the TGF is to continue after 2012, a number of basic requirements and key issues will need to be addressed:

- *Interest of Stakeholders:* There must be a political and private sector interest in the perspectives in order for the Facility to continue;
- *Timely decision:* A decision on the continuation of the Facility must to be taken no later than 2009–2010 in order to ensure a seamless continuation of the fund activities and avoid losses in key personnel, contacts and pipelines.
- *Public sector involvement:* The public role and level of involvement must be clarified with a maturing private carbon market;

- *Level of capitalisation:* The capitalisation of the fund would need a different dimension from the present situation in order to compete with other international carbon funds;
- *JI perspectives:* The organisational set up with a close exclusive link to BASREC will need to be discussed given restricted opportunities for JI projects in these countries;
- *Title of the Fund:* Unless the focus of the Facility will be on experimenting and testing aspects of carbon finance projects, the name of the carbon fund would need to change away from 'Testing'.

Process

The process on deciding the future for the TGF must cover

- i) whether or not the TGF should continue after 2012 and, if the Fund is to continue,
- ii) under which mandate and structure the Fund should continue.

In order to ensure a seamless continuation of the current type of activities, it is strongly recommendable to start this process as soon as possible. There are several ways to start such a process, for example:

- TGF could open a third tranche for capital to be invested post 2012 in regions either restricted to the current mandate (Model 0) or extended to either the Stan-countries or CDM host countries globally (Model I). The response will show any concrete interest in continuing the fund both from the public as well as the private sector. Any special wishes in terms of countries could be included in this phase.
- The Investor Committee could charge TGF to investigate interest from governments in a continued interest in the TGF, for instance in undertaking activities under a changed TGF mandate (Model II).

Conclusion

The Nordic cooperation on climate issues within the Nordic Council of Ministers has together with Germany been successful in developing a Baltic carbon fund, the Testing Ground Facility. In parallel, members of BASREC have established a multilateral agreement (TGA) on stimulating the use and understanding of JI in the Baltic Sea Region. Despite the late inception of the carbon fund and external developments in the European Union and JI host countries, which have made the JI market less attractive than originally envisaged, the TGF has been able to quickly start identifying and contracting projects.

The management and operation of the carbon fund have from the start profited from project development expertise, regional knowledge and financing opportunities in the Nordic Environment Finance Corporation. Since the inclusion of private investors in 2006, the Investor Committee has also profited from the dynamics and market knowledge of the private

sector. The TGF has now committed ca. half of the capital to emission reductions and expects to purchase emission reductions in the order of 5 million tCO_{2e} in total. Stakeholders interviewed for this memo have unanimously complimented the good work and management of the TGF. Concerns have focused on external unfavourable developments of the JI market, which the fund has sought to alleviate by extending the geographic coverage to Ukraine in 2006.

Despite future uncertainties of the design and stringency of a future climate regime, public and private sectors in the European Union can rely on the continuation of the EU ETS with perspectives of increasingly stringent targets. The wider international climate framework may develop into a patchwork of complementary elements where regimes with fixed targets in industrialised countries and voluntary baselines for specific sectors in developing countries coexist. The potential for project based mechanisms like JI-type activities depends on which countries, sectors and/or sources will not be covered by other market-based mechanisms. Especially the development in Ukraine and Russia will determine the future attractiveness of JI, including the potential market for 'hard' GIS.

Whether the TGF should continue the fund activities after 2012 is a decision to be made by part or all of the investors. Given the capacity and expertise built up in the TGF, as well as the expected future stringent emission reduction targets, it is strongly recommendable for investors to start investigating options and perspectives for a continued and seamless cooperation after 2012.

A termination of the TGF mandate by 31 December 2012 would bring the activities to a close and any uncommitted funds would be returned to the investors (Model 0). Expertise and knowledge built up within TGF would most likely move elsewhere.

A continuation of the TGF mandate with the current regional and sector focus would imply that TGF and stakeholders can make further use of the capacity and expertise created (Model I). The potential in the region will depend on the development of the climate framework after 2012.

A geographical extension of the TGF mandate to include either the Stan countries or CDM host countries in general would significantly open up opportunities for cost efficient emission reductions (Model II). The pipeline of the Nordic Investment Bank could provide a synergy effect similar to the one between the TGF and NEFCO today. Implications for the management and operation would need to be addressed.

A third and less conventional track could be an option for the 'Testing' component of the TGF, opening up for project research activities and working with novel approaches and concepts within the Baltic Sea Region or in a wider geographic area (Model III).

Finally, key issues of political interest, private sector involvement and level of capitalisation would need to be addressed well in advance of 2012.

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Swedish summary

Det nordiske samarbejde omkring klima begyndte med etableringen af ad hoc gruppen for energirelaterede klimatemaer under Nordisk Ministerråd i 1993. Den var oprindeligt ledet af repræsentanter fra energiministerierne i de nordiske lande og senere i 1996 blev den, ved oprettelsen af Miljø- og energigruppen, nu Klimagruppen, udvidet til også at inkludere repræsentanter fra miljøministerierne.

Adskillige workshops, konferencer og udgivelser er siden 1993 blevet arrangeret og produceret for at analysere og teste anvendeligheden af Joint Implementation i de nordiske lande og andre lande omkring det Baltiske Hav. Desuden er der set på kvotehandlen indenfor de nordiske lande og effekten af EU ETS på de nordiske økonomier. Den første publikation omkring samarbejde om JI mellem de nordiske lande og naboerne ved det Baltiske Hav er tilbage fra 1994.

Fem år senere blev BASREC etableret og de politiske forhandlinger, der skulle forberede "the Testing Ground Agreement" mellem BASREC-medlemmerne begyndte. Målet var at igangsætte en tidlig opfølgning af Kyoto protokollen og hjælpe landene omkring det Baltiske Hav med at opnå en favorabel position i forhold til at opfylde deres forpligtelser under Kyoto protokollen. Parallelt med dette blev der startet forhandlinger mellem de nordiske lande og Tyskland for at etablere en nordisk carbonfond "the Testing Ground Facility" der blev tæt forbundet med "the Testing Ground Agreement".

"The Testing Ground Facility", ledet af NEFCO var oppe og køre i 2004. Dette bliver af mange interessenter betragtet som for sent i forhold til at have kunnet høste alle fordelene ved JI-kreditter specielt set i lyset af: Den hastigt svindende mulighed der præsenterede sig med de nye EU-medlemslande i 2004, EU ETS der faldt på plads i 2005 og "the linking Directive" der begrænsede potentialet for JI-projekter indenfor EU-medlemslandene. Yderligere problemer på JI-markedet har inkluderet forsinket eller manglende indenlandske godkendelsesprocedurer i Rusland og Ukraine.

Den første offentlige medlemsrunde i 2004 gav €15 mio., hvilket i 2006 blev udvidet til også at inkludere investorer fra den private sektor. I dag har fonden en kapitalbeholdning på €35 mio. hvoraf omkring 50% er under aftale. Dette svarer til en emissionsreduktion på ca. 2.8 mio. tCO_{2e}. Selvom fonden er relativt lille i forhold til andre internationale carbonfonde, har fonden en række konkurrencemæssige fordele, heriblandt synergieffekten af pipeline, regional erfaring, finansieringsmuligheder gennem NEFCO i regionen omkring det Baltiske Hav og den dynamiske ledelse baseret på et Public Privat Partnership. En anden spe-

cifik egenskab ved fonden er det multilaterale energisamarbejde mellem de nationale stater i regionen omkring det Baltiske Hav og "the Testing Ground Agreement", hvilket skabte en fælles ramme for implementeringen af JI-projekter i regionen.

Der er på nuværende tidspunkt 154 udvidede projekter på JI-markedet og disse giver den samlede årlige emissionsreduktioner på 27 mio. tCO₂e, hvilket er beskedent i forhold til CDM pipelinen. På trods af den forsinkede JI-godkendelsesprocedure i Rusland er landet stadig hjem for størstedelen af de planlagte JI-projekter med 50% af de totale ERU'er i pipelinen og 84% af track 2 ERU'erne. Fremtidige udsigter for JI efter 2012 afhænger i høj grad af hvorvidt Rusland og Ukraine vælger at udvikle og sammenkoble et kvotehandelssystem med EU ETS og hvor stor sektordækningen sådant et system kunne have. Uafhængig af hvordan den omfattende dækning af mål vil være i et fremtidigt klimaregime, vil der højst sandsynligt være nogle lande, sektore og/eller kilder, der ikke vil blive dækket af andre markedsbaserede mekanismer og derfor være tilgængelige for JI-aktiviteter. Potentialet for „hårde“ versioner af „greening AAU's" kan også være væsentligt efter 2012. Perspektiverne for GIS som JI-aktiviteter afhænger af et klart sæt definitioner og en vilje til at skabe et marked for GIS i værtslandene.

TGF er sat til at afslutte sine fondsaktiviteter i slutningen af 2012 med mindre en del af eller alle investorerne beslutter sig for at fortsætte fondens forretninger efter 2012. En fortsættelse af TGF kunne gå i tre forskellige retninger: bevare det nuværende TGF-mandat, udvide det nuværende TGF-mandat geografisk eller ændre det nuværende TGF-mandat mod eksperimenterende og/eller projektresearchaktiviteter.

Hvor attraktivt det ville være at fortsætte det nuværende TGF-mandat efter 2012 afhænger af perspektivet for JI-aktiviteter i Rusland og Ukraine. En mulig udvikling af kvotehandelssystemet i de to lande ville reducere potentialet for JI mens en „hård“ version af „greening AAU's“ kunne øge mulighederne for JI-aktiviteter. JI-potentialet i EU-optagelseslandene ville ikke være tilstrækkeligt til at retfærdiggøre fondens aktiviteter.

En udvidelse af det nuværende TGF-mandat kunne fokuseres på at inkludere Stan lande i den nuværende geografiske dækning eller den kunne teoretisk set involvere alle CDM værtslande. Dette ville stille nye krav til fondens ledelsesorganisation og nødvendiggøre et tæt samarbejde med den nordiske investeringsbank om at dele pipelineprojektet. Yderligere kunne en udvidelse af det nuværende mandat involvere indkøb af emissionsreduktioner til kreditering efter 2012.

En ændring i det nuværende TGF-mandat kunne involvere udvikling af projektresearchaktiviteter, der tester nye tilgange, nye teknologier eller sektorer og regioner, der i stor stil er ignoreret på det nuværende marked. Helhedsskabende tilgange kunne også inkluderes ved for eksempel at kombinere carbon-projekter med bredere bæredygtighedstemaer såsom

regulering og biodiversitet eller udvikling af nye systemer til betaling for miljømæssige services eller sammenkæde ODA med carbon finance streams. En fremtidig TGF kunne også kombinere de forskellige retninger.

De hovedproblemstillinger der skulle adresseres, hvis TGF skal fortsætte efter 2012 inkluderer politisk og/eller privatsektor interesse i perspektiverne ved en fortsat fond; en klargørelse af den offentlige sektors rolle på et udviklende carbonmarked og den nødvendige kapitalisering af fonden for at kunne imødekomme udfordringerne efter 2012. Navnet på fonden ville højst sandsynligt skulle tilpasses i forhold til den valgte retning for fondens aktiviteter efter 2012.

Appendix 1

Quotes chapter 1: 10 years with the Testing Ground Facility, Views on the Work of the Climate Group since 1993

What was the motivation to join the Climate Group?

Jaakko Ojala, Environment Ministry, Finland – the main motivation of Finland to join the Ad Hoc Group on Energy Related Climate Change Issues was originally to launch more cooperation between research groups in climate change issues in the Nordic countries, as some Finnish Institutes had not been so active in cooperating internationally. The establishment of the Ad Hoc Group, however, did not really lead to more research cooperation, instead the Group managed to activate the Nordic countries and the progress on the Testing Ground is one example of this work. So I think that there has been a lot of progress.

Olle Björk, Ministry of the Environment, Sweden – it was the expectation of Sweden that the group would contribute to formulating international cooperation in the field of climate change with a focus on the regulatory frameworks. The purpose of the group was to provide policy relevant information and analysis. Sweden was yet a member of the EU and it was therefore a Nordic pendant to the European cooperation. At the outset it was only the energy side that represented the Ad Hoc Group. Because we were doing well with interesting work, the environmental side of the NCM became interested to participate in the group, which started in 1996.

How has the work in the Climate Group developed over the years?

Olle Björk, Ministry of the Environment, Sweden – The work in the Climate Group was easier when the Group was small and only represented the energy side of the NCM. After the creation of the Climate Group in 1996, 2 representatives from each country were present each from the energy and environment ministries. Documentation of decisions necessarily became more important with the extension of the Group. But it works fine.

Over the last years, we have had too much to do. In the beginning of the Group, we discussed the projects and contents, formulated projects with an important input from the members to the work of the Group. Today, the work has changed character with a reduction in budget for the Group. We have fewer possibilities to go into depth with the projects. The work has almost developed towards a ‘normal’ Group under the NCM where we distribute money for studies and we don’t decide what projects to initiate and fund as much as previously. The content of the

work has also changed. The Group is now more focused on topics that can be used in climate negotiations in the EU or internationally compared to the first phase, where earlier we were more interested in academic, theoretic questions. The energy side of the Group expressed a wish in the past to use the Group to help formulate a common Nordic negotiation position, but this didn't happen as the mandate wasn't created for that.

What are the particular positive aspects of the work of the Climate Group?

Olle Björk, Ministry of the Environment, Sweden – Members of the Group have been happy with the analytical atmosphere in the forum where it has not been necessary to represent national positions in the discussions. The political control of the group has intensified, though, over recent years. The yearly approval of the mandate and work of the Group by the Civil Servant Committee is another positive aspects as it is quite general, which leaves some initiative within the Group.

What are the less positive aspects of the work of the Climate Group?

The reduced budget of the Group necessarily reduces the level of responsibility that the Group members can take in terms of the studies and analyses. The cooperation between the Nordic countries has also occasionally led to one country refusing to let a study be published. The Group has lost in continuity in the work due to the fact that the Group now has to rotate the chair every year. Other issues in the Group include the probably inevitable controversies between the energy and environment side, but also that the Group is being asked by other Groups to give answers to areas that lie outside the area of the Climate Group. The present structure is similar to that of a "normal" working group designed to allocate money but that is not really what our Group is about.

How did the Climate Group start working with the Testing Ground Facility?

Seppo Oikarinen, Ministry of Trade and Industry, Finland – the idea for the Testing Ground Facility originally came from Denmark, from Jørgen Abildgaard. We all liked the idea and proposed it to our ministers and ministries. The ministers thought it was a good idea and they said "go ahead with the negotiations" and that's how it started. It was a long negotiation and a complex situation, but we managed to get it established.

Olle Björk, Ministry of the Environment, Sweden – The initiative started in the end of the 1990s with the meeting in Stavanger in 1999, where Sweden and Denmark made a concrete proposal. By then, the Climate group had worked for about a year to look at the possibilities of making projects in the Baltic Sea Region. It took some time and it wasn't easy to make people understand the idea behind the flexible mechanisms. The Group was asked to look at the possibilities of financing and an issue

was that the Stortinget in Norway had to agree to the financing. Denmark and Sweden were the driving countries in that process.

Reasons of Investors to subscribe to the TGF

What were the motivations to join the TGF?

Frank Rasmussen, DONG Energy, Denmark – The motivation for DONG Energy to join the TGF with 5 million euros was to diversify our investments in terms of countries and increase possibilities to purchase emission credits. We are also active in other carbon funds such as the World Bank Umbrella Carbon Fund and the Danish Carbon Fund. We have invested more than 30 million euros in carbon funds.

Seppo Oikarinen, Ministry of Trade and Industry, Finland – The first idea with the TGF was really to gather experience and to obtain the know how of how these new ideas work in practice. None of us were able to see if this idea would fly. It was not so difficult to convince the minister in Finland of the idea; it only became difficult when we started asking for the capital. But we found the money in a programme of bilateral trade projects, which didn't proceed on the ground.

Uwe Schroeder-Selbach, Federal Ministry of Economics and Technology, Germany – As Germany will reach its Kyoto obligation by domestic measures, we have at the Federal level technically no real need for the use of JI/CDM. The subscription of Germany to the TGF, however, was based on the acknowledgement that there are several good reasons to pursue the flexible mechanisms, including:

- participation of host countries, especially those without reduction obligation, in GHG abatement measures;
- creating incentives for future commitments post 2012;
- opening the flexible mechanisms for companies and business sector i.e. for cost effective compliance with their own caps under EU ETS;
- assisting the private sector with overcoming the steep learning curve by gaining experience, lowering transaction cost, establishing administrative procedures; and
- developing JI/CDM as a support tool for realisation of clean energy projects and thus for additional technology exports (Germany is a leader in energy and efficiency technologies).

Germany contributed with capital to the TGF at a later date than the Nordic countries as we don't have a parliamentary carbon purchase fund, and time was needed to agree on an appropriate budgetary source. The € million capital finally came from the programme "Förderung des Exports von erneuerbaren Technologien".

What were the motivations to join the TGF?

Jon-Dahl Engebretsen, Ministry of Petroleum and Energy, Norway – Norway found it very important to develop and build competencies relating to energy and climate in the Baltic countries and in Russia. There was a strong agreement on this in Norway, which made it relatively uncomplicated to enter into the TGF. The negotiations between the countries on how the TGF should look like took longer than what we thought in the beginning.

Olle Björk, Environment Ministry, Sweden – Sweden hoped with the TGF that the spreading of the JI mechanism would happen faster and that the TGF would have a pedagogic effect on the market. We didn't have big expectations on the volume of carbon credits purchased by the TGF, but wanted to disseminate the experiences and understanding of the mechanisms. We were very much inspired by the Prototype Carbon Fund. In Sweden, it wasn't difficult to find capital to sign up to the TGF. Finland and Germany were the countries with the most views on the TGF during the negotiations of the mandate of the TGF

Qoutes chapter 2: Status and experience so far, Experiences with the TGF

Harro Pitkanen, former Managing Director of NEFCO and TGF

How did the process of establishing the TGF take place?

The process of establishing the TGF was an exciting and complex process with regular negotiations between six nation states on the operational guidelines, settling the legal, economic, financial and political aspects of the carbon fund, which necessarily took its time. Because the political process in Germany took longer, the Nordic countries decided to set up the fund first and let Germany enter at a later stage, but Germany was part of the founding negotiations.

How was the minimum level of capitalisation determined?

The minimum level of capitalisation that was considered for the fund at the negotiation stage was €10 million. This was actually a 'finger-spitzgefühl' for the minimum level necessary to make the fund operational and not meaningless, which we thought would be realistic and appropriate. That we ended up with €15 million euros thanks to the investment of Germany was impressive.

How does the TGF deal with small and large-scale JI projects?

There is a paradox in supporting small scale JI projects while ensuring cost efficient carbon credits. The Facility began early on to focus on the functionality of the fund by ensuring cost-efficient carbon credits and to function as a carbon credit purchaser rather than a provider of technical assistance. This has of course become more pronounced with the inclusion of the private investors in the Facility and the additional capital.

Which are the strengths and weaknesses of the TGF in your opinion?

The strength of the Facility has definitely been the coupling of the Facility with NEFCO. It allowed for an administrative capacity to handle the tasks of building up a project portfolio from the beginning. Also the anchorage in a professional environment, especially in the field of project development, is a strong feature of the Facility compared to other carbon funds that have been set up as traditional fund managers. NEFCO has its own competencies, experience and network of local contacts with energy projects in the Baltic Sea Region and there are several examples of carbon projects that were realised through the pipeline of NEFCO.

A weakness of the Facility has probably been the limitation of activities to a certain geographic area and sectors, thus reducing the room for manoeuvre of the fund compared to other funds. On the other hand, this concentration of activities is also a positive feature, avoiding the fund having to look for projects globally. One limitation, for instance, has been that the Facility could not invest in projects on the Balkan, which has proven to be a quite active market for JI. The market for JI of the Facility has also not been the easiest with a small project potential in the Baltic countries, the fast arrival of the EU ETS and the linking directive, which directly marginalised JI and closed a large number of potential projects. The decision to include Ukraine as potential host country for the fund activities was a wise step to make up for the lack of opportunity in Poland and the Baltic States. The lesson of the Facility has really been to respond to the substantial changes in the external framework conditions.

How did the process of establishing the TGF take place?

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Oleg Pluzhnikov, Ministry of Economic Development and Trade, Russia – I don't know very much about the work of the TGF, so I can't really make an evaluation of the role of the TGF. I do know that the TGF is active in North West Russia. However, I would really like to know more about the details, the type of activities and the future plans of the fund. I would very much welcome a meeting with a representative of Nefco, also to learn about any kind of investment problems or other barriers that they may experience in the regions to ease the development of their activities.

Ash Sharma – TGF Fund Manager

How is the TGF run with regard to transaction costs and small-scale JI projects?

The Facility places great importance on keeping transaction costs low and has also for that reason been successful in developing a number of small scale JI projects. This makes the TGF a leader on small scale projects as not very many buyers on the market are interested in small-scale projects. We also have one of the lowest management fees compared to other carbon funds so we try to provide good value for money. We also try to fill a gap in the market in the public sector. Often times, the lead time is longer and the financial situation is weaker.

What is your experience from the Investor Committee?

The Investor Committee with public and private investors has until today functioned very well. There is a common agreement on the objectives of the fund and the arrival of the private sector investors has been valuable in terms of the experience and contacts that they bring with them.

Is the Fund successful in transferring clean technology?

We have been rather successful in the transfer of clean technologies, since the bulk of our projects presented to the IC are renewable energy or energy efficiency related projects (79% of PINs) and the bulk of the projects under contracting relates to clean technology. Wind energy has been a particular success.

What are the key successes to the TGF?

- Engaging the private sector in the region (the second subscription exceeded expectations), including attracting the largest energy companies in Denmark, Finland and Sweden. The TGF benefits not only from their capital, but also their technical knowledge and their networks. The decision making and governance structure is strengthened by their presence on the Investor's Committee;
- Promoting the role of JI in energy sector financing in the region, especially for smaller and medium sized projects. The TGF has a strong orientation toward dissemination of information, which is rather unusual for a commercial carbon fund, aside from the World Bank, and transparency on projects (all published on the webpage). We are also very active in promoting TGF in local and international fora;
- I think for a relatively small fund with limited resources we have been very active, especially under the track 2 procedures where we submitted seven out of the first 37 projects, with several more to follow in the coming months.
- We have promoted small scale JI projects (whilst not excluding larger ones, this focus was a result of the small size of the fund initially, the relatively small size of NEFCO's projects and the limitations of many of the countries of operation, esp. the Baltic Countries), for example we have five projects using SSC methodologies. This is in contrast to

the rest of the JI market which is looking to procure large volumes (>0.5 mtCO_{2e} per project and larger, especially in Russia).

Views on the TGF from an Investor Point of View

What is your experience with the workings of the TGF today?

Uwe Schroeder-Selbach, Federal Ministry of Economics and Technology, Germany - The TGF has functioned well, as NEFCO is successfully acquiring projects, the Investor committee has streamlined its procedures and we were successful at expanding the fund into the private sector (now a PPP). Now we have to finalize acquisition and get transfers successfully on the way (which will take until 2009!). In 2009 when we have a better feeling for measurable success and hopefully for the post Kyoto framework we should look at lessons learned and at a conceivable future for the TGF to make further use of the capacity created.

Frank Rasmussen, DONG Energy – I think that the administration and operation of the TGF works fine. NEFCO is doing a good job. The mixture of public and private investors sitting around the table gives several synergy effects, such as exchange of experience and a good dynamism. Public authorities have spent quite a lot of money on gathering experience from JI development which the private investors can profit from. The public authorities in turn can benefit from our business experience in the carbon market and our assessment of risks and side effects. We have made similar positive experience in the Danish Carbon Fund.

Seppo Oikarinen – Ministry of Trade and Industry, Finland – The TGF is working very well. I had hoped, of course, that the process of getting JI projects started could have been speedier, but the longer lead time is due to the situation in the different host countries and not something the TGF can change.

Dag T. Enden, Ministry of Petroleum and Energy, Norway – Given the Linking Directive, the potential for joint implementation projects in the energy sector in the Baltic Countries is reduced. It is therefore difficult to find appropriate projects. The inclusion of private investors has further strengthened the knowledge within the Investor Committee regarding joint implementation in the energy sector.

Olle Björk, Ministry of Environment, Sweden – A positive aspect was that the TGF discussed expanding the business area to Ukraine. Norway Stortinget had reservations when the funds for the TGF were granted. The TGF has experienced difficulties to access projects due to the uncertainties about the rules in Russia, the expansion of the EU and the linking directive, but these are external circumstances, which the Fund has had to respond to.

Qoutes chapter 4: TGF - Perspectives for the future, Personal Views on the Future of the TGF post-2012

How do you see the future of TGF after 2012?

Uwe Schneider-Selbach, Federal Ministry of Economics and Technology, Germany - TGF was designed as a way to gain experience with JI in the early stages. It took longer than expected to set up the Testing Ground Facility and finalise the Testing Ground Agreement. Still, the TGF was an early mover in the Baltic Sea Countries and there is still a need for a regional focus for some time to come, especially in Russia and Ukraine. However, I am not aware of a need for the TGF as a “Testing” instrument after 2012. We should want to make further use of the capacity we have created, but only if there is a need for such capacity in the marketplace. Much will, in that context, depend on the post Kyoto negotiations: They will define the path and the necessary framework after 2012.

The specific strength of the BASREC cooperation has to continue lying in the Baltic Region (including some neighbours as Belarus, Ukraine and projects in Siberia), because we doubt that the TGF should act worldwide like any other climate fund as long as the specific potentials in the region in which we have expertise are not yet tapped adequately.

The market for emission reduction projects is now dynamic and mature enough and there is therefore not the same need for state funded JI/CDM projects in the market. This is why Germany is now withdrawing from similar pilot and testing activities.

Seppo Oikarinen – Ministry of Trade and Industry, Finland – The contract for the TGF only runs until 2012, so unless the contract is changed, there will be no TGF. If the Kyoto Protocol is not extended with a second commitment period, there will also no longer be JI projects. But my understanding is also that if there really will be a Kyoto Protocol after 2012, I think there is a need to think of TGF or some other kind of Nordic JI-funding.

Dag T. Enden, Ministry of Petroleum and Energy, Norway – The TGF was established with a certain objective for a limited period of time and for a clearly defined geographical area. An extension or change of the period of operation, geographic coverage and/or purpose of the TGF should therefore be treated as a separate issue to be negotiated.

Hans Jürgen Stehr – Ministry of Environment, Denmark – The idea to establish the TGF was good, but I think it took too long to get the Facility established and that’s why it entered the market too late for really reaping the possibilities within the original mandate of the Facility. For the TGF to continue after 2012, it will be necessary to change the organisational set-up and to provide more capital for the Fund to compete with the large international funds on the market. The Facility would also need a larger business area if it is to have a future. In any case, the current set-up as a

Public-Private-Partnership has some clear advantages that can also be explored in the future.

Oleg Pluzhinikov, Ministry of Economic Development and Trade, Russia – There is a lot of smoke about the future regime; too much depends on many issues. Nobody knows if there will be a future regime; it is definitely our intention to have it, but how it will be constructed, what will be the effort, nobody knows. I would like to see a future for the Joint Implementation; I can't predict how the regime will be constructed and what will be the future of JI, both in general and not only in Russia.

I think there is a more clear future for the CDM mechanism, but I am not very sure about the future for JI. I think that the future climate regime will be very different from the current one. A first step is for countries to agree on the construction of the regime and only after this will it be possible to consider whether it is possible to integrate Joint Implementation into the new regime. First we need to discuss what type of engine goes into the car, whether it's a large or small car, before we decide on the colour. And JI is in a way the colour of the future engine of the climate regime. Emission trading in Russia will not take place in the near future, but after 2012, I think the prospects for Russia are promising. I think there will be a much stricter international climate regime than today and in such a case it will be important to find the least cost option to meet those targets.

How do you see the future of TGF after 2012?

Harro Pitkanen, former Managing Director of NEFCO & TGF – I am quite confident that there will be some form of carbon trading after 2012. There are two possible directions that the Facility could take after 2012: one is a conservative direction of ensuring cost efficient and secure carbon credits for its investors in an established JI-like system. The fund could, for example, as a way of expanding the effect of JI projects take an initiative similar to the World Bank to create a post-2012 fund and sign agreements already today. This could also enhance the monetised value of carbon projects with crediting periods longer than 2012. The testing component of the Facility is today more due to the history of the Facility. It should rather be called 'implementation' than 'testing' and that's why we prefer using the TGF abbreviation.

The other direction could be to develop the idea of the Testing Facility further by focusing on experimental aspects of projects and/or trading systems. In any case this will need to be decided by the investors of the fund.

Olle Björk, Ministry of Environment, Sweden – I think that TGF can play an important role in a post-2012 climate regime if the fund receives increased capital. There is also the possibility that TGF could focus more on Green Investment Schemes. The original pilot and testing activities belong to the past now. The usual markets take over the implementation

and operations of project based mechanisms, whereas public activities might be needed in future, but these will not play the same role as earlier. TGF would need to adapt to the new conditions after 2012. It is sad if the amount of work, expertise and experiences made with JI were not to continue after 2012, unless of course something better is put in place instead. There is in any case a limiting window of opportunities for energy projects in most of the Basrec countries, which opens for the question whether Basrec is the optimal organisation to base the work of the carbon fund on. Russia is the interesting country, and I think that we will see a more headstrong Russia in future.

Frank Rasmussen, DONG Energy, Denmark – I think the TGF should remain loyal to the original mandate to promote JI projects and not expand the business area towards CDM. There is a large potential for projects in Ukraine and Russia and it's just the appropriate approval procedures that are lacking. It is necessary at the project development level as well as at the political level to work for the implementation of these projects. With the current size and staffing of the TGF it would not be feasible to expand the geographic area towards CDM projects, also because the strength of NEFCO lies in the Basrec countries. The political mandate at the outset of the TGF was to develop projects in the Baltic Sea Region and I think that there will not be a political support and funding towards an extension of the current geographical coverage of the fund. From a DONG Energy perspective, the interest in the TGF was the focus on JI in the Baltic Sea Region. If the TGF were to expand towards CDM projects, it would start to resemble other funds such as the World Bank or the Danish Carbon Fund, with the risk to lose the focus of the fund. The future of JI really depends on what Russia decides to do, whether they will be part of a future emission trading scheme or stay outside, in the latter case there would be good possibilities for JI projects after 2012. There could also be possibilities for programmatic activities and in general there is a need for a lot of creative ideas and solutions up to 2012 to design and agree on a future climate framework.

Appendix 2

Publications of the Climate Group since 1993

- Evaluation of the Baltic Sea Region Testing Ground Facility, TemaNord 2007:591
- Potent Greenhouse Gases. TemaNord 2007:558.
- The Impact of Renewables and Energy Efficiency on Greenhouse Gas Emissions. TemaNord 2007:556.
- Emission Trading Outside the EU. TemaNord 2007:552. The Significance of the Linking Directive for the Joint Implementation potential in the Baltic Sea Region. TemaNord 2007:550.
- Climate 2050 – the road to 60–80 percent reductions in the emissions of greenhouse gases. TemaNord 2007:535.
- Road transport emissions in the EU Emission Trading System. TemaNord 2007:536.
- Decoupling of CO₂ Emissions from Energy Intensive Industries. TemaNord 2006:528.
- Harmonising New Entrant allocation in the Nordic Energy Sectors. TemaNord 2006:515.
- The EU Emission Trading Scheme After One Year. Experiences and outlooks. TemaNord 2006:514.
- Update on the Latest Developments in the EU Emission Trading Scheme. TemaNord 2005:570.
- Green certificate systems and a greenhouse gas emission permit trading system. TemaNord 2003:535.
- How the EU Emissions Trading Directive Affects the Nordic Countries. 2002:449.
- Implementering av et system for kvotehandel i Norden og østersjøområdet. TemaNord 2001:528.
- Kvotehandling og elhandel i Norden og Østersjøområdet. TemaNord 2001:510.
- Ways of reducing consumption and emission of potent greenhouse gases (HFCs, PFCs and SF₆). TemaNord 2001:594.
- Inventory of Climate Change Indicators for the Nordic Countries, TemaNord 1999:505.
- Omsettelige utslippskvoter i Norden, TemaNord 1998:564 .
- Kriterier og perspektiver for Joint Implementation – En analyse af ti nordiske projekter i Østeuropa. TemaNord 1997:543.
- Are Tradable Carbon Emission Quotas Internationally Acceptable? - An Inquiry with Diplomats as Country Representatives. Nord 1997:8.
- A Joint Implementation as Emission Quota Trade: An Experiment Among four Nordic Countries. Nord 1997:4.
- Climate Change Negotiation - Burden Sharing and Cost Effective. Conference Summary, TemaNord 1997:562
- Joint Implementation of Commitments to Mitigate Climate Change - analysis of 5 selected energy projects in Eastern Europe. TemaNord 1996:573.
- Climate Policy, Burden Sharing and the Nordic Countries - Present State of Analysis and Need for Further Analysis. TemaNord 1996:572
- Pilotproject on Joint Implementation – Nordic Workshop. TemaNord 1996:566.
- Samarbete mellan Baltikum och de nordiska länderna för reduction av koldioxidemissioner. TemaNord 1996:537.
- Felles implementering av klimatiltak. TemaNord 1995:616
- Felles gjennomføring som klimatiltak - nordiske perspektiver og prioriteringer. TemaNord 1995:537
- Joint Implementation as a Measure to Curb Climate Change – Nordic perspectives and priorities. TemaNord 1995:534
- Efficiency Implications of FCCC Joint Implementation – With Special Reference to Carbon Emissions Reductions. TemaNord 1994:628. Strategier og kostnader ved å oppnå klimapolitiske mål i Norden. TemaNord, 1994:548

Abbreviations

AAUs	Assigned Amount Units
BASREC	Baltic Sea Region Energy Co-operation
CDM	Clean Development Mechanism
tCO _{2e}	Ton Carbon Dioxide equivalent
ERPA	Emission Reduction Purchase Agreement
ERU	Emission Reduction Unit
EU ETS	European Union Emission Trading Scheme
GHG	Greenhouse gas
GIS	Green Investment Scheme
IGES	Institute for Global Environmental Strategies
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
NCM	Nordic Council of Ministers
NEFCO	Nordic Environment Finance Corporation
NIB	Nordic Investment Bank
ODA	Official Development Assistance
PPP	Public Private Partnership
TGA	Testing Ground Agreement
TGF	Testing Ground Facility
	UNFCCC United Nations Framework Convention on Climate Change