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Enhanced Flexibility in European Effort Sharing by Application of a European Project Mechanism – EPM

Use of Project Mechanisms in Europe - insights from Green Investment Scheme (GIS)

Discussion paper

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1 Background and objectives

Project background

The EU Commission announced a regulatory proposal on the Effort Sharing Decision after 2020 (ESD II) for the first half of 2016. It will also contain proposals with a view to enhance flexibility in the ESD II by application of a project-based mechanism. We call such an instrument “European Project Mechanism” (EPM). Based on good design, it could become an important additional building block for meeting the long-term emission reduction targets of the EU cost-effectively.

What is worth noting for context, while acknowledging the ESD II is mainly an EU internal discussion, is the new development of the international climate regime through the Paris Agreement (PA), adopted at the UN climate conference last December. It contains two parallel frameworks on markets and flexibility mechanisms in its article 6: one for cooperative approaches that allow the use of internationally transferred mitigation outcomes, and the other for a new centralized “mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development” (referred to by some as the Sustainable Development Mechanism)¹, likely to replace the Kyoto Protocol’s flexible mechanisms CDM and JI. The UN-level guidance and provisions regarding these frameworks shall be worked out over the coming years. The PA gives individual countries a green light to develop carbon markets and transfer carbon credits, as long as it is consistent with the accounting provisions defined by the UNFCCC. This means EPM development may need to incorporate the UNFCCC accounting provisions once they are in place. Meanwhile, the EPM experiences may also inform the development of the centralised market mechanism under UNFCCC.

About this paper

In this context, this paper aims to inform research and discussion on the design of EPM by looking into the Green Investment Scheme (GIS) as a reference mechanism. Despite the relatively rich and successful experiences of GIS across different member states in the EU, it has been largely ignored so far in the discussion of EPM and thus deserves renewed attention.

The paper is based on an intensive literature research and analysis, as well as interviews with stakeholders related to GIS. It firstly provides information on the general functionality and market experiences of GIS from 2008-2012. This is then followed by more detailed analysis on national experiences regarding sector priorities and institutional setups, complemented by a country case study for Poland. In the end, based on the previously presented information and analysis, we summarize the GIS success factors, barriers and the implications for an EPM to be considered.

¹ Steve Zwick, Building On Paris, Countries Assemble The Carbon Markets Of Tomorrow, Ecosystem Marketplace blog, 29 January 2015 <http://www.emissierechten.nl/column/what-cop21-and-paris-agreement-means-for-carbon-trading/>

2 Acronyms

AAU	Assigned Amount Units
AEA	Allocated Emissions Allowance
CDM	Clean Development Mechanism
CEE	Central and Eastern Europe
EBRD	European Bank for Reconstruction and Development
EPM	European Project Mechanism
EU	European Union
EU COM	European Commission
ESD	Effort Sharing Decision
ETS	Emission Trading Systems
GIS	Green Investment Scheme
JI	Join Implementation
MoE	Ministry of Environment
MRV	Measuring, Reporting and Verification
MS	Member States (of EU)
PA	Paris Agreement

3 GIS in the carbon market

3.1 General functionality

The concept of Green Investment Scheme (GIS) is based on International Emissions Trading, a mechanism defined under the Kyoto Protocol (Art. 17). It allows governments to sell (surplus) international emission rights under the Kyoto commitment periods to governments for their compliance purposes². The quota revenues should be "greened", i.e. channeled to the development and implementation of the projects either acquiring the greenhouse gases emission reductions (hard greening) or building up the necessary framework for this process (soft greening)³.

The European Effort Sharing Decision outlines a mechanism similar to GIS under Kyoto regulation. The major difference is that the underlying emission rights of the transactions are AEAs (European allowances under the effort sharing (non-ETS) sector instead of AAUs (under Kyoto regulation)).

In practice, GIS – as a financing mechanism – resembles an environmental support scheme, where proceeds from the sale of underlying emission rights represent an additional (grant) source for co-financing climate mitigation projects.

Under a GIS, the selling country needs to assure buyers that the proceeds from the sale of AAUs would be used to finance agreed projects and programs, and credible monitoring and verification measures would need to be adopted. In return, the buying country would provide financing for the GIS under the terms of a negotiated contract⁴.

Table 1: Key GIS characteristics

- No top down rules or international oversight, bilateral negotiation agreements;
- Programmatic/sectoral approach;
- More ownership and control by host countries;
- Ex-ante financing: AAUs can be traded ahead of physical GHG reduction;
- Government as main market player, while there is also private-sector participation.
- National Fund structure used;
- Scope and terms of revenue use bilaterally negotiated.

Source: own

² The GIS between 2008 and 2012 was only about selling of AAU surplus. During this research project, we use GIS experiences as references for the EPM design. The structure, governance and provisions could in principle also apply to EPM as one design option.

³ EBRD (2015/08), Comparative Analysis of market-based Mechanisms Consultancy services to support the preparation and implementation of the Polish Sustainable Energy Financing Facility (PoISEFF II): Carbon Market Consultant (CMC), Final Report, http://polishcarbonmarket.org/wp-content/uploads/2014/02/polseff-cmc_comparative-analysis_final-version_21.08.2015.pdf

⁴ Climate Strategies, 2010, Tuerk et al. Green Investment Schemes: First experiences and lessons learned, http://www.accc.gv.at/pdf/JoanneumResearch_GISWorkingPaper_April2010.pdf, and Climate Strategies 2013, Tuerk et al. Green Investment Schemes: the AAU market between 2008 and 2012, <http://climatestrategies.org/wp-content/uploads/2013/03/cs-gis-discussion-paper-formatted-final-rev2a.pdf>

As JI and GIS are both used as reference schemes in this research project, here is a summary of major differences comparing them (although there are also many similarities in their design and operation that are not considered mutually exclusive):

- 1) GIS is a more programmatic and sectoral approach, while JI is more project-based (does include PoA as well but limited in number);
- 2) GIS is ex-ante financing - AAUs traded before GHG reductions, while JI is ex-post financing (with some projects also having partial payment upfront);
- 3) Sellers and buyers of GIS are mainly national governments, while in JI sellers are mainly project developers (private sector);
- 4) Project developers under JI could hold credits, while under GIS they only receive financing/funding;
- 5) GIS is largely based on national fund structure.

3.2 General market experiences 2008-2012

Compared with JI and CDM, there are only a limited number of studies on GIS. Existing market data show that it was a quite active and sizable market between 2008 and 2012. In total around 445 million GIS-backed AAUs were traded, with a value of around 1.6 billion EUR in this timeframe (Climate Strategies, 2013). To put those figures in perspective, for the similar period the volume of ERUs issued (as of July 2013) was 754.9 million tonnes, making GIS and JI comparable instruments in size. However, it should be noted that some funded programs carried on in selected host countries such as Poland and Estonia after 2012 (Interview).

Participation of countries under GIS is quite broad, with 9 host countries, 9 buying countries, and private Japanese companies also acting as GIS buyers. Further looking into the portfolio of GIS and JI at the country level shows that different countries have different experiences with the two mechanisms. Some countries (e.g. Poland and the Czech Republic) have extensive experience in both mechanisms; some (e.g. Estonia) has abundant GIS experiences but a small volume of ERUs sold under JI; some have hosted large amounts of JI projects while none under GIS (e.g. Romania). Overall, considering the size and number of GIS deals, Poland, the Czech Republic and Estonia are the most 'successful' host countries. Table 2 below gives an overview of the data.

Table 2: Overview of GIS market experiences per country 2008-2012

	GIS			JI	
	AAUs sold 2008-2012 (Mio)	number of deals	AAUs available for GIS end of 2012 (Mio)	Number of registered JI projects	ERUs issued as of July 2013 (MtCO ₂)
Poland	138.2	7	362.1	36	10.5
Czech Republic	102.4	13	47.6	58	0.6
Estonia	75.6	22	16	12	0.5
Slovakia	50	3	77	0	0
Ukraine	47	3	353	271	458

Lithuania	30	1	50	18	8.5
Latvia	28.7	7	11.3	1	0
Hungary	13	4	37	11	1.3
Bulgaria	7	2	193	30	2.6
Romania	0	0	200	18	8.9
Russia	0	0	200	97	264
Total	491.9	62	1547	552	754.9

Source: Climate Strategies, 2013 and interviews

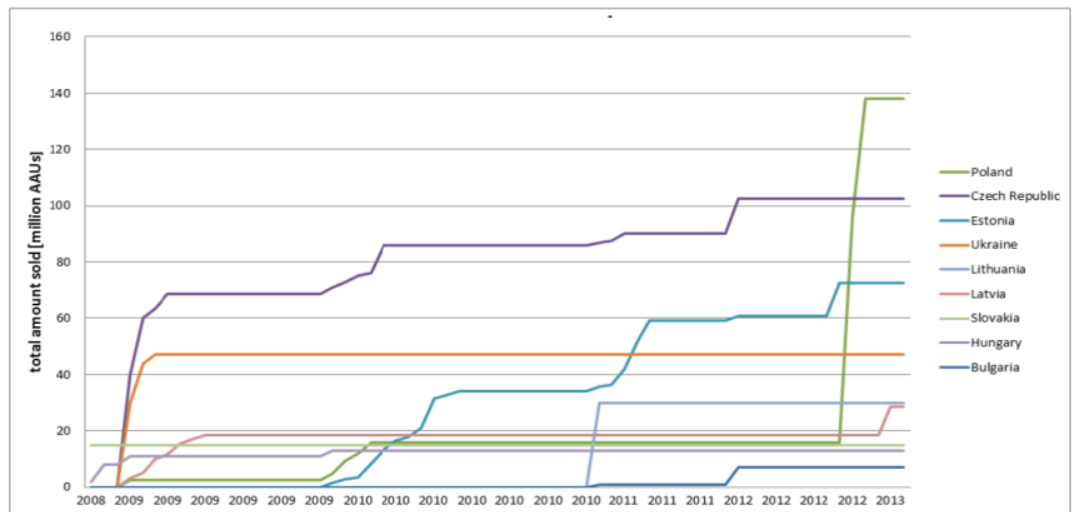


Figure 1: GIS trades volumes – sellers
Source: Climate Strategies, 2013

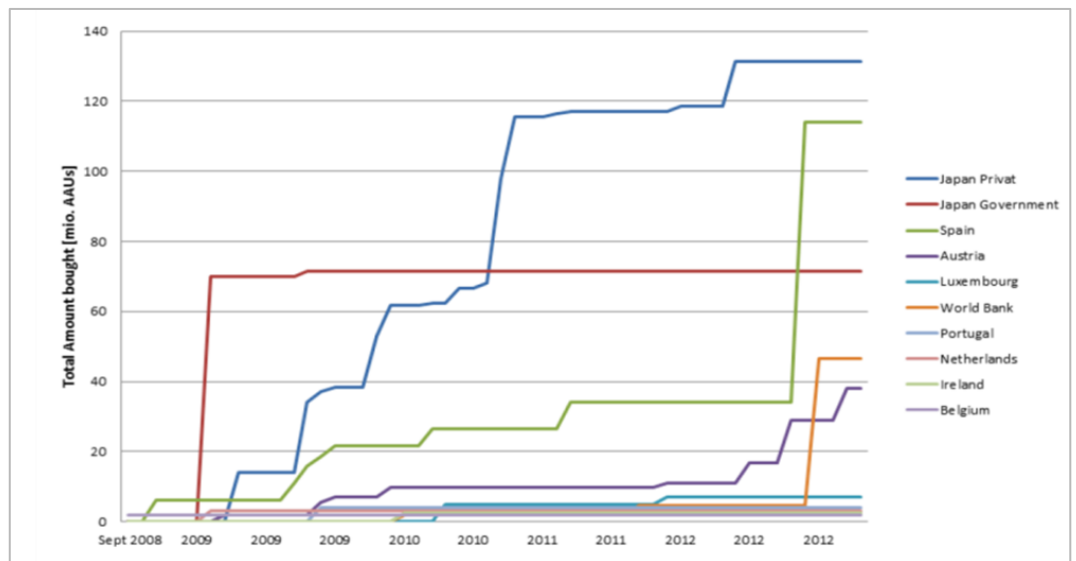


Figure 2: GIS trades volumes – buyers
Source: Climate Strategies, 2013

4 Sectoral and institutional experiences at country level

Each host country has set up its own legal and institutional framework and decided on the priority areas/sectors to focus on, with consideration of buying countries'/parties' needs as well as their situations and priorities. Annex1 provides a table that summarizes the sectoral, institutional and MRV experiences of countries.

4.1 Sector experiences

Regarding priority sectors, in most of the cases it is the decision of host countries while some countries such as Estonia give buyers the possibility to choose the specific sector/program(s) they would like to support.

The majority of countries have taken an approach of diversification of programs (a combination of building, transport, renewable, and infrastructure sectors) e.g. Bulgaria, Estonia, Hungary, Poland, Ukraine, Latvia and Lithuania; while there are also countries with focus on certain sectors e.g. the Czech Republic mainly on the building sector.

Energy efficiency in the building sector has been popular for GIS programs across countries like Bulgaria, the Czech Republic, Estonia, Hungary (residential), Latvia and Lithuania (public). Small renewables such as biomass and biogas is another common sector for countries such as Bulgaria, the Czech Republic, Estonia, Poland, Latvia and Lithuania. A third interesting common sector is transport, particularly for Estonia, Poland and Lithuania.

A programmatic approach is taken, where smaller projects fall into a standardized program according to pre-defined provisions on qualification and selection process. On the contrary to JI, GIS provides upfront financing and is not restricted by a limited crediting period⁵.

4.2 Institutional experiences

There is a diversified institutional set-up of GIS in host countries. In most cases, though, it is the Ministry of the Environment in charge of both signing the AAU sales agreement with buyers and managing the administration application and MRV processes of the GIS projects. A third-party based MRV system in most cases is also in place.

The Czech Republic, for example, used support from domestic entity DetNorske Veritas for validation and The Energy Efficiency Center SEVEN for verification of the Annual Report and Final Report (in cooperation, for example, with accountants from Accenture)⁶. There were also on-site inspections of at least 5% of Greening Activities,

⁵ JI is ex-post payment in general; while in some cases there was also pre-payment to cover the upfront investment.

⁶ Ministry of the Environment of the Czech Republic, Experience in the Czech Republic in implementing the Green Investment Scheme and using cohesion policy for energy efficiency in buildings presentation, November 30 2011.

following the internal directive SM25 “Methodology of inspections execution”, and “Public administration inspection” – Act. No. 320/2011 Coll., on financial control, Act No. 552/1991 Coll., on state control⁷.

Apart from emission reductions, AAU revenue flows are monitored and reported. In the case of the Czech Republic the international auditing firm Deloitte Advisory s.r.o was in charge of auditing the investments and appropriation of the Total Contract Price. Many host countries also set up separate account(s) to track the utilization of GIS revenue⁸.

4.3 GIS institutional structure models

To further unpack the institutional structure of GIS, we consolidated the diversified experiences into two models, one based on a national fund structure, the other without. Figures 3 and 4 provide more details on these models.

Model 1, “fund-based mechanism,” has been used by most of the countries, such as Poland (PL), Latvia (LA), Lithuania (LI), the Czech Republic (CZ) and Bulgaria (BL). Different countries have some different features in the operation of the Fund e.g. some have an advisory body or monitoring committee with different stakeholders.

Model 1 Fund based Mechanism

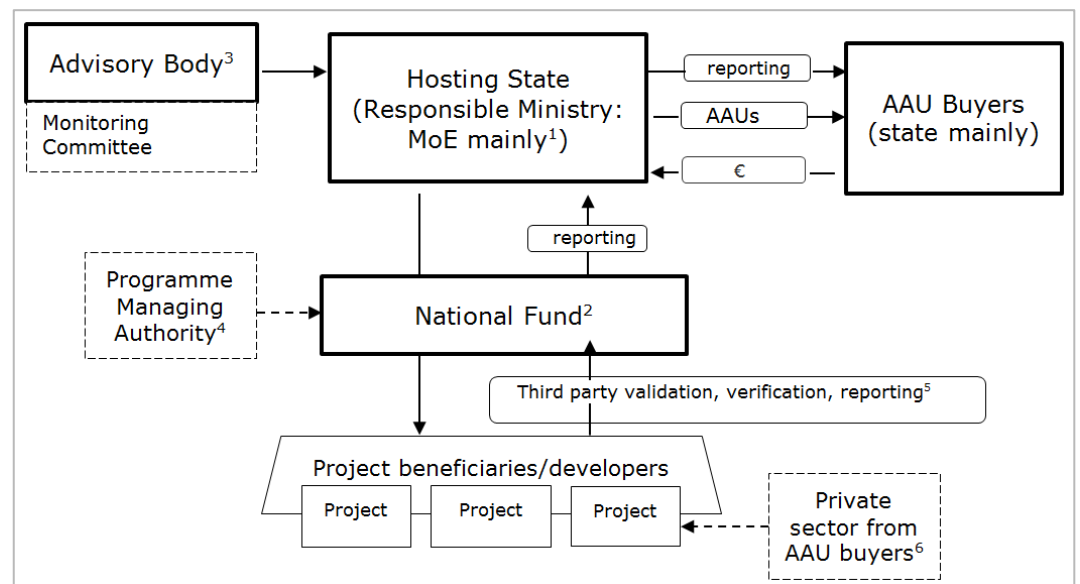


Figure 3: GIS institutional structure model 1
Source: own

1. Ministry of Environment (MoE) – CZ, LA, LI, PL. Ministry of Finance – BL.
2. National Trust Eco Fund – BL. State Environmental Fund – CZ. Environmental Investment Fund – LA. Climate Change Special Program – LI. National Fund for Environment Protection and Water Management – PL. The Funds operate not only with AAU proceeds, but are also supported with other funds and financial sources. In the case of the Czech Republic, the main contact points for applicants are regional offices of SEF with five large banks involved for administrative purposes and providing possible co-funding.

⁷ Ibid.

⁸ There is reputational cost for those who haven't done so such as Hungary and Latvia.

3. Advisory Committee – BL (buyer state can participate in its activities), Advisory Council – LA, GIS Consultative Council – PL. Czech Republic has established the Monitoring Committee (consisting of involved ministries, the Fund, Parliament, Senate and NGO representatives), which inter alia conducts the functions of an Advisory Body.
4. Program Managing Authority is a supporting executive body in Czech GIS. Consisting of representatives from the SEF, the Parliament, the Senate, and MoE, it operates the application for GIS subsidies and prepares reports.
5. Financial-flows verification is done by an international auditor. GHG reductions verification and validation are conducted by domestic or international auditors and the National Fund.
6. In some cases, the private sector (suppliers of technology or equipment) from buying countries could participate in the projects supported by the revenue.

Model 2 Mechanism without National Fund

Model 2 is mainly based on Estonia’s case⁹, in which a State Chancellery coordinated inter-ministerial working group is responsible for developing the GIS programmes and projects, GIS programs are implemented by the relevant Ministries, or they are implemented by subordinate institutions¹⁰. MRV are program-specific and client-specific.

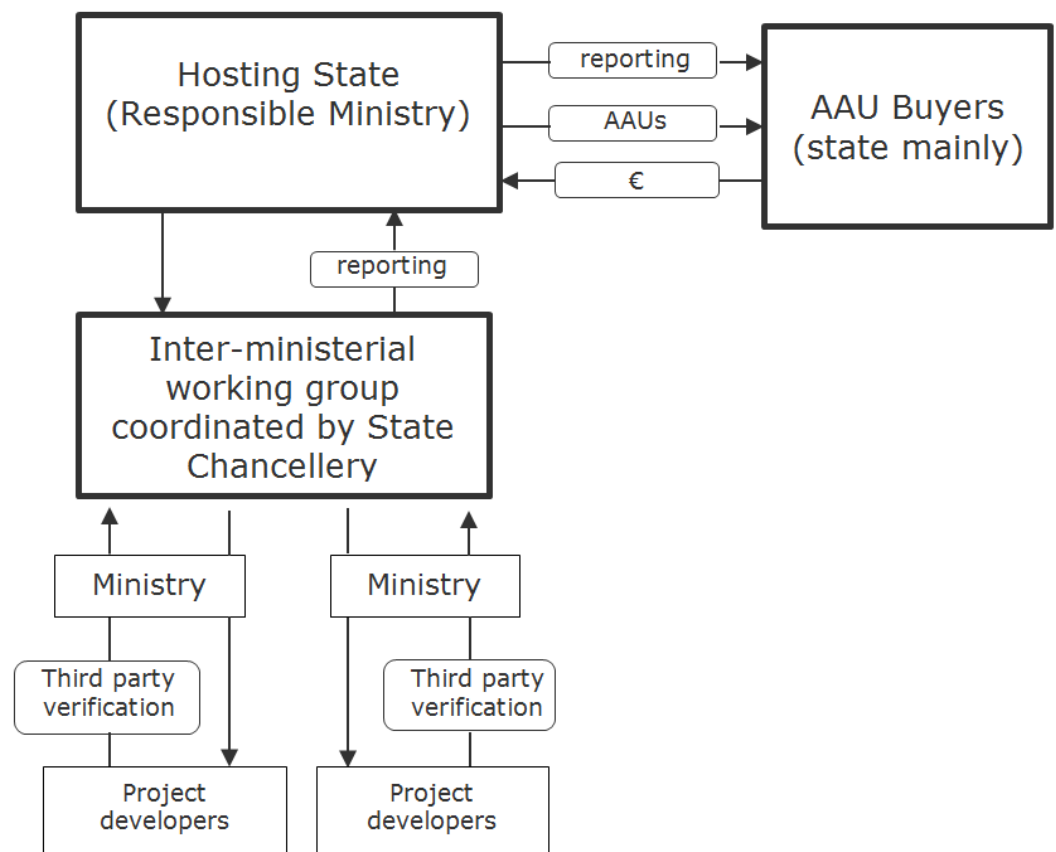


Figure 4: GIS institutional structure model 2
Source: own

⁹ There are also other countries such as Hungary with a different structure, but given the relevance and significance of GIS experiences, we focus on Estonia for non-fund based model.

¹⁰ Here is an example of the Ministry of Economic Affairs and Communications managing GIS programs: <https://www.mkm.ee/en/objectives-activities/foreign-financing/green-investment-schemes>

4.4 GIS country case study- Poland

Poland, the Czech Republic, and Estonia are the top 3 GIS host countries. Looking in more detail on the example of Poland, the following can be summarized: Poland was relatively late getting involved in GIS use (first deal in 2010) while the largest in volume of AAUs sold. The surplus amounted to 500 million AAUs in the period 2008-2012 and is assumed to be the third largest worldwide after Russian and Ukrainian. The experiences of Poland regarding GIS has shown the importance of a solid national legal and institutional basis, the merit of nationally defined sectorial priority, the possibility of broad-based beneficiaries and successful implementation.

Legal and institutional basis

Legal and institutional setting: in 2009 the Polish Government introduced the Act on the System to Manage the Emissions of Greenhouse Gases and Other Substances, a legal framework of GIS operation¹¹. An implementation structure set out by the Act regulates the management of the financial resources available for GIS. The National Fund for Environmental Protection and Water Management (NFEPWM), under the supervision of the Ministry of Environment, is a state agency which plays the role of the National GIS Operator and manages the Climate Account. NFEPWM carries out some key functions, including project identification through the competitive procedure, supervision of Greening Activities implementation, monitoring and reporting, etc. The Act also sets a framework for selection, appraisal and monitoring of GIS co-financed projects. In parallel, under the Ministry of Environment there is the National Centre for Emissions Management which maintains the national registry of Kyoto units.

Priority areas identified by the Polish government

Until the end of 2013, seven priority programs were adopted in the area of¹²:

- Energy management in public buildings;
- Energy management in buildings of selected public-sector entities;
- Biomass-fired power plants;
- Agricultural biogas plants;
- Upgrading electricity grid for connecting renewable wind energy sources;
- Low-emission municipal transport;
- Energy efficient street lighting.

A wide range of beneficiaries

The beneficiaries (project developers) are private and public enterprises, public institutions, local government units, higher education institutions, cultural institutions, research institutes, independent public and private health care facilities, churches and other religious organisations. The selection criteria are uniform for all sectoral priorities, including environmental effect, technical feasibility, cost analysis, financial structure, technology, and cost efficiency etc.

¹¹ <http://www.nfosigw.gov.pl/en/priority-programmes/green-investment-scheme/>

¹² Ministry of the Environment in cooperation with National Fund for Environmental Protection and Water Management 2014, Green Investment Scheme in Poland. <http://www.nfosigw.gov.pl/en/priority-programmes/green-investment-scheme/>

By the end of first quarter of 2014 Poland had concluded ten contracts for the sale of AAU all together worth over 190 million EUR, with various public and private buyers¹³. 16 Calls for Proposals were placed by the GIS Operator until the end of 2013. Grant agreements were signed with more than 300 beneficiaries by the end of March 2014, in all priority programme areas, with total grant amount of about € 175 Million and emissions of 1.4 Million tonnes CO² to be avoided each year¹⁴.

¹³ Ibid.

¹⁴ Ibid. GIS Operator further planned to disburse approx. 32 million EUR (PLN 135.4 million) on greening activities until the end of 2014, and 34.8 million EUR (PLN 146.3 million) on until the end of 2015

5 GIS implications for EPM

5.1 GIS success factors and barriers

Success factors

- + GIS is a flexible instrument that can be tailored to national priorities (sectors and areas)
- + GIS transactions can cover entire sectors
- + Relatively low transaction cost compared to project approach
- + Countries have rules for monitoring and verification of emissions reductions and financial flows, e.g. international auditors
- + Simplified approaches for MRV and additionality
- + Countries have more freedom in defining the rules and the institutional framework suiting their domestic situation
- + Technology swaps, technology export and private-sector participation: Japan – Estonia (e mobility); Austria – Czech Republic (building) etc.
- + Many countries have measures in place to make the GIS and the existing national and EU support programs complementary

Barriers/challenges

- Potential environmental integrity concerns in some countries
- A number of barriers for implementing greening activities, e.g. lack of co-finance, implementation capacity
- Reporting and recording of the AAU deals are not centralized and easily accessible
- The activities of companies in the AAU market are sometimes difficult to assess
- Potential political/diplomatic interferences that could block or delay sales transactions

5.2 GIS implications for EPM to consider

Governance

On governance the experiences of GIS seem to suggest that even without a centralized system, there can be an active market. Thus for the EPM a largely decentralized structure could be imagined, allowing diversification of programs, with a certain level of guidance/centralisation on information. MSs could own the responsibility to define areas for projects, set detailed regulation and carry out the reporting. From an institutional perspective, the role of a National Fund structure has shown its effectiveness for GIS, at least in the more successful countries. Such National Fund model could be further explored for the discussion on EPM design options. More generally, flexibility and ownership of countries are of key importance. Institutional structure could be tailored to each country's situation, and the GIS related MS level structure could potentially be used for an EPM. The use of the option of a programmatic approach should be encouraged wherever possible (such as building EE,

building renewable application, small scale renewables etc.) to reduce the overall transaction cost.

MRV and Accountability

On MRV and accountability a simplified approach for MRV and additionality could be taken with due consideration of environmental integrity. For some sectors and sub-sectors such as building energy efficiencies (public and private), small renewables (biomass, biogas), public transport, electric mobility, etc. there are existing program documents from different countries (including calculation formats, selection criteria, templates, etc.) to draw on. In general, good MRV practices can be replicated, such as the transparent rules for monitoring and verification of emissions reductions, of project effectiveness and financial flows, through national or international third party verification and validation.

A minimum standard or guideline for information (reporting) and even a central registry to make such information available would be helpful for market transparency and integrity. It could also consider requiring regular reports (e.g. annual or every two years) on the progress of the implementation of an EPM and ESD II by MSs. Such MRV framework may also meet the spirit of the related PA provisions on markets.

There seems to be an interesting option to link the revenue of EPM with other funds and resources to scale up the financing through creation of combined financial instruments. EU-level guidelines on provisions for EPM in areas where other national or EU funding is already in place should be considered in order to avoid concern regarding additionality and credibility of an EPM (e.g. drawing on experiences of GIS from Estonia and Poland etc.).

Trading

On trading, EPM and the overall design of enhanced flexibilities under ESD II should be in a way that encourages MSs to develop experiments or trials for potential EPM design early in order to gain experiences and accelerate the market development. Our interviews with the CEE (Central and Eastern European) countries also illustrated that there is interest in some countries to do EPM experiments before 2020.

The AEA demand is a decisive factor on the market and price - the ESD II targets for countries should be set as soon as possible and at an ambitious level, and it could also include a strong message from the EU COM decision to encourage engagement in EPM. It is worth noting that many of the low-hanging fruits are generally gone, so the overall cost of abatement in ESD sectors are expected to be higher compared to the GIS 2008-2012 phase. The overall -30% reduction target for ESD sectors by 2030 (as compared to the current target of -10% by 2020) indicates that most countries would end up in deficit unless they take additional reduction efforts.¹⁵ In this case, if the country decides to sell, it is of its own interest that the program/project ends up with real emission reductions or else risks non-compliance.

¹⁵ Climate Strategies 2015, Enhanced Flexibility in the EU's 2030 Effort Sharing Agreement: issues and options, April 2015 <http://www.cdcclimat.com/IMG/pdf/cs-2030-enhanced-flexibility-in-the-eu-2030s-effort-sharing-agreement-2.pdf> and Öko-Institute 2015, Enhanced flexibilities for the EU's 2030 Effort Sharing Decision, Report prepared for Carbon Market Watch, http://carbonmarketwatch.org/wp-content/uploads/2015/06/Report_New-and-enhanced-Flex-final_Öko-Institut-e.V..pdf

The Crediting period is a critical issue. One comparative advantage of GIS compared with JI is that it was also possible beyond 2012, while JI was only viable until 2012. So for EPM crediting needs to be long enough (e.g. 10 years per GIS), meaning the EPM as such should last even beyond 2030).

Finally, private-sector participation linking with technology transfer/swap needs to be further explored as a potential element of the EPM¹⁶.

Capacity Building

On capacity building, existing capacity in some countries is already sufficient. However capacity-building needs should be identified for those less engaged in JI and GIS, as well as those with personnel changes in their respective governments¹⁷. According to GIS experiences, institutes like multilateral development banks (e.g. EBRD) and/or MSs willing to purchase could play a key role in capacity building.

¹⁶ There are differences between pure private sector participation, AAU-technology swaps and technology export. Hosting countries need to arrange a public procurement under the EU procurement rules.

¹⁷ Notice that due to the down phase of JI/GIS in recent years there are a lot of people moving out so there may be some need to fill in such human capacity gap in countries who already have good experiences with JI/GIS.

Annex Overview of GIS design and institutional elements per country 2008-2012
 (source: own, drawing on Climate Strategies, 2013, GIS websites and interviews)

Country	Amount of AAUs	Priority Areas	Institutional set-up	MRV set-up
Bulgaria	Surplus AAU: ~200 million 7 million AAUs sold to Austria in 2011/2012	Energy efficiency in buildings, energy saving measures in heating installations including solar installations, regulation and heat distribution and switch to biomass, introduction of efficient lighting, energy production from biomass and biogas	GIS management is conducted by National Eco Trust Fund (NTEF). The Ministry of Finance controls the execution of project contracts between NTEF and project investors. AAU sales are not part of the budget	Procurement, evaluation, validation and financing - Executive Board of NTEF Verification - independent organisations accredited by UNFCCC Buyer representatives can participate in Advisory Committee of NTEF
Czech Republic	158 million AAUs allocated to GIS, out of which 102.4 million AAUs sold in 2009-2012.	Energy efficiency and use of renewable energy sources (biomass) in buildings.	GIS Management - Ministry of Environment (MoE) GIS Operation (allocation of funds and control management) - State Environmental Fund (SEF) GIS subsidies allocation - Programme Managing Authority (SEF, Parliament, MoE) Co-funding from 5 large Czech banks AAUs sales are not part of the budget	Reporting - Programme Managing Authority Efficiency monitoring - Monitoring Committee (Ministries, SEF, Parliament, Senate, NGO) Verification - international auditors Financial monitoring - international auditors (agreed with Buyer)
Estonia	Surplus of 85 million AAUs allocated to GIS. 75.6 million AAUs sold in 2010-2012.	Energy efficiency of multi-apartment houses, public/municipal buildings and private households, micro-renewables, wind farms, CHP plants, boiler-house fuel-switch, insulation of district heating networks, energy efficient public transport (buses, trams), LED street lighting, country-	GIS Management - Ministry of Environment Project development - inter-ministerial group coordinated by the State Chancellery Implementation - relevant Ministry Buyer chooses its preferred greening programme/project.	Reporting - Ministry of Environment Financial and greening audits - international auditors

Country	Amount of AAUs	Priority Areas	Institutional set-up	MRV set-up
		wide electro-mobility.	AAUs sales are not part of the budget-a separate account for each GIS programme	
Hungary	~ 45-55 million AAUs allocated to GIS. 11 million AAUs have been sold in 2008-2009.	Energy efficiency in the building sector, in public transport, lighting, and household appliances.	Before 2010: GIS Management - Ministry for Environment and Waters (MEW) After 2010: GIS Management - Ministry of National Development (MND) Credit sales- the Department for Climate Policy under MND Revenue disbursing programmes planning and operation - the Department for Green Economy under MND	Reporting - the Dept. of Green Economy Development Verification - independent auditors
Latvia	~40 million AAUs allocated to GIS. 18.5 million AAUs sold.	Energy efficiency, Complex Solutions for Greenhouse Gas Emission Reduction, Low Energy Consumption Buildings, Use of Renewable Energy Resources	GIS management - Ministry of Environment GIS operation - Environmental Investment Fund (EIF) AAUs sales - part of the budget	Reporting - EIF Verification - international auditors (finance and greening), EIF (implementation), Ministry of Finance (internal audit) Buyer participation at Advisory Council meetings
Poland	AAU surplus totals 500 million (200 million downgrade from 2008 estimations). ~500 million AAUs allocated to GIS. Contracts for EUR134 million	Energy management in public buildings, biogas and biomass, construction and reconstruction of electricity networks for connecting renewable wind energy sources, energy-efficient street lightning, urban transport. Poland allows also soft greening such as research and	GIS Management - National GIS Operator (National Fund for Environment Protection and Water Management, Ministry of Environment) Operation - National GIS Operator AAU sales are not part of the budget-a separate account (climate account)	Reporting - National GIS Operator Supervision - Ministry of Environment and GIS Consultative Council (representatives of 6 ministries and of National Emission Accounting and Management Center)

Country	Amount of AAUs	Priority Areas	Institutional set-up	MRV set-up
		educational activities		
Ukraine	~1000 million AAUs allocated to GIS. 400 million as a tentative purchase target since 2009. 47 million sold in 2009.	EE in building, EE in Kiev subway, Reconstruction in public and residential building, Thermal measurement equipment, District heating, Mining sector modernization, Waste water treatment	GIS Management - State Environmental Investment Agency No overall GIS architecture, greening requirements are negotiation-based and set by AAUPA	MRV set by each AAUPA, Buyer is able to send representatives Verification - independent accredited auditor
Lithuania	80 million AAUs allocated to GIS.	Renovation of public buildings, Installation of biomass boilers and environmentally friendly vehicles.	GIS Management - Government of Lithuania Operation - Ministry of Environment under Climate Change Special Program	Reporting - Ministry of Environment Buyer is able to inspect financial flows Verification - international auditor
Romania	The proposed scheme has been discarded, no new regulations in place, no transaction.	No information	No formal GIS structure in place	
Russia	The proposed scheme has been discarded, no new regulations in place, no transaction.	No information	No formal GIS structure in place	The proposed scheme has been discarded, no new regulations in place, no transaction.
Slovakia	92 million AAUs could be sold under GIS, 50 million AAUs planned to be sold in a controversial deal, which was stopped, only 15 million transferred to the buyer.	No information	No formal GIS structure in place.	

