

Green Investment Schemes: Maximizing their benefits for climate and society

CENTER FOR CLIMATE CHANGE
AND SUSTAINABLE ENERGY POLICY



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Outline of the presentation

- ❖ Background:
 - ❑ What is GIS
 - ❑ Benefits from GIS
 - ❑ GIS research needs
- ❖ Introduction to the Climate Strategies project on GIS
- ❖ Interim findings on GIS
 - ❑ Modality elements and options
 - ❑ Country status on GIS: modality options
- ❖ Case study: Hungarian GIS
- ❖ Conclusion



Background: What is GIS

- ❖ Most of the EIT countries (Russia, Ukraine, CEE) have a surplus of AAUs, known as “hot air” (not gained from ad-hoc emission reduction efforts but economic recession);
- ❖ However, surplus AAU is not palatable for annex-I countries;
- ❖ Green Investment Scheme: Greening AAUs by channeling the funds from sales of AAUs to areas that benefit climate change.



Back ground: benefits of GIS

- ❖ Unlock the surplus AAUs in EIT countries for Annex-I countries to fulfill the compliance gap;
- ❖ Could be beneficial to the areas, which current financial mechanisms could not support well, such as EE in building.



Background:

❖ Obstacles for the development:

- ❑ Little time left for this window, only significant efforts and cooperation can work;
- ❑ The key characteristic of the GIS: **no regulating international law or treaty; Voluntary;**
- ❑ Advantages (& risks): freedom, flexibility, the lack of previous experience and internationally agreed rules to regulate.

❖ Research needs

- ❑ Limited research on GIS== gaps of knowledge for key overarching and global questions related to GIS;
- ❑ There is a need to identify the key modality elements, modality options and their impacts on GIS.



Climate Strategies: GISs--Maximizing their benefits for climate and society

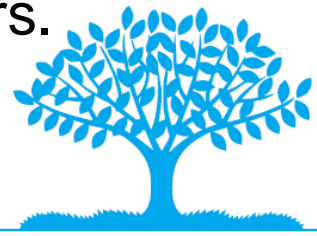
□ Project aim:

- ❖ to provide recommendations that maximise the benefits of GIS;
- ❖ review the GIS in the countries in the EIT region;
- ❖ to draw lessons from the past experiences from CDM and JI, provide recommendations how GIS could overcome their pitfalls and become a potentially superior instrument
- ❖ to provide recommendations how the challenges of design, legislation and implementation phases of GIS can be managed in the short time remaining until 2012.



Project Objectives

- ❖ Understanding the role of GIS on the carbon market;
- ❖ Identifying the key priorities and objectives for GIS;
- ❖ Mapping the present activities in GIS in the CEE region; Assessing the presently planned GIS schemes: successful and failed initiatives and their history;
- ❖ Developing a framework scheme for GIS architecture modalities: taking into account the identified priorities and the CDM/JI lessons to be learnt;
- ❖ Conducting in-depth case studies;
- ❖ Drawing recommendations on all of these objectives for future and ongoing GIS schemes, both for buyers and sellers.



Project Participants and task division

- ❑ Climate Strategies: Funding organization;
- ❑ Central European University, Hungary: Coordinator of the Project;
- ❑ Joanneum Research, Austria: responsible for the part for case study;
- ❑ Point carbon: responsible for the section of the carbon market review.



Climate Strategies Project on GIS

❖ Project Work Package:

❖ WP.1 The role of GIS and GIS priorities

- ❑ Identify demand and supply of AAU in GIS market;
- ❑ Identify key players in the market and dynamics between market players; Identify the price mechanism;
- ❑ Identifying the key priorities and objectives for GIS

❖ WP2 Options for GIS architectures

- ❑ Key modality for GIS design
- ❑ Lessons and experiences from JI and CDM
- ❑ Evaluation on the current development of GIS in CEE region

❖ WP3. GIS country case study

- ❑ Biomass in Bulgaria
- ❑ EE in building sector in Hungary

❖ WP4. Synthesis report



Interim findings on GIS

- ❖ The results presented today are more focused on the GIS modality design
 - ❑ Mapping out the status of GIS development in countries in EIT region;
 - ❑ Identify the basic modality elements and options that are crucial for GIS;
 - ❑ Introducing modality options adopted by countries which are having significant progresses in GIS;
 - ❑ Propose a set of criteria for assessing GIS modality design;



Mapping out the countries status on GIS

SELLING COUNTRIES	UPDATES
Hungary (Front runner)	The law on GIS has been passed in 2007, together with the secondary implementation rules adopted. MOWE in charge of the GIS administration. 45-55million AAUs for GIS, 15million for pilot transaction.
Latvia (Front runner)	The law on GIS has been passed, the country is working on the secondary implementation rules. MOE in charge of the GIS administration. 40million AAUs for GIS, out of which 8-10 million for pilot transaction.
Ukraine	WB Study, 2006. Government's decree No 221: GIS procedures adopted. NEIA in charge of the GIS and JI. 10-20 million AAU in pilot transaction.
Czech Republic	The law related to GIS may be adopted earliest in October. Updated AAU strategy expected to be adopted in June. AAU working group established. State Environmental Fund and the MOE are involved. The country is preparing for an auction for AAU this year.
Romania	2005, REC "Developing a Green Investment Scheme in Romania" Law expected to be passed soon. The government is still working on details on the GIS modalities.



Mapping out the countries status on GIS

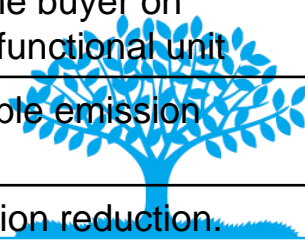
SELLING COUNTRIES Limited progress)	UPDATES
Russia	2002, The Russian GIS, first comprehensive document on GIS development, with a focus on Russia GIS; Russia accepted a grant from Japan via the World Bank to carry out a GIS study; The WB report is still undergoing
Bulgaria	2005 WB “Options for designing a Green Investment Scheme For Bulgaria”. The development is frozen after 2005.
Poland	Very interested in GIS right now. And will have an workshop in June with WB on GIS
Estonia	Interested in GIS, but no concrete movement on GIS right now.
Lithuania	Very interested in GIS, the country is working on an option report on GIS internally. The report is expected to come out in summer.



GIS Modality elements and modality options

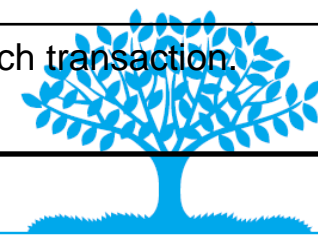
Key GIS modality elements and options

Modalities	Design options	Explanations
How the money is earmarked? What is the budgetary option?	State Consolidated budget	The money goes to state budget and consolidated with other funding. Allocation is made to the areas predefined in AAU sales
	State special Budget	Money goes to a special budget without consolidation.
	Extra budgetary Fund	Money goes directly to the a special fund
The management structure	Fund management unit	For fund allocation, budgetary of the fund, reporting of the fund uses, preparing the tendering or other project selection process, management of the project: monitoring etc.
	Supervision body:	To review the strategy, such as the project priority area, project monitoring and verification principle and methodology
	AAU management unit	To supervise the nation's AAU status to secure the nation fulfill the compliance status.
	AAU sales unit	responsible for finding buyer, negotiation with the buyer on contract, coordinate with the GIS management functional unit
Type of Greening:	Hard greening	GIS funding invest to the projects with quantifiable emission reduction.
	Soft greening	Funding to the area with non-quantifiable emission reduction.



Key GIS modality elements and options

Modalities	Design options	Explanations
The fund allocation:	Grants	Amount corresponding to the quantity of reduced emissions
	Soft loans	Loans with below-market interest rates & longer repayment periods
	Credit guarantees	Guarantees for credits granted by other institutions
Beneficiary	Private firm; NGO; Central or local government; Physical persons; Government owned/municipal owned companies	
Time frame of the GIS	Early crediting	Early crediting is defined as the greening activities could happen before the 2008.
	Late crediting	The greening activities take place after 2012.
Monitoring and verification of the GIS greening activities	Sectoral standard baselines and multi-project emission factors;	Sectoral baseline
	Domestic version of internationally approved track two JI and CDM methodology;	CDM and JI methodology, verified not by third party but by the hosting country.
	Negotiated baselines:	Buyers and sellers negotiate the baseline by each transaction.



GIS Modality elements and modality options

Key GIS modality elements and options		
Modalities	Design options	Explanations
Policy/program approach Vs. project approach	Project approach	Stand-alone project, with a clear cut project boundary
	Policy/Program approach	Greening activities with discrete nature, dispersed but in a great aggregate number
Project selection process	Top down:	National priority area, depends on government decision, through regional or sectoral distribution;
	Bottom-up:	The project developer propose the project and submit application to the authority;
	Tender	The GIS management authority define project type and criteria for project selection



Modalities Options in the Countries with GIS Progress

	Hungary	Latvia	Ukraine	Czech Rep
Greening option	Hard greening	Hard + soft	Hard +soft(25%)	Hard (soft greening option is under discussion)
Programmatic/project	Project +programmatic approach	Project +programmatic	Project approach	Project +programmatic
Budgetary option of the fund	Money goes directly to the special account in MOEW	Money enters budgetary account in state Treasur then disbursed to CCFI	Money enters the national budget and enters the consolidated budget: risk of securing fund in the case of national budget deficit	Money enters a special account under MOE, not entering the state budget
Baseline	programmatic windows- Sectoral baseline Project window: TBD	TBD	Sectoral baseline; domestic version of CDM and JI methodology	Sectoral Baseline & Negotiate with the buyers
Verification	Small project: a) a desk review; b) a random check; c) after the project realization check on performance of the applicant. Large project, ISO standard is employed;	TBD	Independent entity, mostly likely domestic, to issue determination report	TBD
Monitoring	Financial audit; Reported by the MOEW in the format of a report; An advisory committee monitoring of GIS	Financial + project conformity; assessment of the greening result	Monitoring plan is proposed by the project beneficiary, no concrete rules on the monitoring is regulated at this stage	Yearly report which covers the monitoring of money, projects and results

Modalities Options in the Countries with GIS Progress

	Hungary	Latvia	Ukraine	Czech Rep
Crediting period	Depends on projects: complex measure:12-11yr (30-40yr)	TBD	TBD	TBD
Timeframe	First commitment period	TBD	First commitment period or beyond	TBD
Fund allocation	Grants	Grants	Not decided yet	Soft loan and grants
Beneficiary	Private Companies; Non-profit co.;Central and local authorities; NGO; physical person	Private Companies; Non-profit co.;Central and local authorities; NGO; physical person	Private companies, government/owned municipal owned companies	TBD, but preferably physical person
Project selection	Tender	Tender	Tender and top down	Tender



Findings from the countries modality options (1)

- ❖ The **rigid requirements** for approving “additionality”, are disappearing. The term “additionality” is more like qualitative criteria rather than quantitative evaluation criteria.
 - This phenomenon could be justified by the fact that GIS is taking place in EIT countries, who are annex-I countries taking legally binding targets under the Kyoto Protocol.



Findings from the countries modality options (2)

- ❖ In the case of hard greening, emission accounting, verification and monitoring are equally crucial.
 - ❑ The emission accounting and verification are the proof of the projects taking place as agreed between buyers and sellers. The emission reduction calculation and verification would be a crucial supervision tool of the greening activities.
 - ❑ Emission reduction calculation and verification is the basic information for evaluating the greening activities. Information of how much emission reduction was achieved is crucial for buyers to assess the greening effective of the projects.



Findings from the countries modality options (3)

- ❖ Regarding the baseline for the GIS, most of the sellers chose the sectoral baseline and was expecting that the simplified methodology could be expected.
 - ☐ Hungarian case will be discussed later.



Findings from the countries modality options (4)-1

- ❖ There is a soft link between the amount of emission reduction gained from greening activity and the amount of AAU transferred.
 - ❑ Emission reduction generated from greening activity is not 1:1 (or less) matched with the AAU transferred to the buyers.
 - ❑ The greening ratio is not employed as a standard to regulate the greening.
 - ❑ Buyers in most of the cases are provided with a list of projects as the greening options, rather than provided with a certain amount of emission reduction to be achieved.



Findings from the countries modality options (4)-2

❖ The issue of the green ratio:

- ❑ Pros: It can ensure the environmental integrity;

- ❑ Cons:

- ❖ Selling countries will go for the area which is easy to account and verify emission reduction and most cost-effective;
- ❖ easily to go to area where sustainability not ensured;
- ❖ Transaction cost will be high;
- ❖ Hard to establish accurate emission accounting system;
- ❖ Related to the fund distribution option: if the fund is revolving, then it could be difficult to quantify the greening effects.

❖ Thus, the current practice of the EIT countries without greening ratio employed could be justified.



Findings from the countries modality options (5)

❖ Supervision issue:

- ❑ Hungarian and Latvia will all employ financial audit to ensure the funding transparency;
- ❑ Audit in Hungary will also include the audit on verification procedures;
- ❑ In both Latvia and Hungary, a supervision committee is introduced with public and NGO participation.



Findings from the buyers' preferences

❖ Buyers' major concerns regarding the GIS:

- ❑ to ensure the greening activities are implemented, the money will be spent on greening activities and will be earmarked for its designated purposes;
- ❑ GIS management structure in the hosting country should be clear and simple to ensure the transparency of the whole scheme;
- ❑ the monitoring and verification of the emission reductions should be in place.



Key Modality Elements for GIS

- ❖ Modality for funding transparency: modality designed to ensure that the funds are earmarked, traceable and monitored
 - ❖ Earmark of the funding: The best option would be the revenue could not enter the national budget but set separated in an account in the fund management unit
 - ❖ Supervision from independent committee: Financial + verification auditing.
 - ❖ Public accountability: Participate from other department of the ministry, public, NGO.
- ❖ Modality for management structure of GIS: Modality designed to ensure that the structure of the GIS management is clear and transparent
 - ❖ The hosting nation should have a law regarding the GIS establishment, a secondary law regarding the implementation procedures of the GIS.
 - ❖ Fund management unit
 - ❖ Project management unit
 - ❖ AAU management unit
 - ❖ AAU sales contract negotiation unit
 - ❖ Supervision unit



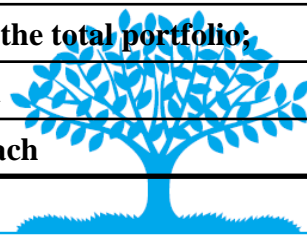
Key Modality Elements for GIS

- ❖ Modality for technical questions related to verifying the emission reduction: modalities related to baseline and baseline methodology, emission reduction calculation procedure, monitoring and verification procedure
 - ❑ Monitoring plan regarding the emission reduction
 - ❑ Verification plan regarding the emission reduction
 - ❑ Baseline setting and emission calculation procedure
- ❖ Modality for greening choices: modality related to soft and hard greening options, programmatic and project approach.
 - ❑ Soft greening or hard greening
 - ❑ Programmatic approach or project approach



Evaluation Criteria for GIS

Funding transparency	Budgetary option	“+” if the budget doesn’t enter the state budget or a special in the state budget which is earmarked
		“-”if enters the consolidated state budget
	Supervisory unit for the whole project: Financial auditing; auditing on verification	“+” if there is rules for financial auditing and other financial monitoring mechanism
		“-” If no financial monitoring
	Public Accountability	“+” if supervisory from public and NGO on the priority area choose, project implementation, fund management, etc
		“-” if the decision is closed to only management institution of GIS
GIS management structure	Law in place	“+” general law for GIS establishment & secondary law for GIS implementation
	Fund mgt unit	“+” if there is a professional fund management unit
	Project mgt	“+” if there is project management procedure
	AAU mgt. Stg.+ procedure	“+” if there is AAU management and also the procedure for implementing the AAU management
	AAU sales unit	“+” if there is one
Modalities for emission reduction monitoring and evaluation	Monitoring plan for ER	“+” if there is a ER management plan,
	Verification plan for ER	“+” if there is verification plan
	Baseline setting and emission calculation procedure	“+” if the emission is calculated and the baseline is set
Modality for greening option	Hard greening	“+” if hard greening
	Soft greening	“+” if the soft greening is kept as a small portion in the total portfolio;
	Project approach	“+” if there is a project approach
	Programmatic approach	“+” if there is programmatic approach



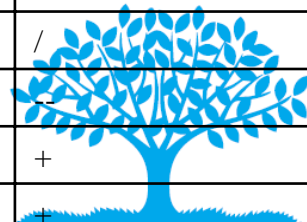
Modality for operation

- ❖ Modalities for operation: this section is more related to the selling countries on how they should arrange the operational issues in GIS
 - ❖ Fund allocation
 - ❖ Beneficiaries
 - ❖ Time frame for GIS
- ❖ In the following chart, three priority area were chosen to show how it is works. But the choice is more dependent on national circumstances



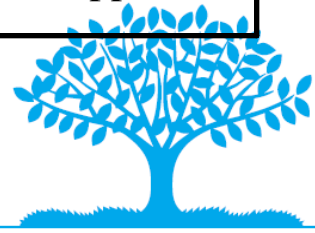
Interaction between the priority area and the priority investment area

Modality for operation	Modality options	Priority area for investment		
		Retrofitting buildings	Renewable energy	CC awareness raising
Fund allocation	Grants	++	+	++
	Soft loan	++	++	--
	Credit guarantee	++	++	--
Beneficiaries	Central and local government	++	++	--
	Government owned /municipal owned companies	++	++	--
	Private companies	-- (EU MSViolation of the state aid rule)	++	+
	Non-profit companies	+	++	++
	NGO	-- (don't have the capacity)	--	++
	Physical person	++	--	++
Timeframe for GIS	First commitment	++	++	++
	Late crediting	-- (if credit guarantee is chosen as fund allocation option)	--	--
Crediting period	5 yr	--	--	/
	10 yr	--		/
	10 or more	++	++	/
Project selection	Top down	++	--	--
	Bottom up	--	++	+
	Funder	++	++	+



Case Study: Hungarian GIS development

Law	Act LX of 2007 On the implementation framework of the UN Framework Convention on Climate Change and the Kyoto Protocol thereof (Hungarian Government, 2007); Government Decree 323/2007. (XII. 11.) On the implementation of Act LX of 2007 /
Available AAU for GIS	In the pilot phase, 15 million AAU for GIS; after pilot phase, another 30-45 million AAU
Type of Greening	Hard greening
Design of the architecture	<p>Program window: In this scheme the objective is to support emission reduction activities which are easy to execute in large numbers (small in scale in each project) , using standard procedures.</p> <p>Project window: The project window is a possibility to support unique or/and complex GHG reduction projects which are of larger size. The project window will start in 2009, depending upon the EU approval.</p>



Priority area for investment

❖ **Programmatic window:**

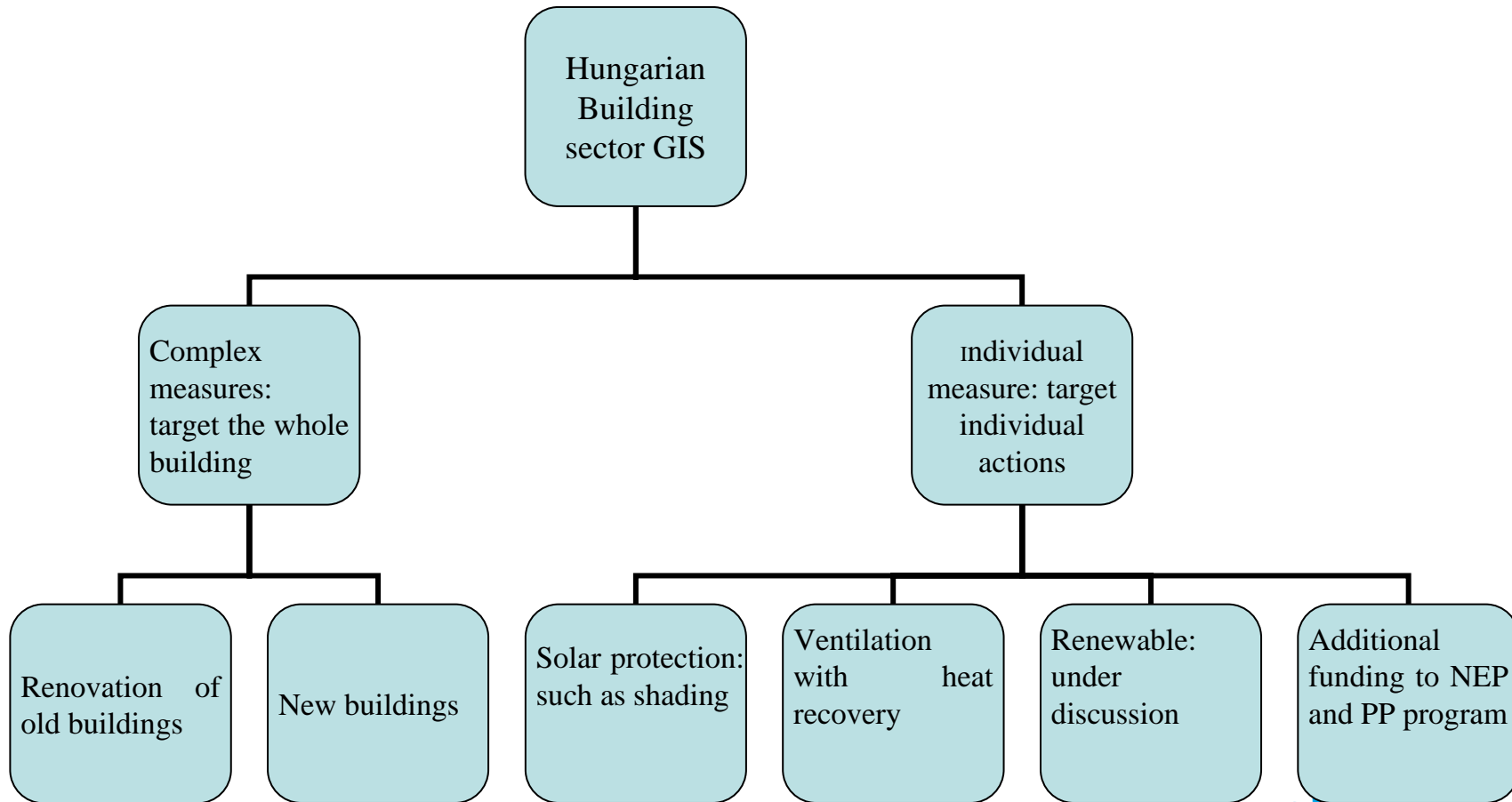
- ❑ **Increased energy efficiency of existing buildings.**
- ❑ Planning and construction of low energy use buildings;
- ❑ Renewable energy use for smaller to larger heating systems;
- ❑ Biogas production and utilization;
- ❑ Other measures of energy conservation, energy efficiency and promotion of the use of renewable energy

❖ **Project window:**

- ❑ Renewable energy and other area.

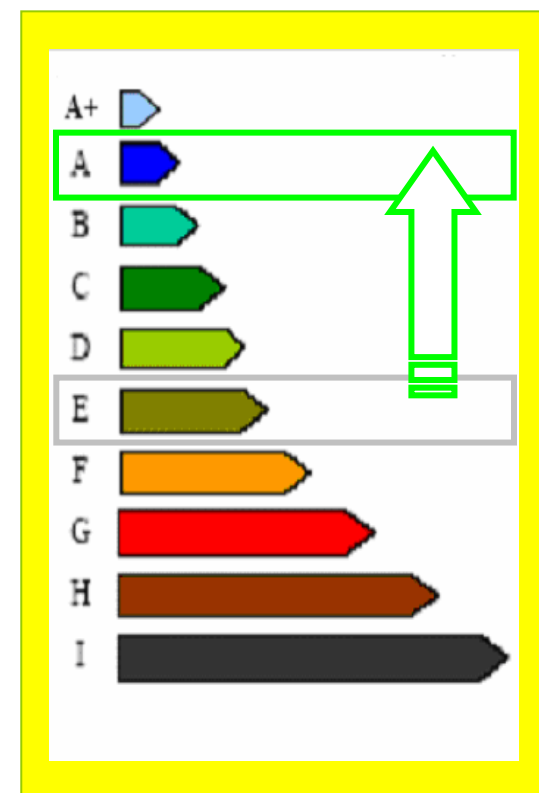


Programmatic window: Energy efficiency in Buildings



For Renovation of old buildings

- ❑ Awarding system
- ❑ Based on EPBD
- ❑ Target energy label: C, B, A, A+
- ❑ Support depends on the target label in % of investment costs
- ❑ Calculation according to EPBD (7/2006 (V.24.) TNM Ministerial decree)
- ❑ Any combination of measures acceptable if target label reached
- ❑ Market (energy expert) will select the most efficient measures
- ❑ The whole building must reach the target, but not all the occupants need to participate

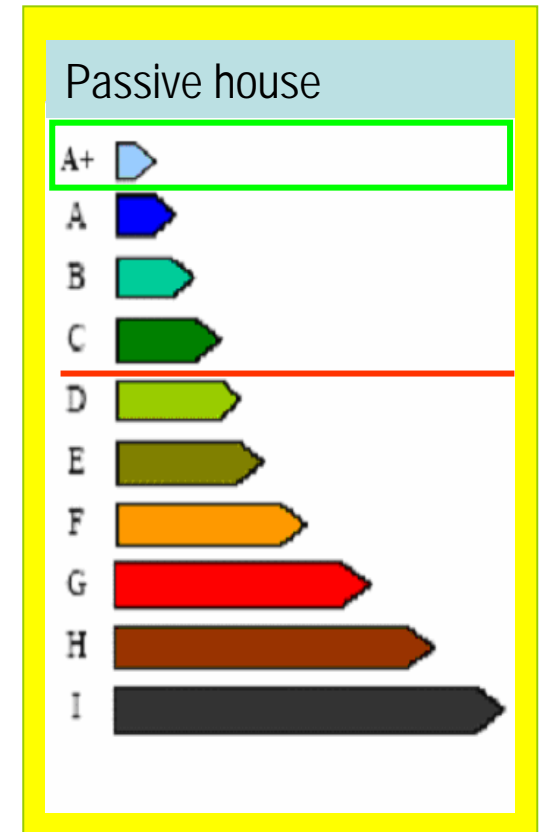


Adapted from Tamás Csoknyai presentation April. 2008. Budapest.

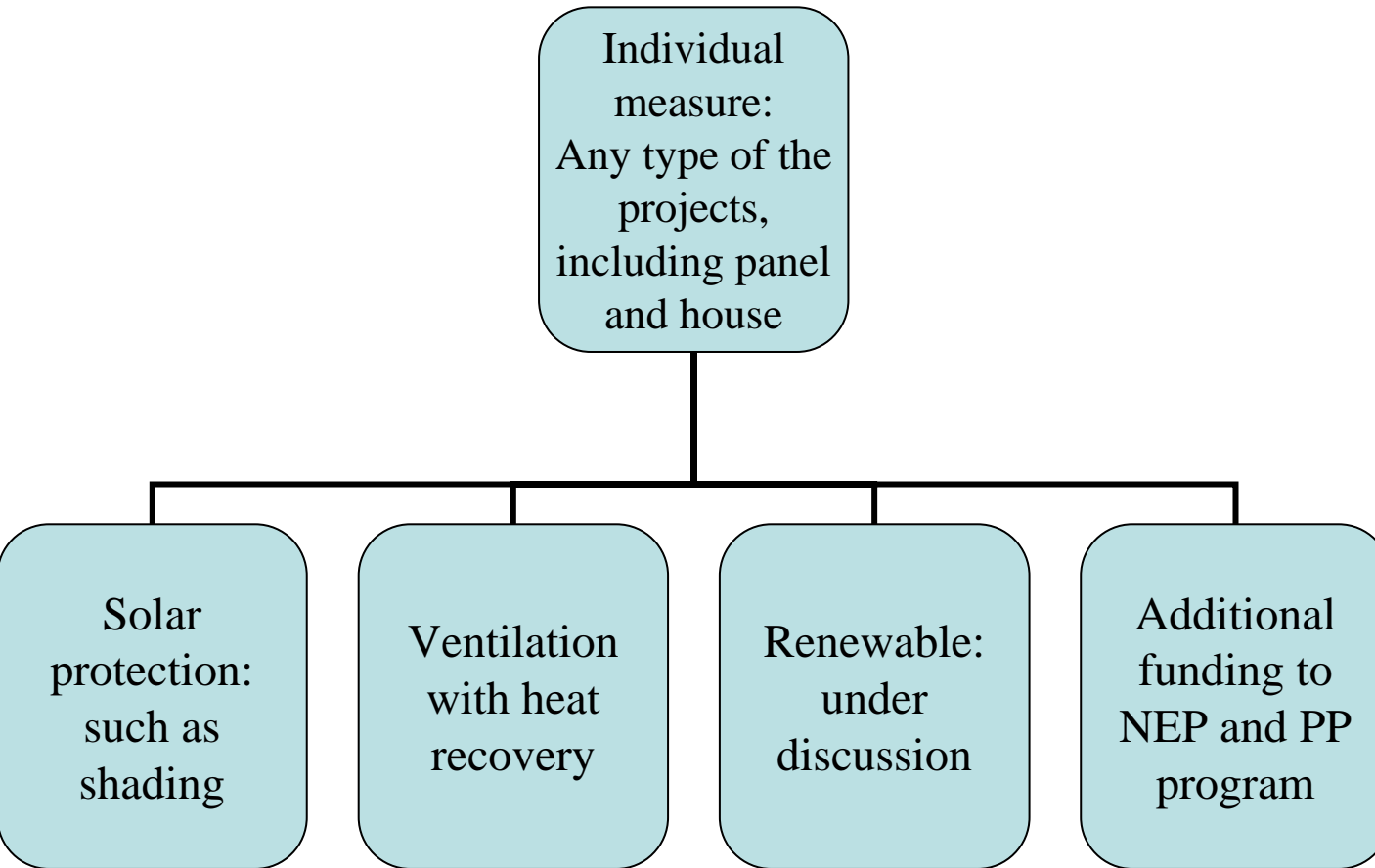


For New buildings

- ❖ Awarding system
- ❖ Based on EPBD
- ❖ Target energy label: B, A, A+, passive house
- ❖ Fix support in function of target label
- ❖ Calculation according to EPBD (7/2006 (V.24.) TNM Ministrial decree) except passive house
- ❖ Any combination of measures acceptable if target label reached
- ❖ Market (energy expert) will select the most efficient measures
- ❖ The whole building must reach the target, but not all the occupants need to participate
- ❖ Passive house certification process according to the rules of Passivhaus Institut Darmstadt



Programmatic window: Energy efficiency in Buildings



- Technical protocol to access the emission reduction by each individual measure;
- Beneficiaries are the physical persons



Conclusion

- ❖ GIS modality design is a key element to ensure the mechanism's well functioning;
- ❖ Success story of Hungarian could be used for other countries in their GIS development;
- ❖ The matrix developed could help the buyers to assess the GIS in a selling country and for seller to improve their GIS;
- ❖ The GIS operation matrix could be used by a selling country to organize the operation of the GIS.



Thank you !

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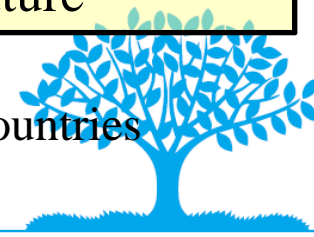


Supplementary slides



Eligibility status and JI track One Procedures^[1]

	Becoming Eligible For IET and Track One JI	Have adopted Track One JI procedure adopted
Bulgaria	(25 November 2008-Expected)	No, but in the near future
Czech Republic	21.Feb 2008	Yes
Estonia	15 th . April 2008	No
Hungary	30 Dec. 2007	Yes
Latvia	29 April 2008	No, but in the near future
Lithuania	22 April 2008	No, but in the near future
Poland	29 April 2008	No
Romania	1 Sep. 2008	Yes
Russia	20 June 2008	No, but in the near future
Ukraine	29 April 2008	No, but in the near future



Evaluation of the GIS in the countries with progresses developing the system

		Hungary
Funding transparency	Earmarking Of the funding	++
	Supervisory unit : Financial +verification audit	++
	Public Accountability	++
GIS management structure	Law in place	++
	Fund mgt unit	+
	Project mgt	+
	AAU mgt. Stg.+ procedure	++
	AAU sales unit	+
Modalities for emission reduction monitoring and evaluation	Monitoring plan for ER	+
	Verification plan for ER	++
	Baseline setting and emission calculation	+
Modality for greening option	Hard greening	+
	Soft greening	--
	Project approach	+
	Programmatic approach	++

