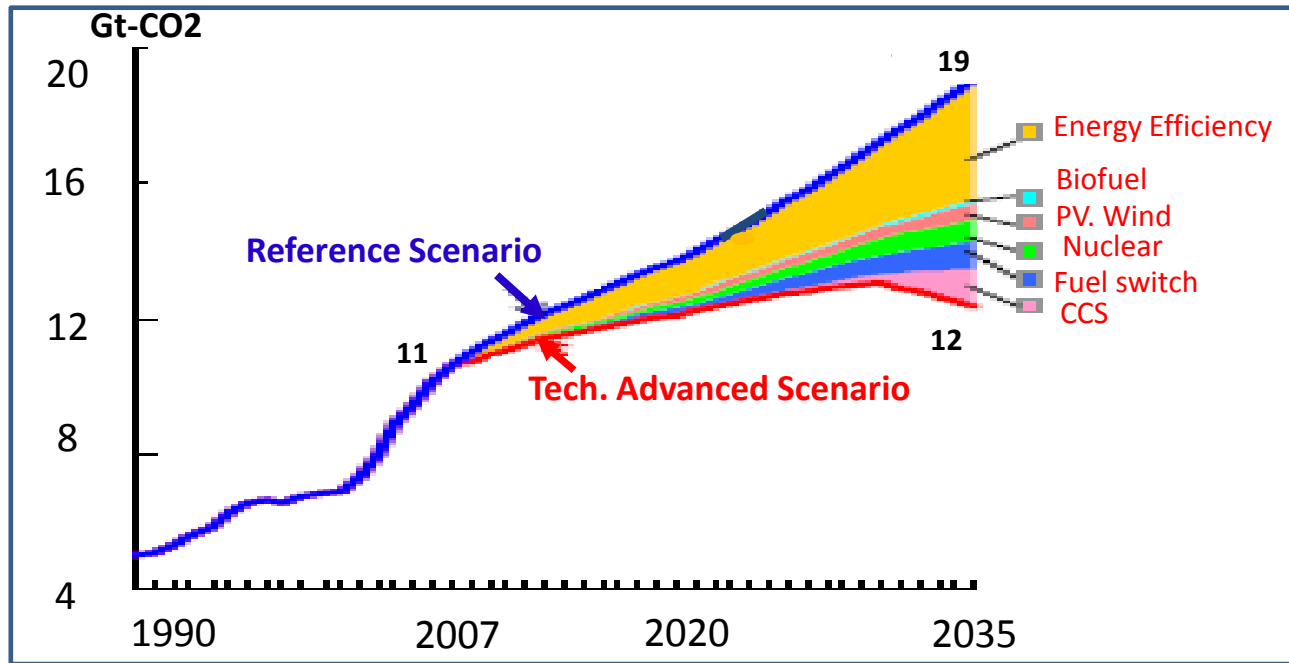


Enhancing Stakeholders Matchmaking to Promote Low Carbon Technology Application in ENEA

Abdessalem RABHI, PhD.
Senior Policy Researcher, and Task Manager
-Institute for Global Environmental Strategies (IGES)

1. Background: Low carbon technologies key to emission reduction in Asia

>Asia has a huge need/opportunity to reduce GHG emissions (estimated to be around 6.8 billion tons in a Technologically Advanced Scenario);



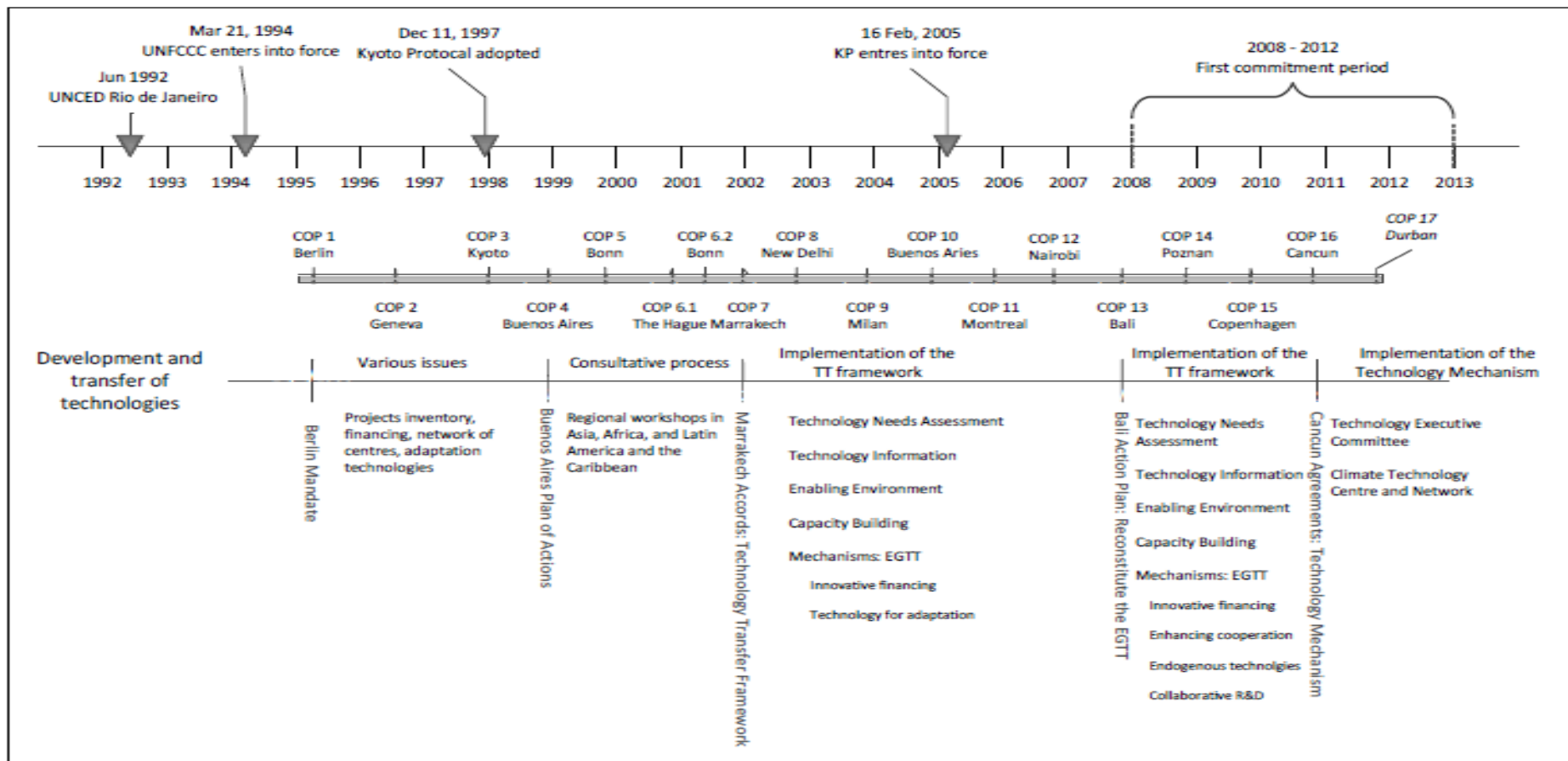
Source: Ryoichi Komiyama 2010

>Energy saving related technologies is playing a crucial role (estimated to contribute with about 53% of overall reduction).

1. Background: Discussion about technology transfer/facilitation

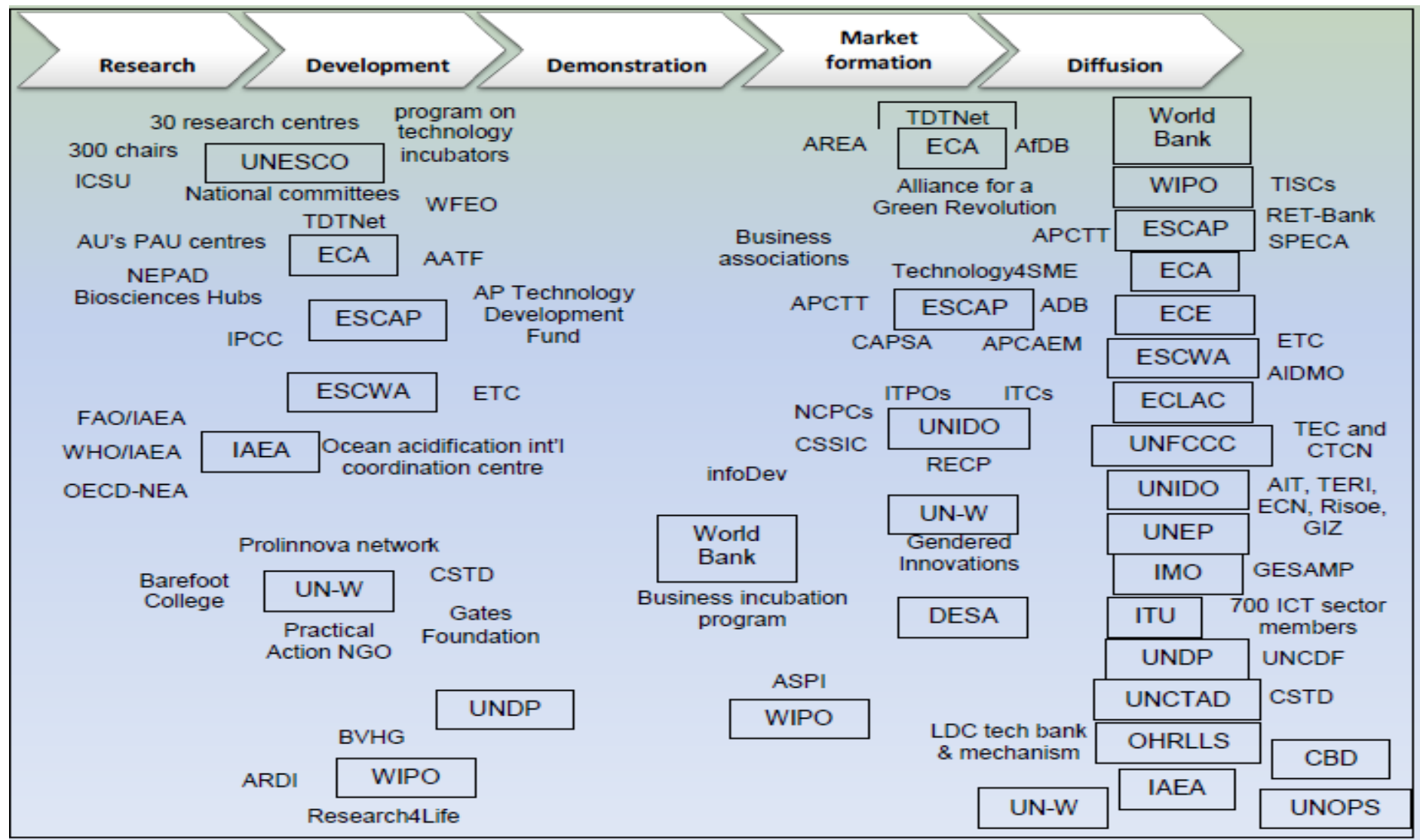
>Discussion about TT has been carried since early 90s, but it is still considered a hot topic and urgent issue to be tackled.

>There is still no consensus on what to do?, how to do it?, and who can play what role?



1. **Background:** Overview of UN contribution (Boxes) and selected partnerships (without boxes)

(Worth emphasizing: Only limited number are focusing on demonstration projects)



2. Japan main initiatives on technology transfer

Ministry of the Environment, Japan has initiated several programs which could promote climate technology development and transfer in developing countries.

Mitigation



- Joint Crediting Mechanism (JCM)/
Bilateral Offset Credit Mechanism (BOCM)
- Co-Benefit Approach
- 3R Initiative
- The Low Carbon Asia Research Network (LoCARNet)

Adaptation



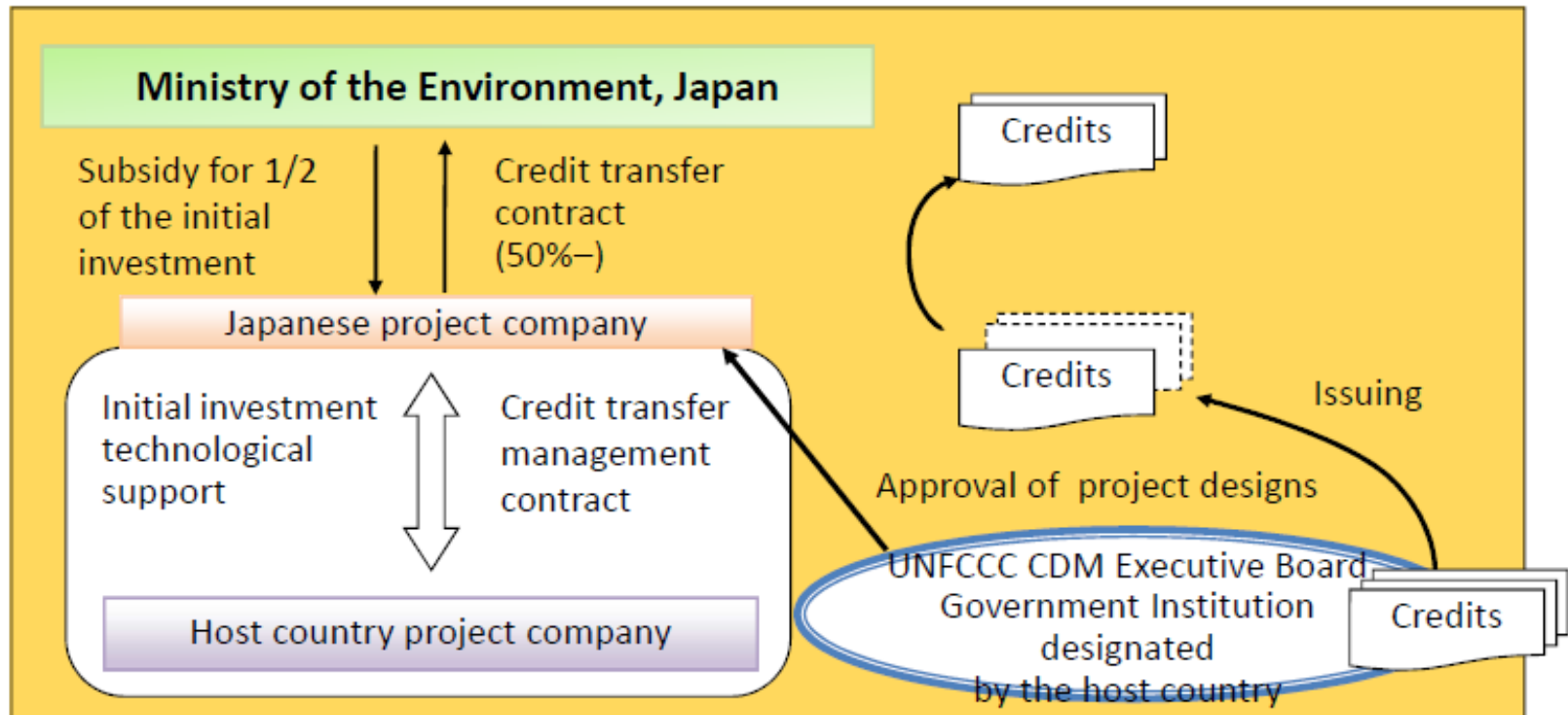
- Asia Pacific Adaptation Network (APAN) – supported by ADB, Adaptation Knowledge Platform, IGES, MOEJ, RRCAP, SIDA and UNEP

Private Public Partnership

2. Japan main initiatives on technology transfer

2.1. Co-benefit CDM Model Project

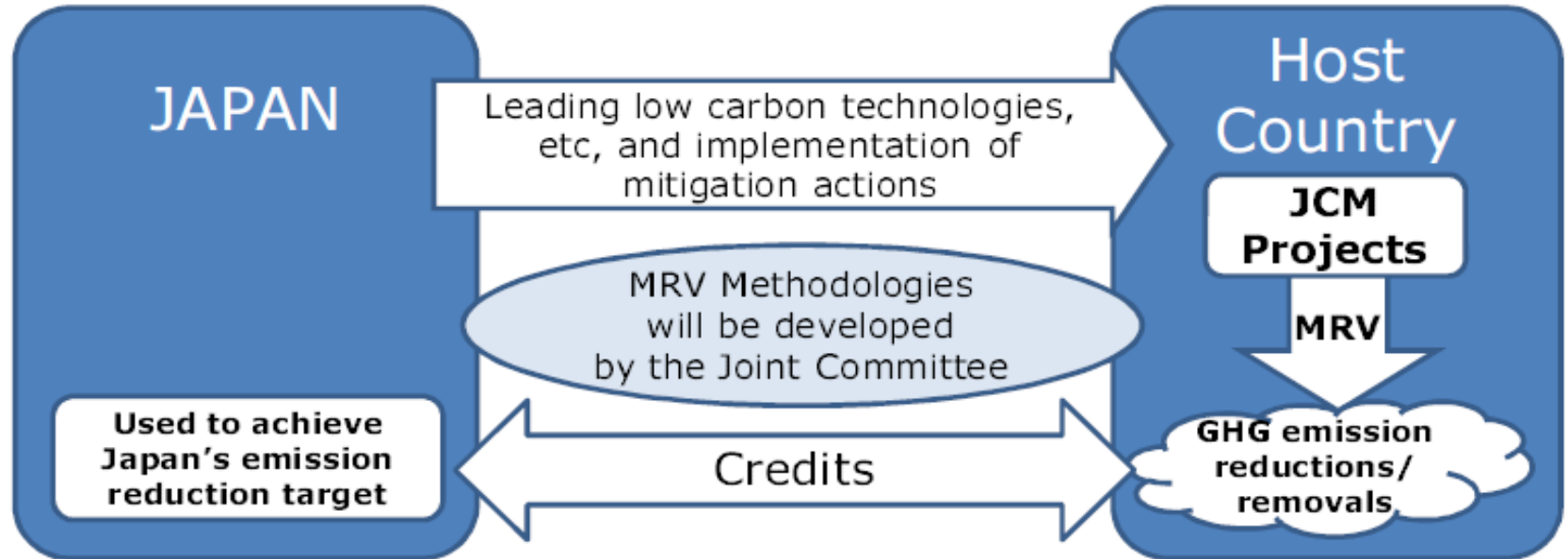
Ministry of the Environment has provided a subsidy program to support CDM model projects with co-benefits.



- ◆ Subsidy for half of the initial investment and transfer of half of CERs to the Government

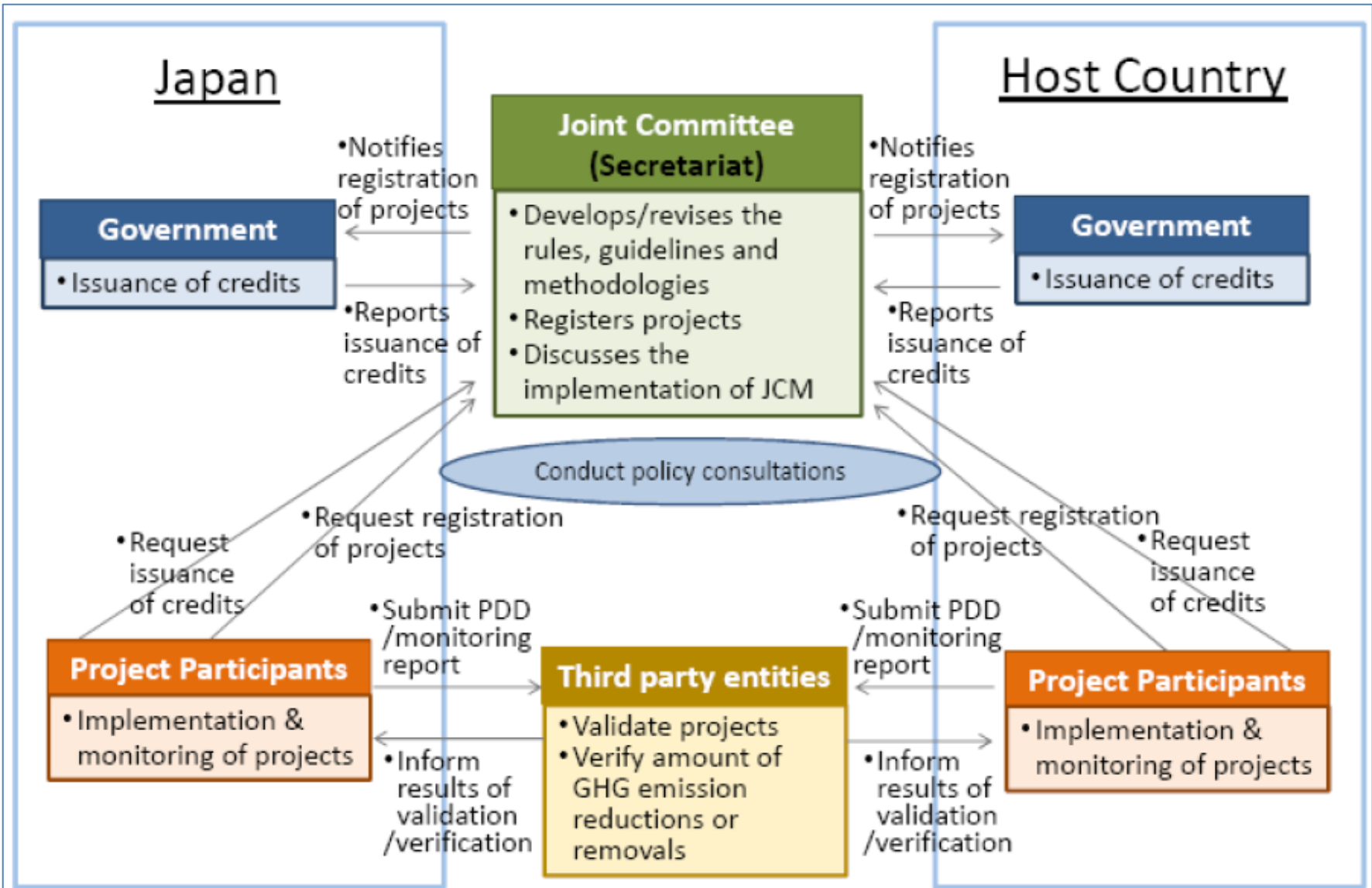
2. Japan main initiatives on technology transfer

2.2. JCM: Model Project



- ◆ Subsidy for up to 50% of the initial investment cost, and transfer of CERs to the Government.

2.2. JCM: Process



Source: Government of Japan, 2014

2.2. JCM: Feasibility studies and other activities

Capacity Building Programmes

Region

Asia, Africa, Latin America, and Small Island countries

Scope

Facilitating understanding on the JCM rules and guidelines, enhancing capacities for implementing MRV

Activities

Consultations, workshops, seminars, training courses and study tours, etc.

Target

Government officials, private sectors, candidate for validation & verification entities, local institutes and NGOs



Feasibility Studies

Objective

Elaborating investment plan on JCM projects, developing MRV methodologies and investigating feasibility on potential JCM projects,



Type of studies

JCM Project Planning Study (PS)

To develop a JCM Project in the next fiscal year

JCM Feasibility Study (FS)

To survey feasibility of potential JCM projects

Large Scale JCM Feasibility Study

To survey feasibility of potential large scale JCM projects including city level cooperation

Reports

Available at GEC (Global Environment Centre Foundation) website <URL: <http://gec.jp> >

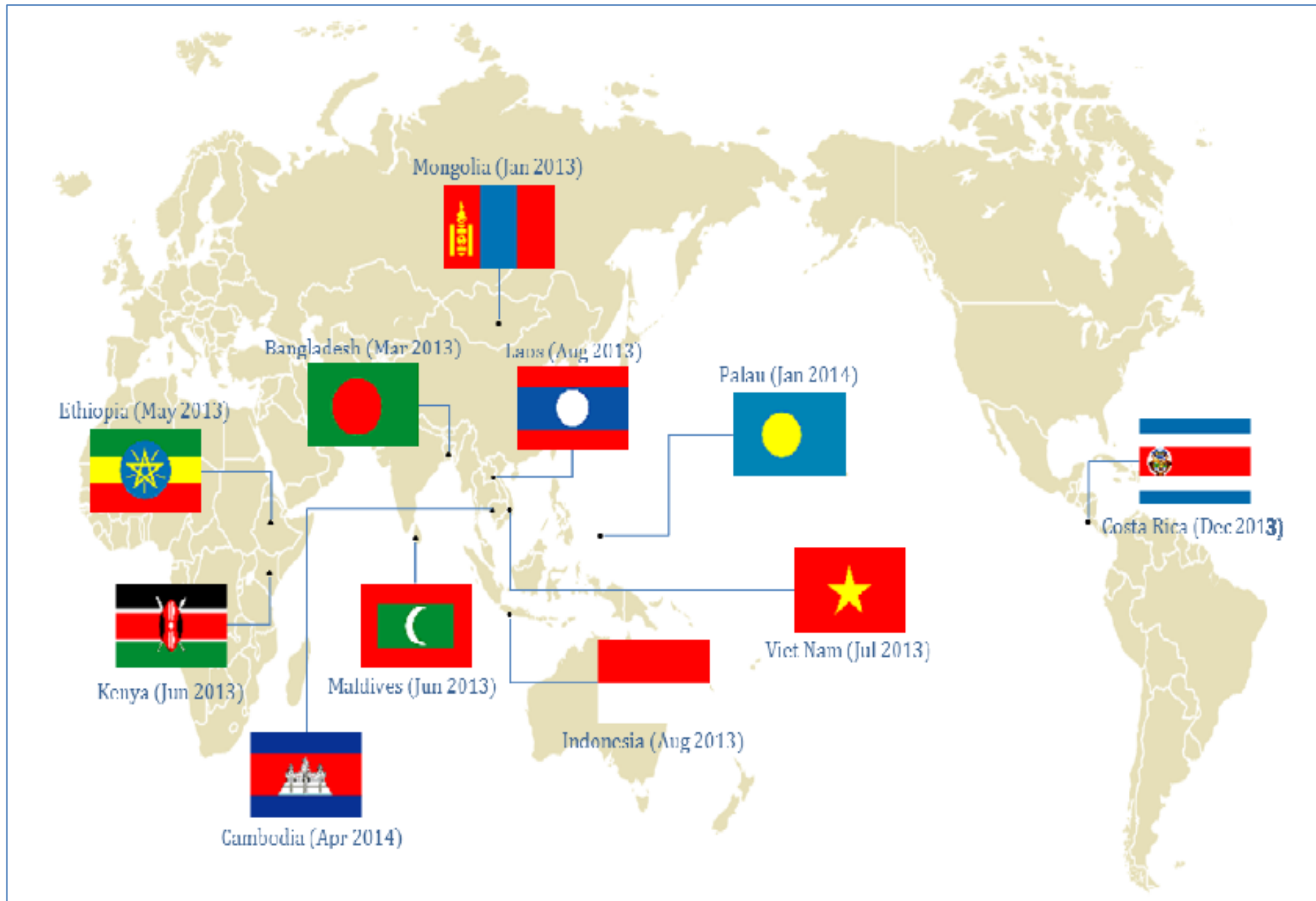


Outreach

New Mechanisms Information Platform website provides the latest information on the JCM <URL: <http://www.mmechanisms.org/e/index.html>>



2.2. JCM: Signed countries

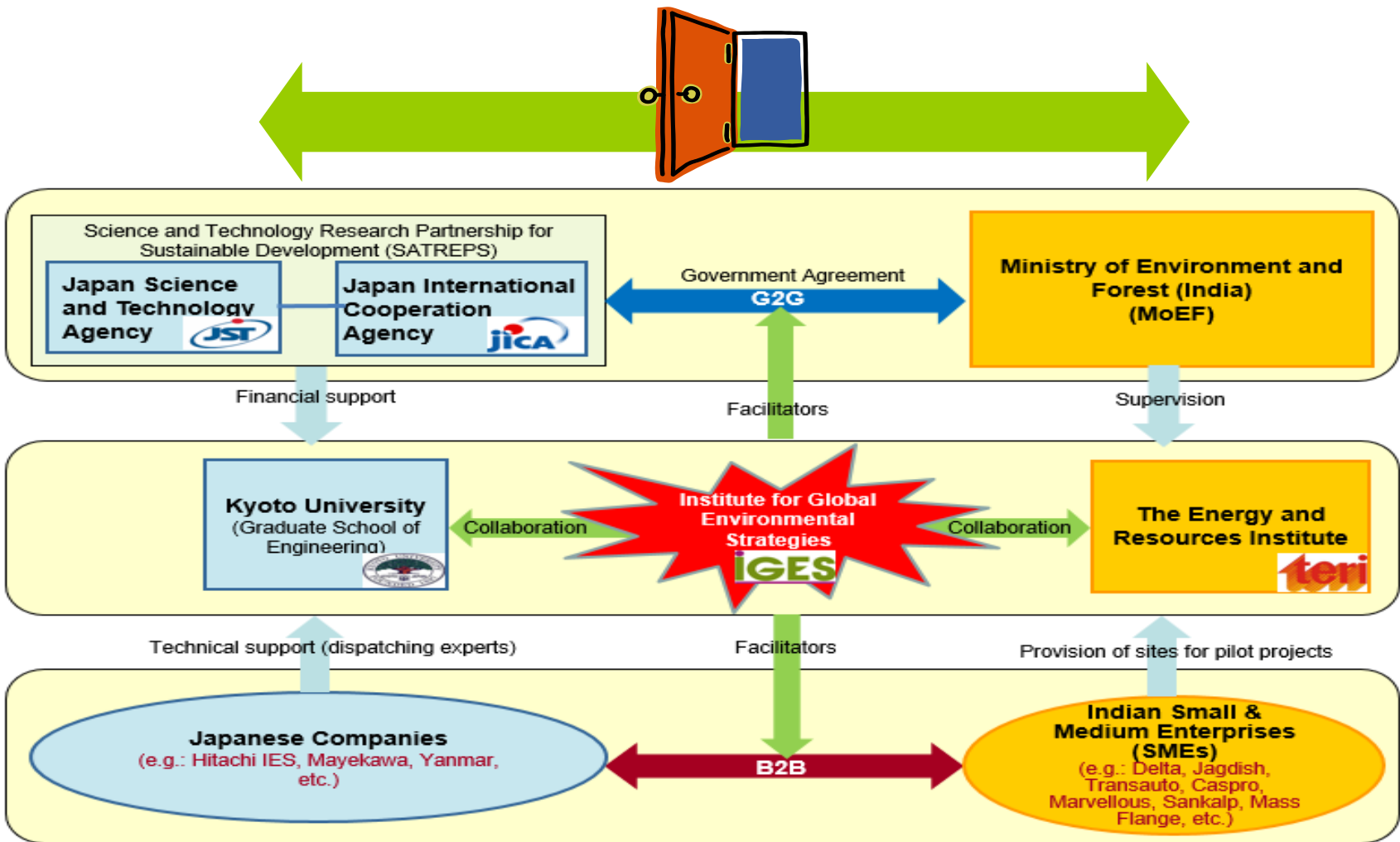


2. Japan main initiatives on technology transfer

2.3. Public Private Partnership:

- >e.g1: JICA Public Private Partnership Program
- >e.g.2: ALCT project: IGES project on the Application of LCT in India (details given below)

Japan-India Environmental Technology Gateway



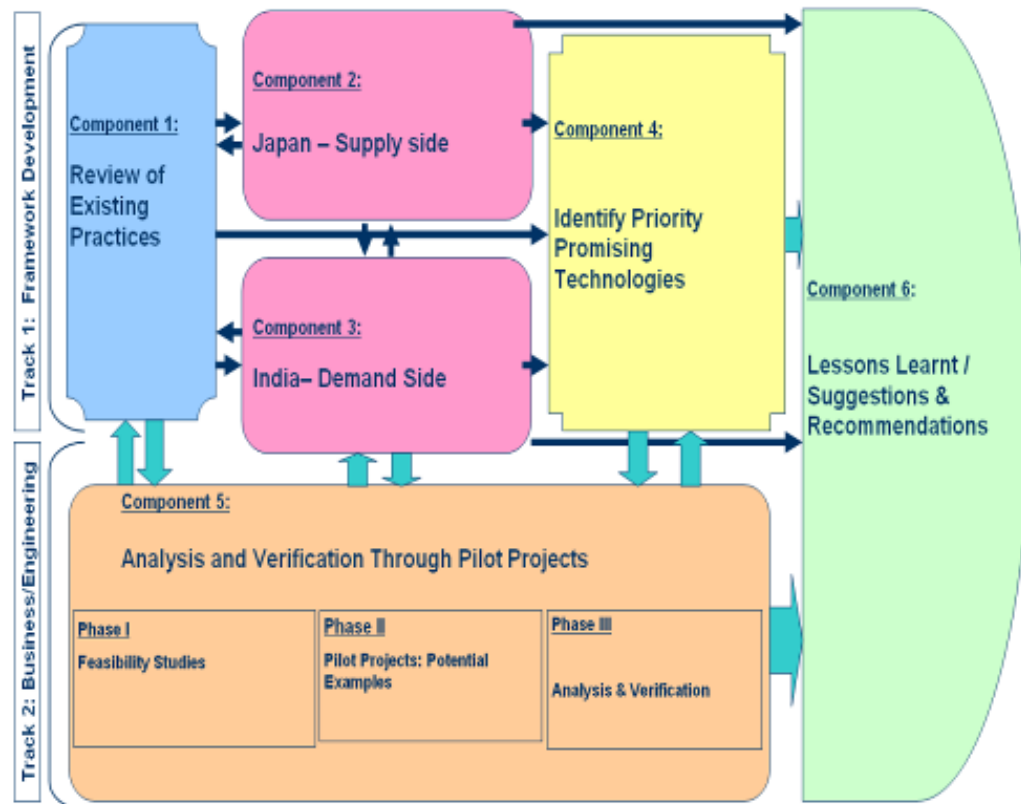
2.3.1 Overall objective

To promote the application of Japanese low carbon technologies at small and medium sized enterprises (SMEs) in India.

2.3.2 Duration: 4 years (May 2010 - March 2014)

2.3.3 Components

- 1- Review of existing practices;
- 2- Study and analyze technologies and relevant conditions of Japanese side;
- 3- Study and analyze needs of technologies and relevant conditions of Indian side;
- 4- Select the appropriate Japanese technologies to be applied in India;
- 5- **Analysis and verification through pilot projects implementation**;
- 6- Draw lessons learnt from the project and provide suggestions and recommendations.



2.3.4 Summary of selected sites and pilot projects

	Technology	Japanese Companies	Total number of investigated sites	Number of selected sites for pilot projects	Location of pilot projects	SME
Hard Technologies	Gas Heat Pump	Yanmar	11	2	Rajkot	-Delta Technocast -Jagdish Technocast
	Electric heat pump	Mayekawa	13	2	Anand	-Amul Dairy
					Chandigarh	-Milkfed Dairy
Best Practices (Soft technologies)	Compressed air system	Hitachi (IES)	13	4	3 in Pune; 1 in Noida	-Sankalp -Transauto -Mass Flange -DIC
	Induction furnace	Expert from Kobe Steel	8	2	Kolhapur	-Marvelous Metals -Caspro Metal

2.3.5: Capacity building and awareness raising (level1)

❖ Targeting SME at unit level:

Onsite capacity building for managers and workers during site visits (in total, more than 50 sites visited)



2.3.5 Capacity building and awareness raising (level2)

- ❖ Targeting SME at cluster/segment level

Several cluster workshops to introduce technology to business entrepreneurs and business associations

(in total 10 conducted)



IGES –TERI Joint Workshop
(Dec. 2011, Rajkot (India))



IGES –TERI Joint Workshop
Jan. 2012, Chandigarh (India)

2.3.5 Capacity building and awareness raising (Level3)

- ❖ Targeting Indian experts:
Training workshops to Indian experts (In India and in Japan)
(in Total 3 (2 in India and 2 in Japan))



2.3.5 Capacity building and awareness raising (Level4)

❖ Targeting Policy makers:

Interaction with policy makers through meetings, symposiums, etc.



IGES-TERI workshop
(Feb.2012 New Delhi- India)



India-Japan Energy Forum
(Sep.2013 New Delhi- India)

2.3.6 Achievements

Achievement1 : A matchmaking process among various Japanese and Indian stakeholders to promote LCT application has been established;

Achievement2 : Actual/tangible reduction in CO2 emission has been generated;

Tech.	EHP		GHP		CA		IF	
Sites	Amul	Verka	Delta	Jagdish	Mass flange	Sankalp	Caspro	Marvello us
CO2 emission reduction	33%	40%	47%	43%	25%	30%	20%	20%

Achievement3: The awareness and technical capacity of various stakeholders, from India and Japan, have been concretely enhanced;

Achievement4: The project was well evaluated by sponsors, as well as attracted the interest of other relevant stakeholders, who are showing readiness to replicate this model of cooperation/collaboration in other countries, such as Vietnam and Thailand.

3. Benefits of technology facilitation

Obvious benefits in term of:

- >Economic benefit (Trade, infrastructure, etc.)**
- >Climate change benefit (GHG emission reduction)**
- >Environmental benefit (better Air quality, water quality, etc.)**
- >Social benefits (poverty alleviation, etc.)**
- >Technical benefit (Innovation, etc.)**
- >Governance (harmonization of policies, etc.)**

4. Obstacle to promote low carbon technology application in ENEA

- >Lack of comprehensive database on what is needed and what is available in term of LCT and best operating practices;

- >Potential for cooperation not fully utilized due to: geopolitical conflicts;

- >Competitiveness rather than complementarity model;

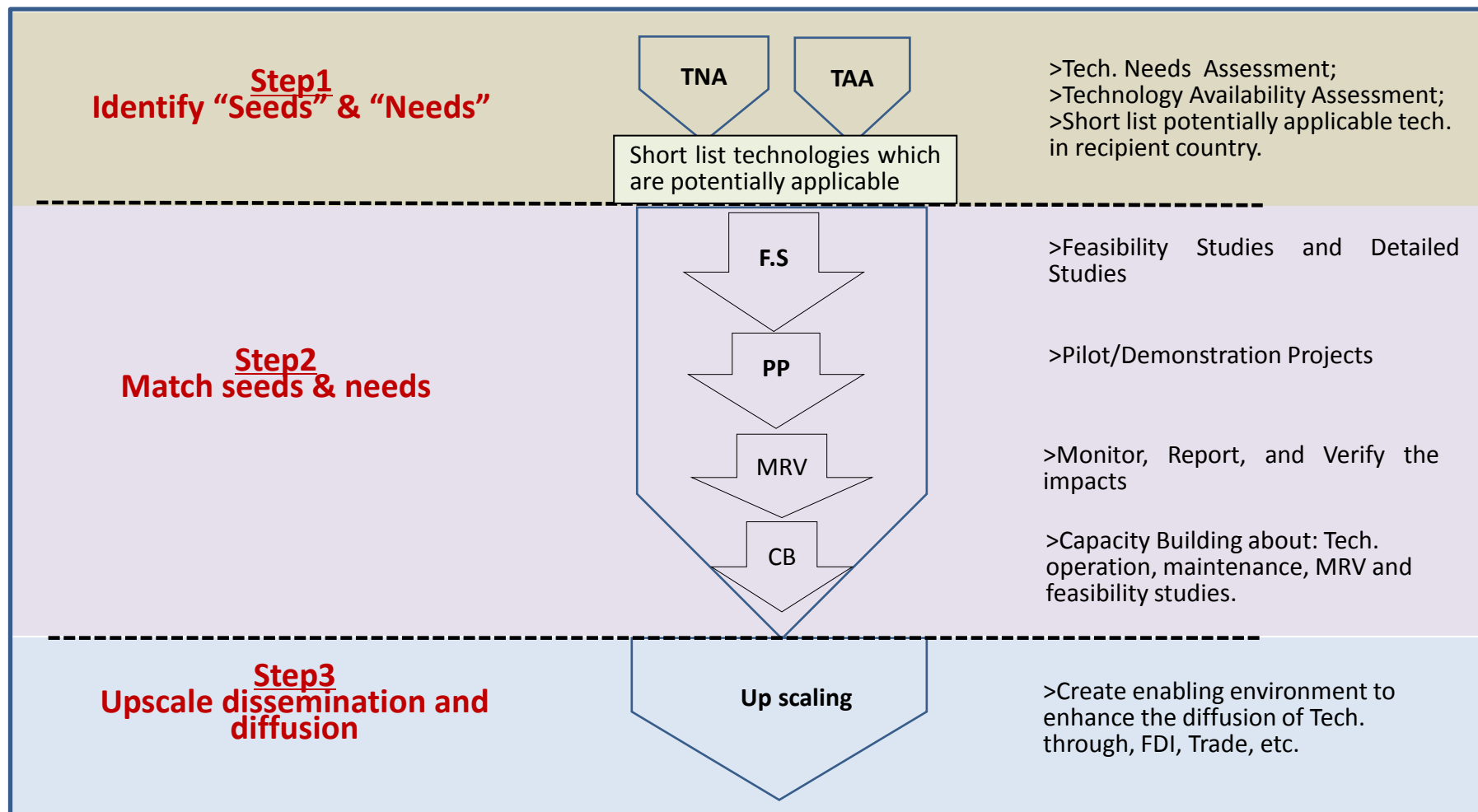
- >Lack of equal conditions;

- >Trade barriers are still high.

- >etc.

5. Element for strategy to promote technology application in ENEA

1) Address the LCT transfer/facilitation as consisting of three steps where the role of each stakeholders have to be identified.



2. Create and strengthen cooperation initiatives regarding the identification of seeds and needs (ESCAP could be facilitator)

- >Each country in Asia should conduct country reviews to identify, collect, analyze, document, and disseminate their needed and/or availability in terms of LCTs; and share it through a national/public database that is accessible to all relevant stakeholders;
- >Create and strengthen coordination among countries to identify gaps, priority areas, partners, solutions, etc.
- >Support countries with low implementation capacity;
- >Develop regional/subregional information systems for mapping technologies available and needed, and/or establishment of an online knowledge platform.

3. Create and strengthen cooperation initiatives regarding matching seeds with needs (ESCAP could be facilitator)

>Create and/or strengthen platforms to match related stakeholders (especially Businesses to Businesses (B2B) and Businesses to Government (B2G);

>Recipient should be put in the core of any cooperation initiative;

>Conduct FS/DS and especially demonstration projects under specific national, regional/subregional initiatives; and create intergovernmental mechanism for impact assessment of new technologies;

>Tax alleviation could be considered for the technologies which are under demonstration;

>Create and strengthen regional peer learning, exchanges, and training programmes regarding new technologies;

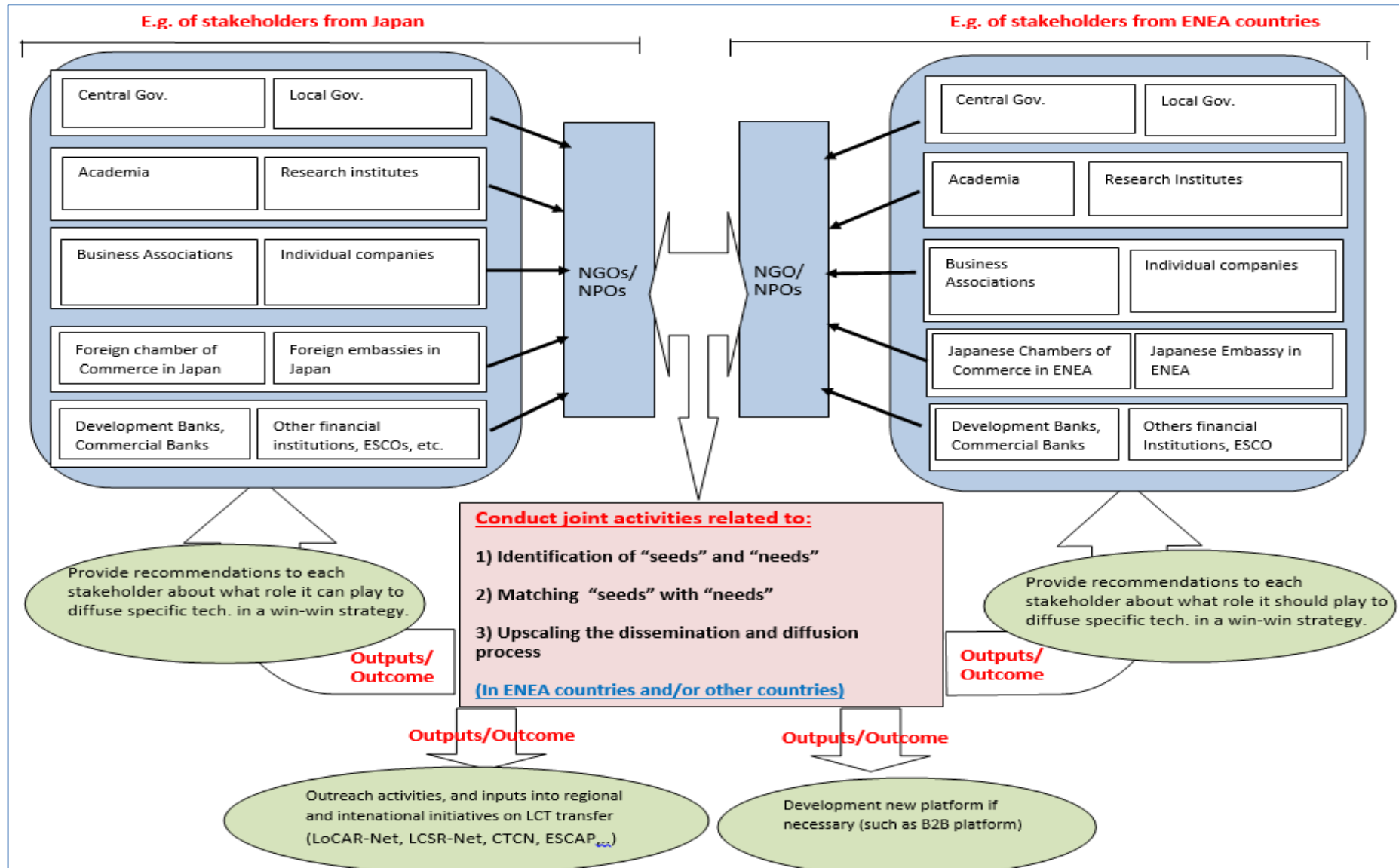
>Establish a regional information system for mapping successful case studies of cooperation.

4. Create and strengthen cooperation initiatives regarding up scaling the dissemination and diffusion of “seeds” (ESCAP could be facilitator)

- >Create the enabling policy and business environments through strengthening matchmaking process among related stakeholders (especially businesses to financial institutions);
- >Establish a market place for low carbon technologies and catalyze more investment from public and private sectors;
- >Consider technology transfer in the context of publicly-funded technologies and public procurement, on concessional and preferential terms;
- >Consider technology transfer in the context of South-South cooperation or triangular cooperation among ENEA countries;
- >Provide funding through small loans, grants programs, technology prizes, etc.
- >Establishment of the following initiatives could be considered: (i) a regional clean technology venture capital fund (a risk capital fund); (ii); Regional network of centers of excellence, partnerships and hubs related to low carbon technology transfer; and (iii) economic partnership agreements on green technology transfer and deployment.

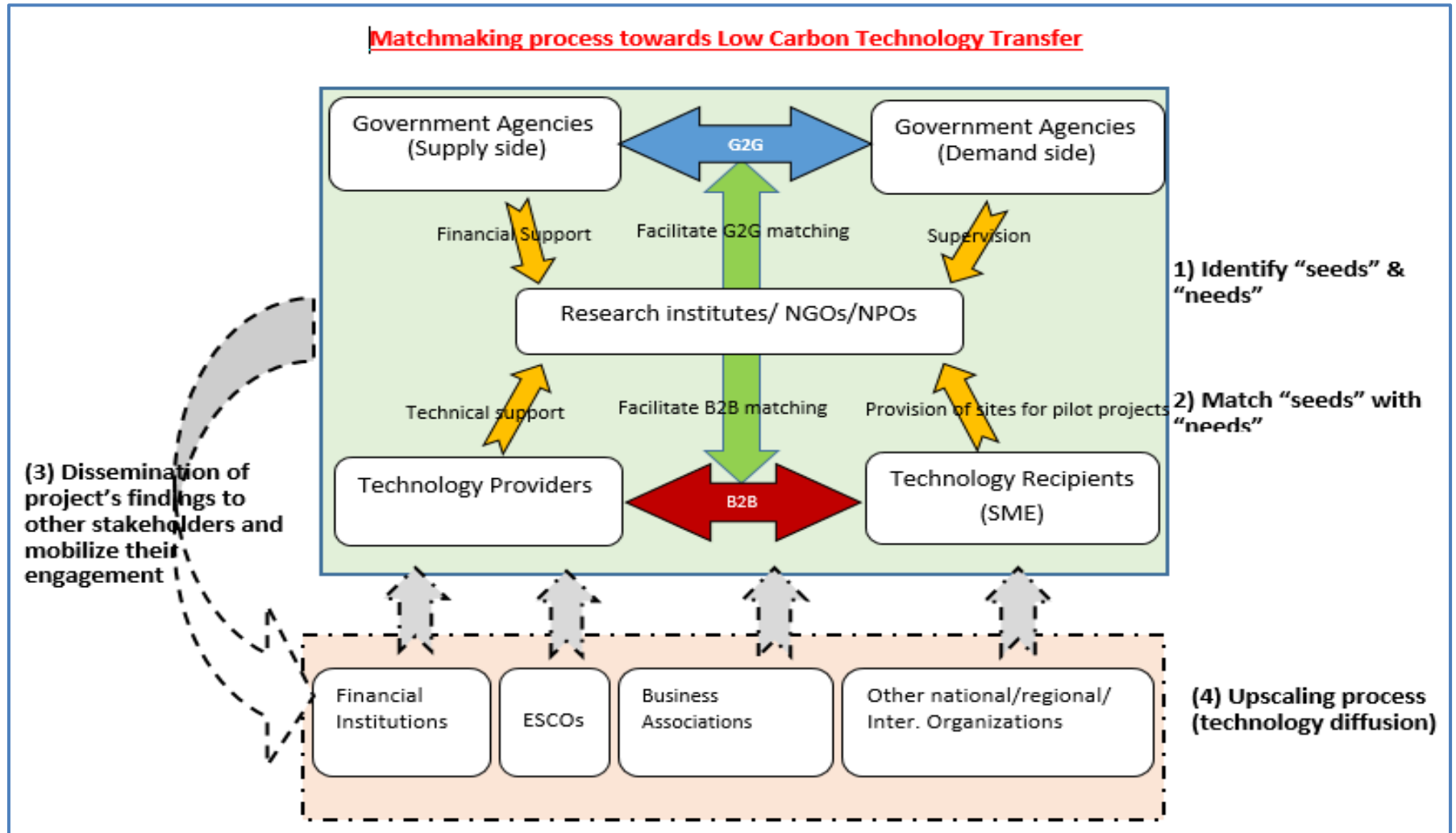
6. Schematic diagram of matchmaking process to promote LTC application in ENEA

Civil society, NGOs/NPOs, research institutes should play significant role in the matchmaking process among public, private and funding agencies in the region.



6. Schematic Diagram of matchmaking process to promote LTC application in ENEA

Civil society, NGOs/NPOs, research institutes should play significant role in the matchmaking process among public, private and funding agencies in the region.



Thank you for you attention

