

ISAP2015 Parallel session , 29th Jul., 2015

Enhancing Stakeholders Matchmaking to Promote Low Carbon Technology Transfer

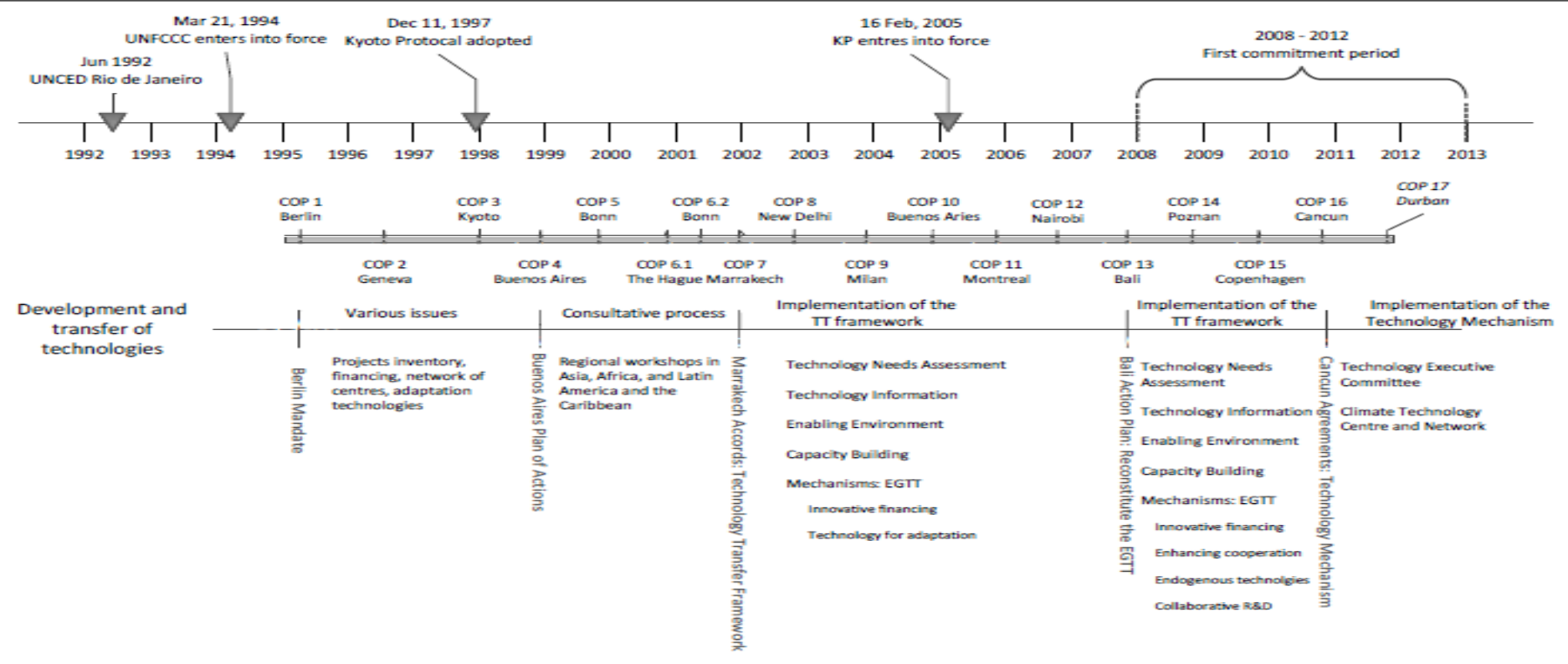
-Findings from “On the ground” Projects-

Abdessalem RABHI, PhD.
Senior Policy Researcher, and Task Manager, IGES

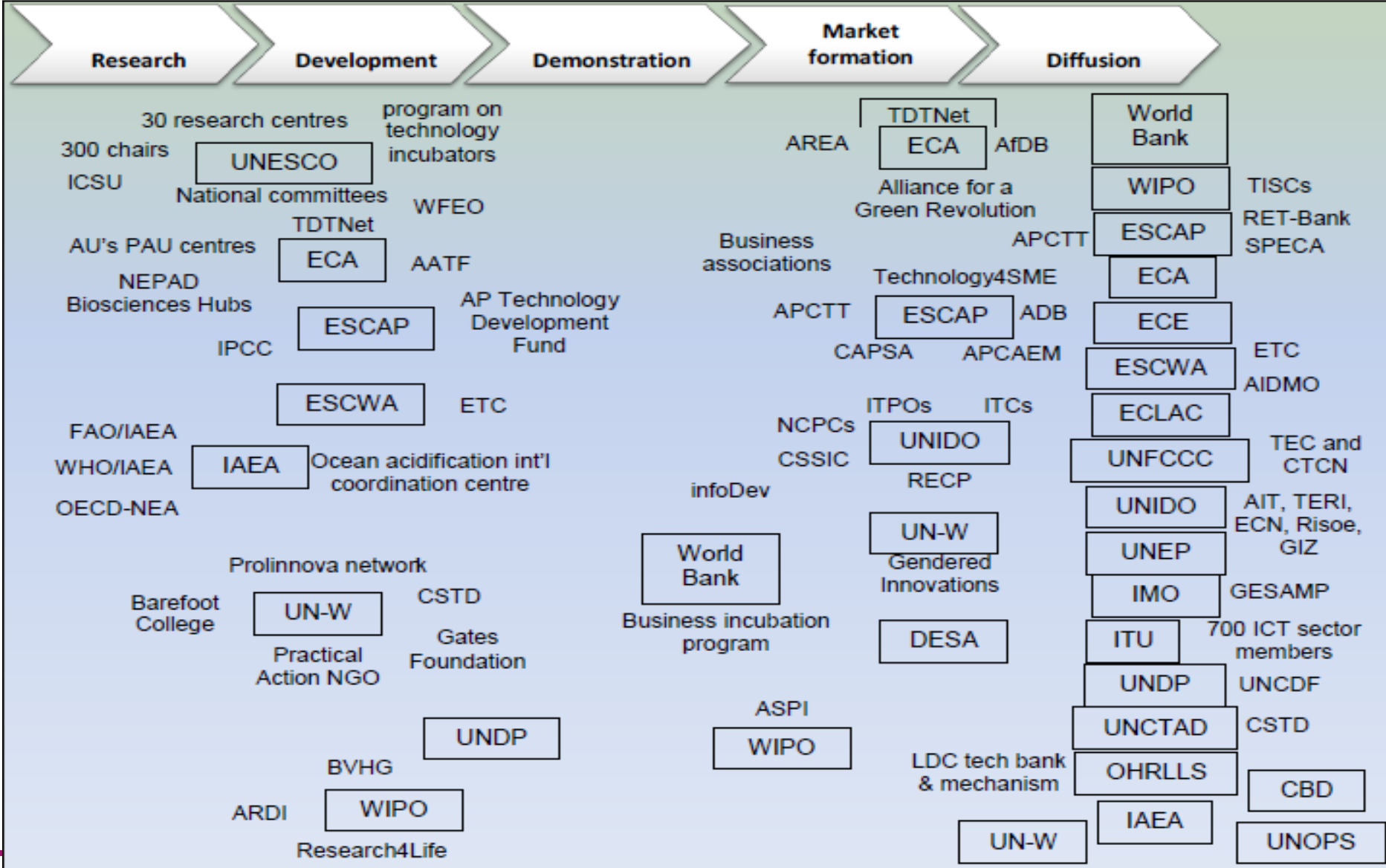


Background: Technology Transfer: Still a hot topics and urgent issue

- > 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?

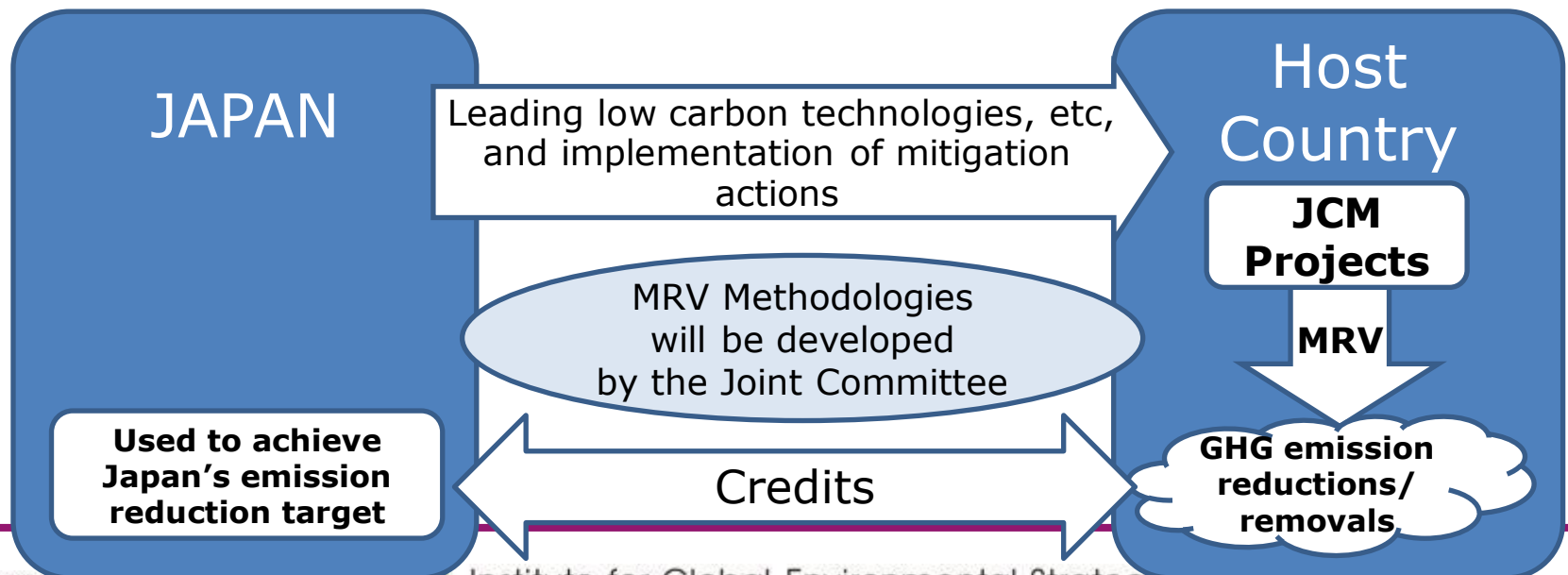


Background: Numerous schemes are available, but fragmented and uncoordinated

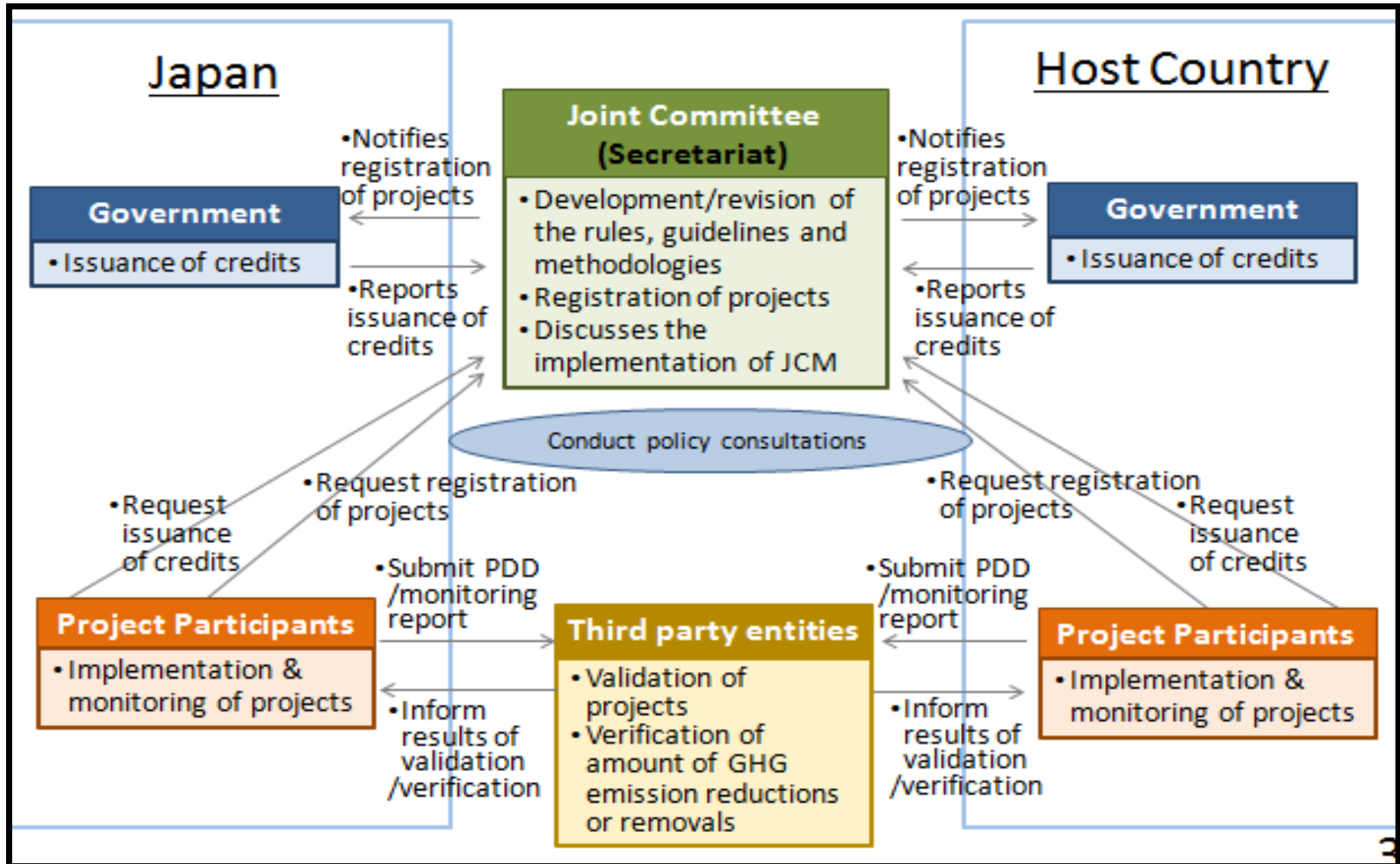


Joint Crediting Mechanism (JCM): Promising scheme to promote LCTT

- Facilitating diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
- Appropriately evaluating contributions from Japan to GHG emission reductions or removals in a quantitative manner, by applying measurement, reporting and verification (MRV) methodologies, and use them to achieve Japan's emission reduction target.
- Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals, complementing the CDM.



Scheme of the JCM



JCM: Partners Countries

➤ Japan has held consultations for the JCM with developing countries since 2011 and has established the JCM with Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, Lao PDR, Indonesia, Costa Rica, Palau, Cambodia, Mexico, Saudi Arabia and Chile.



Mongolia
Jan. 8, 2013
(Ulaanbaatar)



Bangladesh
Mar. 19, 2013
(Dhaka)



Ethiopia
May 27, 2013
(Addis Ababa)



Kenya
Jun. 12, 2013
(Nairobi)



Maldives
Jun. 29, 2013
(Okinawa)



Viet Nam
Jul. 2, 2013
(Hanoi)



Lao PDR
Aug. 7, 2013
(Vientiane)



Indonesia
Aug. 26, 2013
(Jakarta)



Costa Rica
Dec. 9, 2013
(Tokyo)



Palau
Jan. 13, 2014
(Ngerulmud)



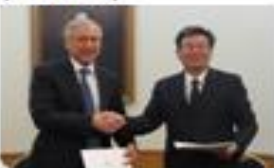
Cambodia
Apr. 11, 2014
(Phnom Penh)



Mexico
Jul. 25, 2014
(Mexico City)



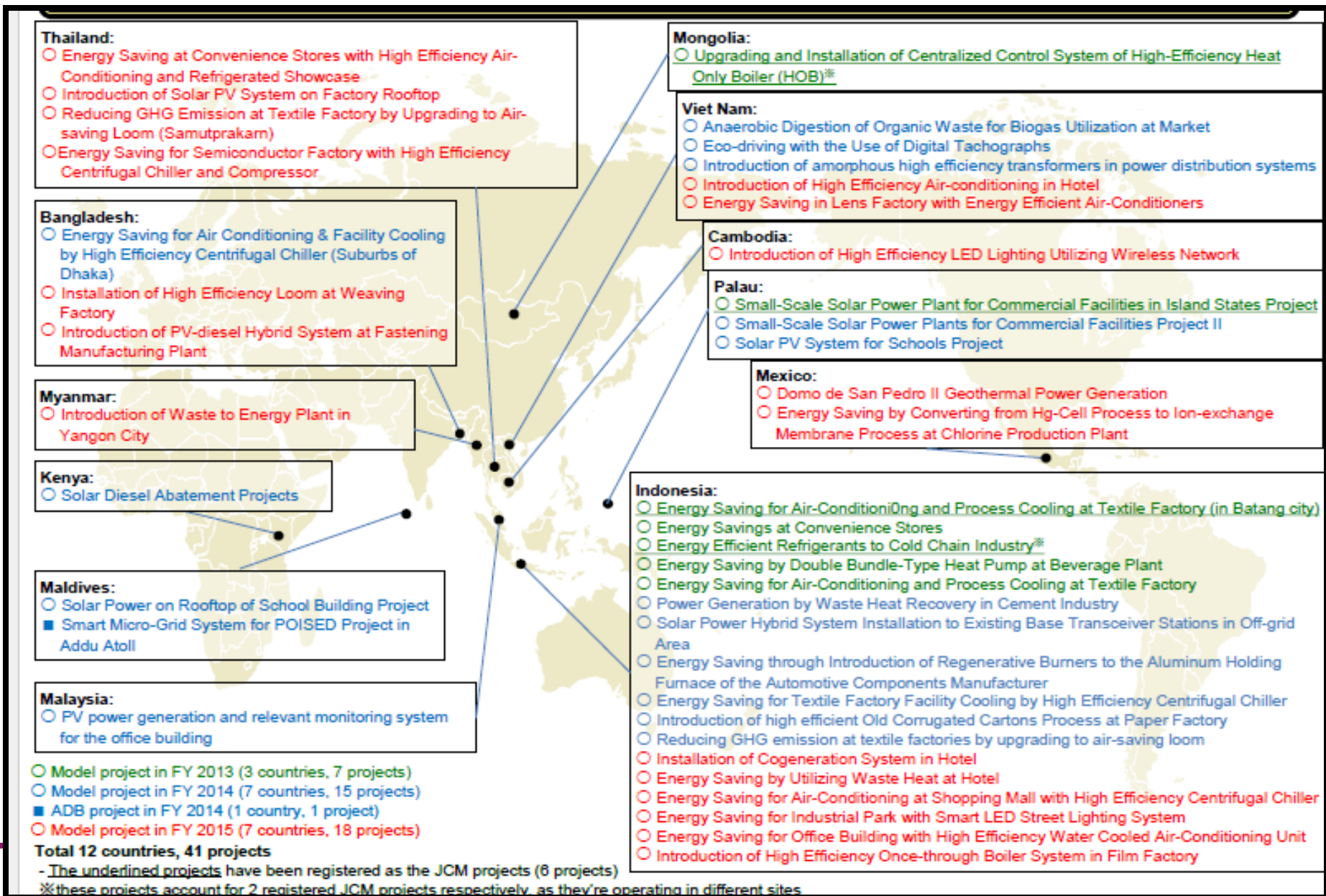
Saudi Arabia
May 13, 2015



Chile
May 26, 2015
(Santiago)

➤ 3 JCM projects have been registered between Indonesia and Japan, 2 JCM projects have been registered between Mongolia and Japan, and 1 JCM project has been registered between Palau and Japan.

JCM: Model projects are on the ground



Lessons learnt from on the ground projects

Case study1: JCM Feasibility study in India (compressed air systems)



Installation of new receiver and new air compressors (not inverter type)



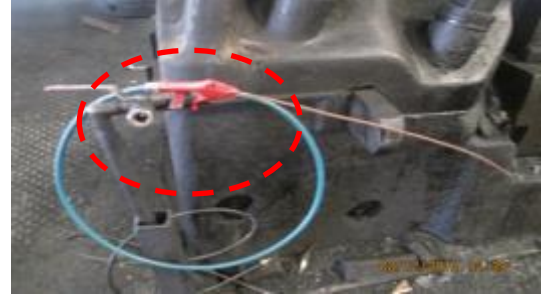
Adjusting pressure setting



Reduce air leakage through installing foot switch



Reconsider pipe size and design



Start the use of efficient air gun

❖ Benefits

- Energy Saving: 20% -30%

Great potential has been identified; but could not be tapped using JCM in India

Sites	Proposals for hardware/equipements installation	Estimated Energy saving (kWh/year)	Estimated emission reduction (Ton/year)	Estimated operation cost saving (Million JPY/year)	Initial cost (in Japan market) (1000JPY)	Estimated Pay back period (Year)
Mahindra Hinoday Co. Ltd	Install Inverter A.C (NL-0)	308,160	302	3,513,024	7,000	2.0
	Install Inverter A.C (NL-1)	308,160	302	3,513,024	7,000	2.0
	Install Inverter A.C (NL-2)	256,543	251	2,924,592	5,000	1.7
	Install two stages A.C	391,500	384	4,463,100	30,000	6.7
	Install Booster	108,864	106	1,241,050	3,000	2.4
Ahmednagar Forging Co. Ltd.	Install Inverter A.C	350,000	343	3,990,000	10,000	2.5
	Install 2 stage A.C	130,500	128	1,487,700	10,000	6.7
Bombay Dyeing Co. Ltd.	Install Inverter A.C	60,830	56	693,462	3,000	4.3
Arvind Textile Co. Ltd.	Install Inverter A.C	660,200	647	7,526,280	12,000	1.6
	Install high-efficiency drain trap	158,000	155	1,801,200	4500	2.5
Morarjee Textile Co. Ltd.	Install Inverter A.C	660,200	647	7,526,280	12,000	1.6
	Install Booster	109,000	107	1,242,600	1,400	1.1
Raymond UCO textile	Install Inverter A.C	660,200	647	7,526,280	12,000	1.6
	Install high-efficiency drain trap	63,200	62	720,480	1,800	2.5

Case study2: Model Project to demonstrate Electric Heat Pump (EHP) under SATREPS scheme

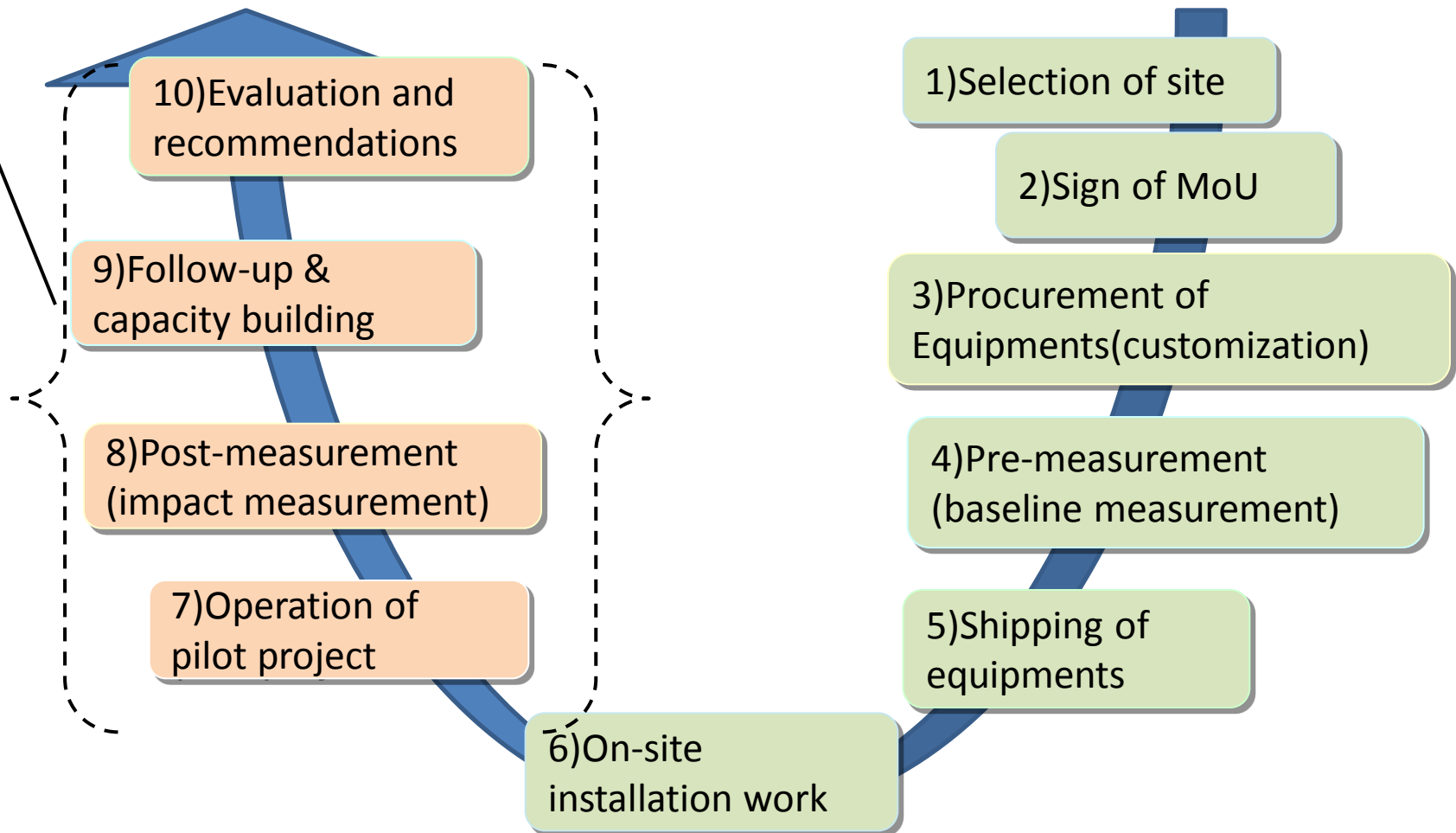
❖ Benefits

- Reduction in fuel consumption of boiler and electricity consumption of chiller
- **Energy savings: 30%-40%**



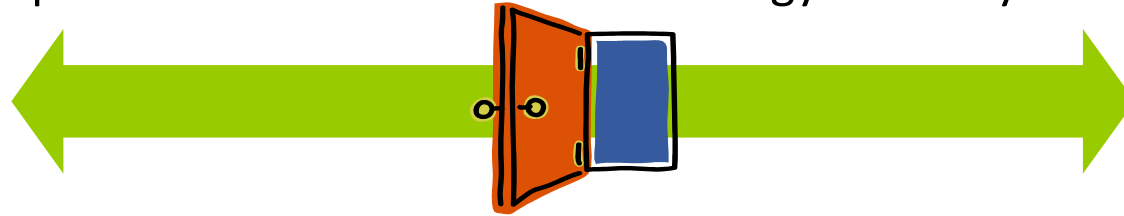
Successful model project, but not enough for follow up and upscaling

Follow up activities to SATREPS project were extremely important to ensure the continues operation of the implemented projects.



Engaging more/new stakeholders for follow up and upscaling

Japan-India Environmental Technology Gateway



Ministry of Environment Japan
(MOEJ)

G2G

Shakti Sustainable Energy Foundation

Financial support

Financial support (modest) and Assistance

Institute For Global Environmental Strategies
IGES

Collaboration

The Energy and Resources Institute
teri

Technical support (dispatching experts)

Facilitators

Provision of sites for investigations

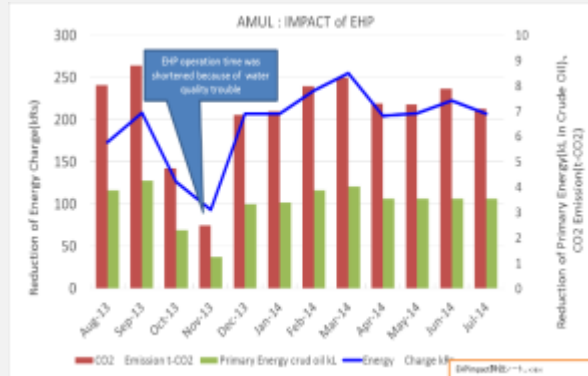
Japanese Companies
(e.g.: Hitachi IES, Mayekawa,
Yanmar, Shinto, etc.)

B2B

Indian SME and Large
industries

Follow up regarding pilot projects

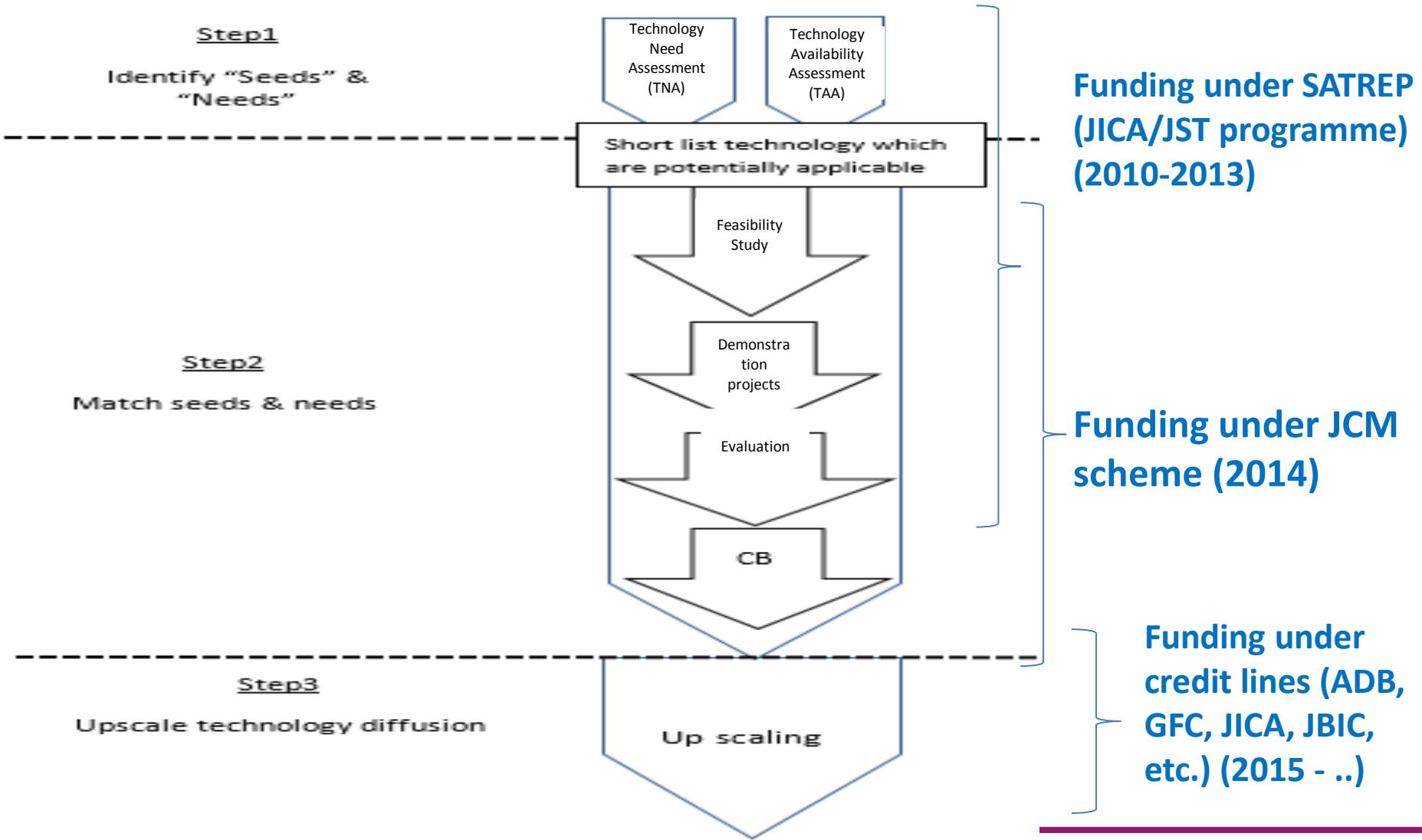
On site monitoring, evaluation and capacity building



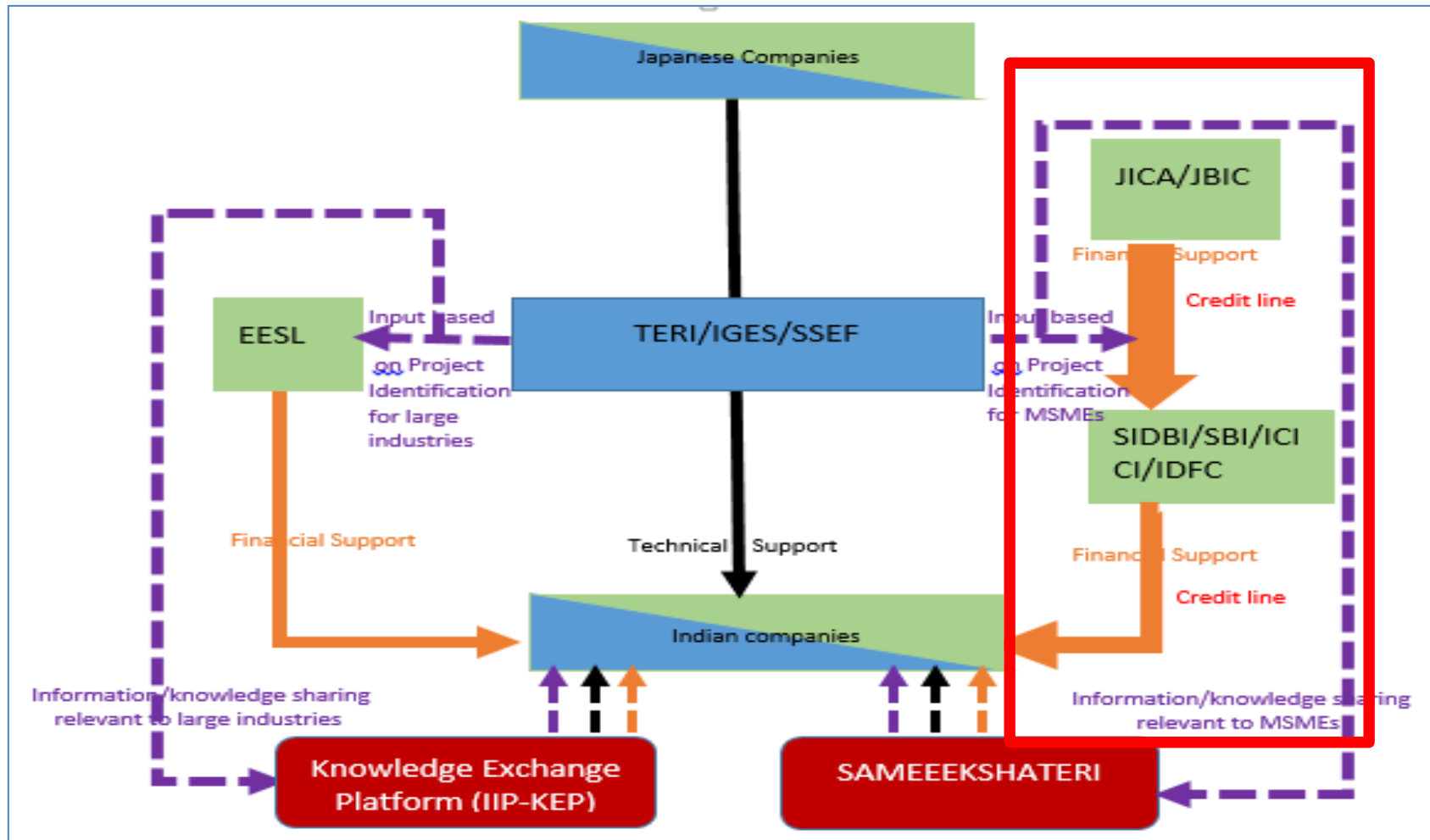
Scaling Up and moving beyond SATREPS Project

	EHP	GHP	CA + FEMS	IF	
>FS/DS & capacity Building	3 sites (Dairy Industry)	5 sites (Food processing, Hotels)	6 sites (Textile, Forging, Casting)	3 sites (Foundry)	
	Local Gov.	Business associations	ESCO	Research Institutions	Funding Agencies
>Networking	MEDA	REA IAFI JFA	Enfragy Solution	IIF SSEF CFER	SIDBI/ISTSL JICA NEDO
	At IGES workshops	At Other workshops	Media Coverage	Working Papers	
>Dissemination	Awareness workshop (Bangalore) Awareness workshop (Pune) CTCN workshop (Delhi) CTCN workshop (Bangkok)	ECCJ (Delhi) UNESCAP (Seoul) Shakti Dialogue (Delhi)	SAMEEEKSHA News letters and websites, etc.	-Submitted and presented at SSEC -Submitted and presented at IIF	

- LCTT process should be wholly addressed rather than partially
- Single scheme may not be sufficient to address the whole process



Financial schemes are already available, but matching them with promising project is missing.



Summary

- The issue is not the availability of schemes, but rather the availability of promising projects/proposals.
- Technology transfer process should be addressed wholly rather than partially: (i) identification of needs and availability, (ii) matching and testing, and (iii) up scaling and diffusion.
- JCM scheme should be effectively utilized as complementary with other existing schemes.