

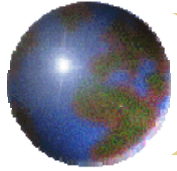
CDM and Role of Japan

Mitsutsune YAMAGUCHI, Professor, Keio University

UNIDO/MRI Forum

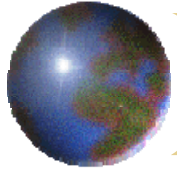
Opportunities for Japan in Asia

June 24, 2002 Tokyo



Marrakesh Accords and CDM

- CDM Executive Board (& 3 Panels)
- Role of the EB
 - Accreditation and designation of OE
 - Recommend modalities and procedures
- Activities of 3 panels
 - Small-scale CDM, First meeting, May 3
 - Baseline and Monitoring, June 12
 - Accreditation, yet to be established



Pros and Cons of CDM

● Pros

technology transfer to DC

Only available scheme for DC to utilize

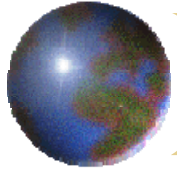
Credit can be obtained after 2000

● Cons

Transaction cost (compare with JI Track 1)

--do-- (2% share of proceed to PVDC)

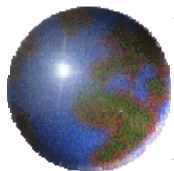
Price of credit (US withdrawal)



Requirements for JI Track 1

- a) Party to the Protocol
- b) Assigned amount calculated and recorded
- c) National system to estimate emissions
- d) National Registry
- e) Submitted most recent required inventory
- f) Submitted supplementary information on Assigned Amount

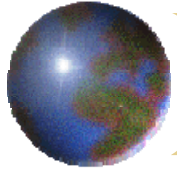
(paragraph 21, Annex to decision 16/CP.7)



Plan to attain Japan's obligation

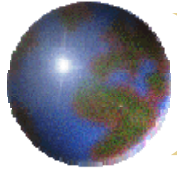
CO2 (energy origin)	± 0.0%
Methane etc.	– 0.5%
Technological Innovation	– 2.0%
HFC, PFC, SF6	+ 2.0%
Sink	– 3.9%
Kyoto Mechanism	– 1.6%
TOTAL	– 6.0%

1.6% = 1970万トン(CO2e)

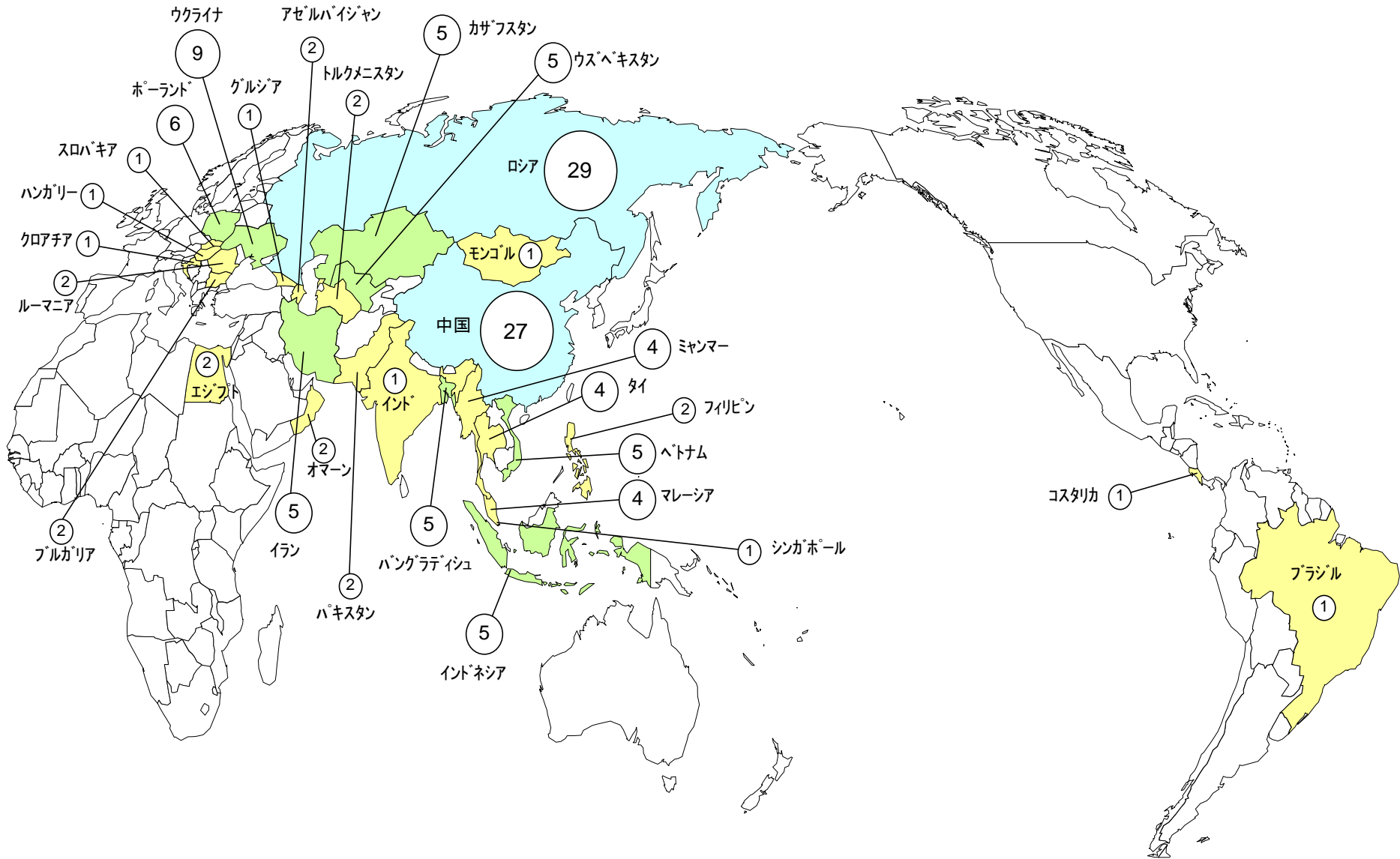


Japan's Efforts (1) (NEDO)

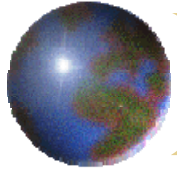
- Model Projects (as of May, 2002)
 - 31 projects (all in Asia)
 - GHG Reduction 1,473,470 t/y (@47,531 t/y)
 - (412 projects for 1.6%)
- Research activities to Promote JI, CDM (1998-2000)
 - 138 cases (Asia 61, EIT 66 etc.)
 - GHG Reduction 800,000 t/y
 - Cost of Reduction ¥6285/CO₂ (average)



共同実施等推進基礎調査対象国マップ図(1998～2000年度)

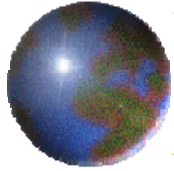


資料提供 NEDO



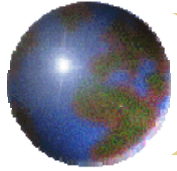
Japan's efforts (2) (JICA)

- 1528 in total in FY 2000
- 916 were trained either in Japan or locally
- 235 experts were dispatched
- 258 had engaged in Project-type technical cooperation
- 119 seniors/juniors were sent or invited for volunteer activities etc.



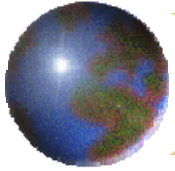
JICA温暖化人材育成実績 (1998-2000)

事業形態		平成10年度実績	平成11年度実績 2000年3月31日現在)	平成12年度実績 2001年3月31日現在)	実績合計 (3年間 分)	人材育成のカウント 方法
研修員	集団研修	485名	641名	327名	1,453名	
	個別研修	153名	205名	107名	465名	
	第三国研修	88名	174名	61名	323名	
	現地国内研	50名	139名	421名	610名	
	合計	776名	1,159名	916名	2,851名	
専門家派遣	個別専門家	176名 (専門家88名)	286名 (専門家143名)	470名 (専門家235名)	932名	長・短期専門家1名 に対し2名の人材が 育成されると考える 1年以上の派遣専門 家は1年間で2名の 人材が育成されると 考える
プロ技		161名	153名	258名	572名	要員配置数)/ 協 力期間)
協力隊		8名 (OCV8名)	80名 (OCV80名)	73名 (OCV73名)	161名	協力隊員1名に対し 1名の人材が育成さ れると考える 1年間で1名の人材 が育成されると考え る
シニア海外ボランティア		3名	3名	2名	7名	同上
青年招へい	都市環境保	30名	24名	44名	98名	
合計		1,154名	1,704名	1,763名	4,621名	



Japan's Efforts (3) JBIC

- Outstanding amount (貸出残高)
 - World Bank ¥21,708 Billion
 - JBIC ¥21,057 Billion
- Climate Change related loans
 - ODA (1998-2001)
 - 26 cases, 13 countries, ¥474,711 M.
 - Other Official Flow (1990-2000)
 - 34 cases, 13 countries, ¥556,336 M.



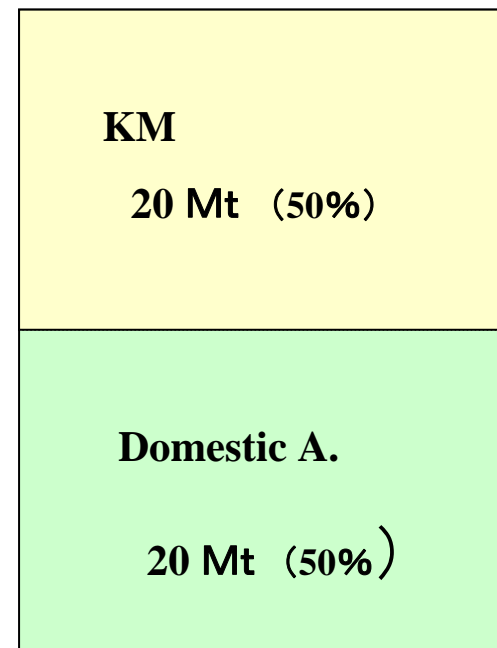
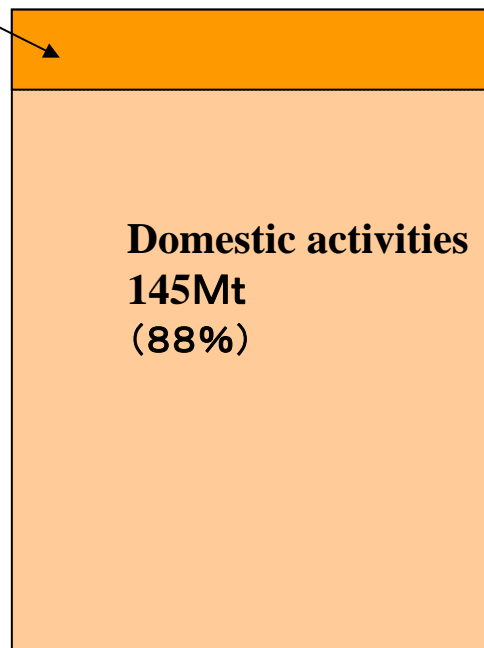
Comparison Japan/Netherlands (1)

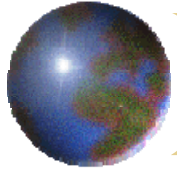
Reduction volume and Utilization of the Kyoto Mechanism

Japan 165Mt CO₂e

Netherlands 40Mt CO₂e

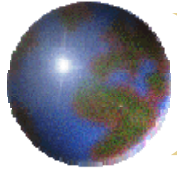
KM 20Mt (12%)





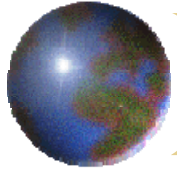
Comparison Japan/Netherlands (2)

- ✚ Is Government policy clear?
Netherlands: CERUPT, ERUPT
Japan: Who pays?
- ✚ Views from firms
For what purpose?
No caps, How to do with credits?
VA and credits



Views from Asia

- CDM National Strategy
 - Indonesia, GTZ/World Bank
 - Thailand, ERM/World Bank
- Capacity Building
 - Many workshops, seminars
- Money for Japan, Idea for Europe?
- Optimal Balance between Countries



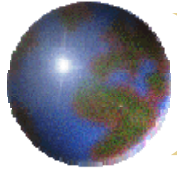
Cooperation among industry, academia and the Government

(What Japan should do?)

Research for potential projects

Development of Risk Management
Strategy

Capacity Building



Research for potential projects

(Cooperation among interested parties)

- Case Study (Power Plants in China)

Keio/Tsinghua 3E Project

- Finding out efficient projects

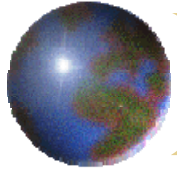
- 2 categories and 8 groups

Small scale S&B, Medium (200-300MW) Mod.

Small and medium classified into 2 by scale

Smalls: divided into 2 by fuel (coal or gas)

Mediums: 2 by grade of modification



Selection of the projects (Annex A)

- 1) Select 3 different crediting periods
- 2) Calculate cumulative CO₂ emission reduction of each project (figure 2)
- 3) Calculate discounted cumulative profit of each project (figure 1)
- 4) Compare cost to reduce 1 ton of CO₂

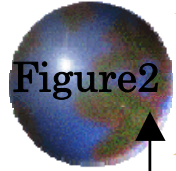
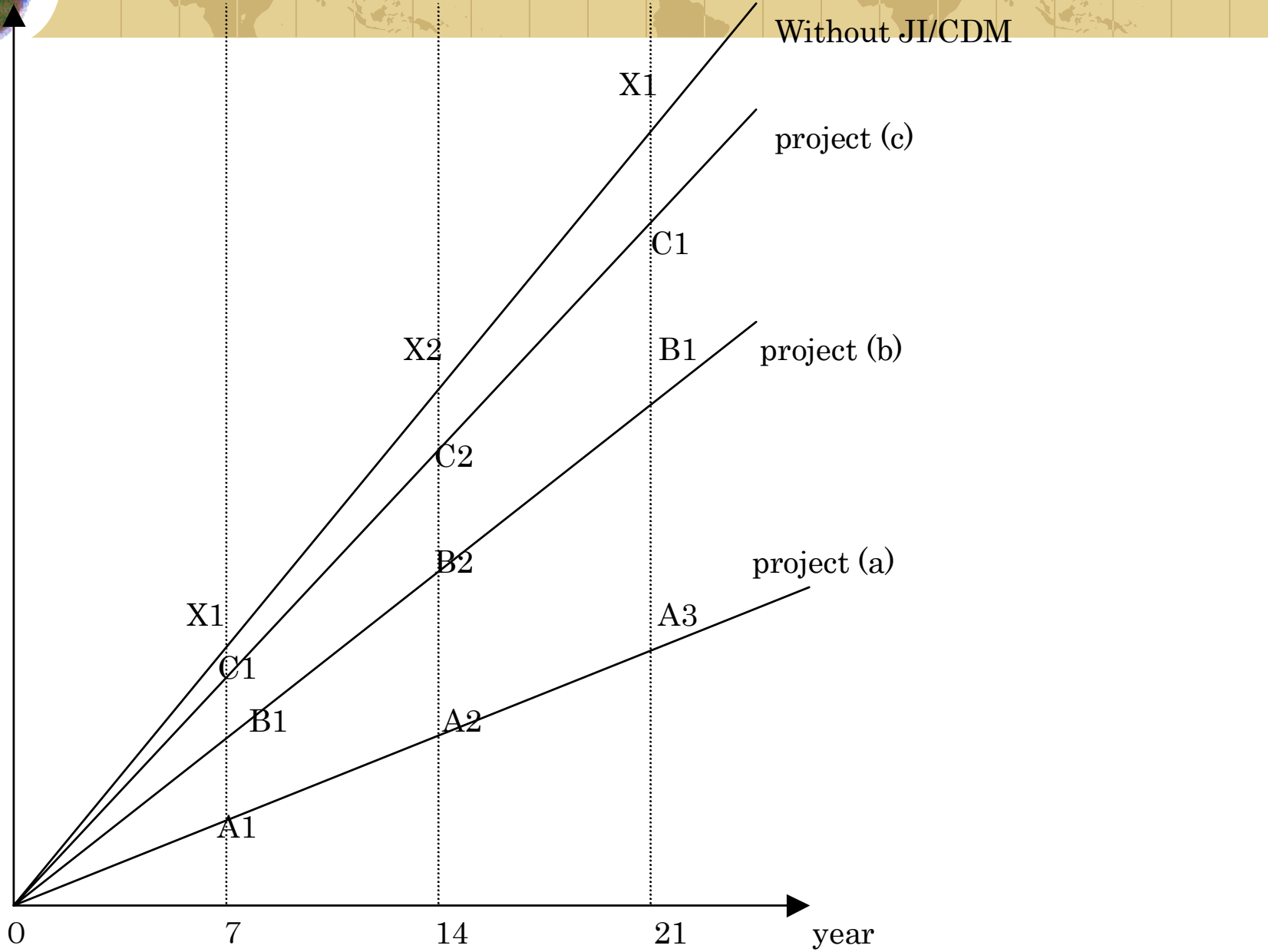
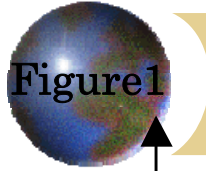


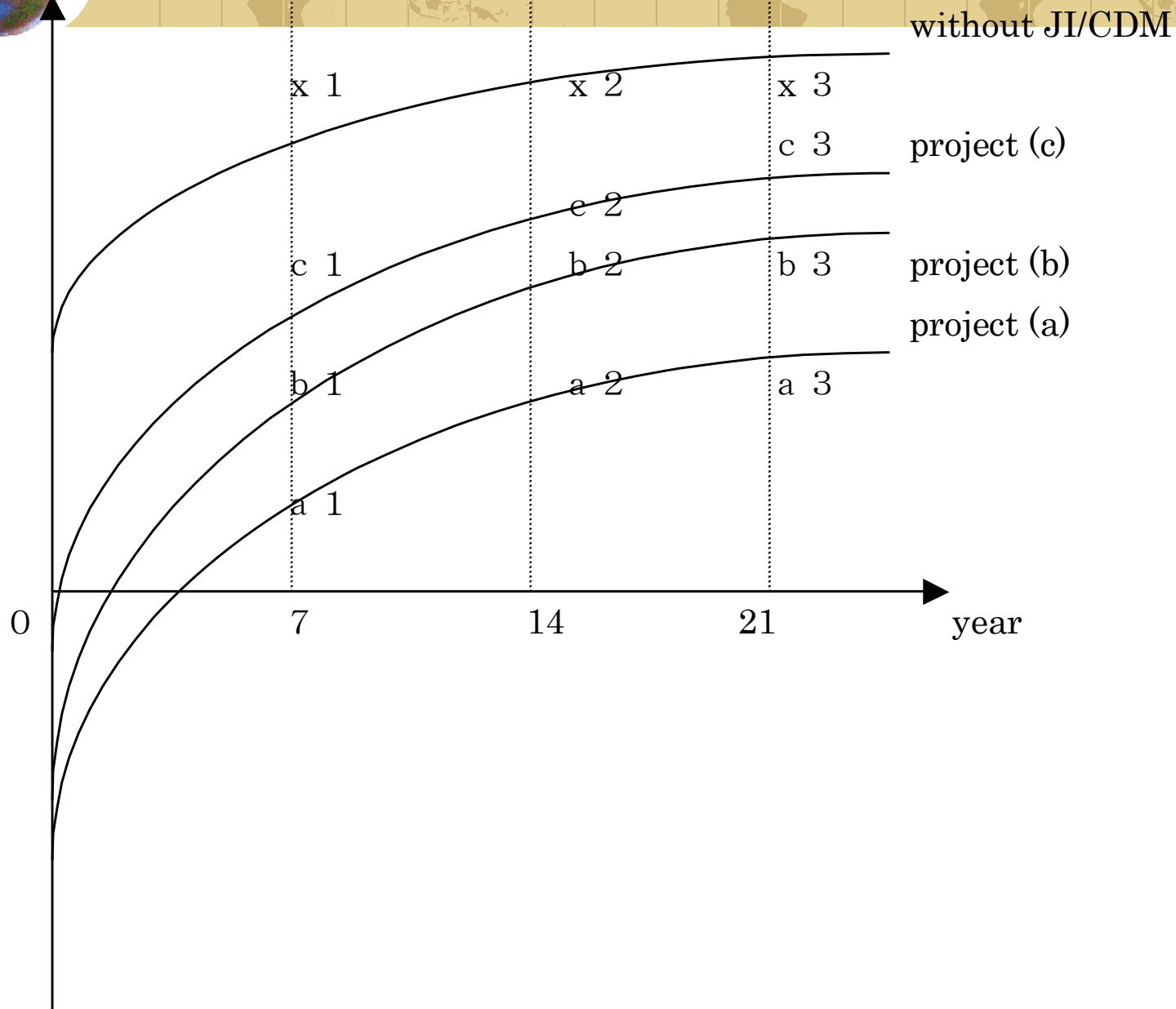
Figure 2

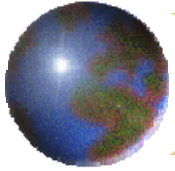
Cumulative CO2 emission reduction of each project





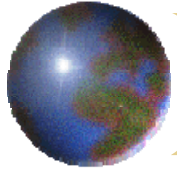
Discount sum of cumulative profits of each project





Abatement Cost of CO2

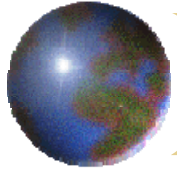
	project(a)	project(b)	project(c)
7years project	$\frac{x1a1}{X1A1}$	$\frac{x1b1}{X1B1}$	$\frac{x1c1}{X1C1}$
14years project	$\frac{x1a2}{X1A2}$	$\frac{x1b2}{X1B2}$	$\frac{x1c2}{X1C2}$
21years project	$\frac{x1a3}{X1A3}$	$\frac{x1b3}{X1B3}$	$\frac{x1c3}{X1C3}$



Capacity Building

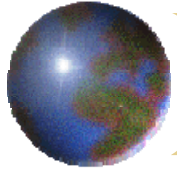
(Co-operation among interested parties)

- National Strategy (Joint works)
(Utilizing overseas consultants if necessary)
- Workshops/Seminars (both in Japan and abroad)



Role of the Government

- Utilization of ODA and Public Fund
- Communication among organizations
- Establishment of Japan fund?
- MoU contract with other Governments
- Providing risk hedge measures



Others

- Establishing Operational Entities
- ISO (TC/207 Johannesburg plenary)
Just started discussion and need to pay attention