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ACTIVITIES IMPLEMENTED JOINTLY UNDER THE PILOT PHASE

Views on the review process of activities implemented jointly under the pilot phase and information on experience gained and lessons learned, including on the uniform reporting format

Compilation of submissions from Parties

Note by the secretariat

Addendum

1. This addendum to document FCCC/SB/1999/MISC.1 contains additional views by Parties on the process and information on experience gained and lessons learned with activities implemented jointly under the pilot phase, as well as inputs by Parties on their experience in using the uniform reporting format (FCCC/CP/1998/16/Add.1).
2. Two such submissions* have been received. In accordance with the procedure for miscellaneous documents, these submissions are attached and are reproduced in the language in which they were received and without formal editing.

* In order to make these submissions available on electronic systems, including the World Wide Web, these contributions have been electronically scanned and/or retyped. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

FCCC/SB/1999/MISC.1/Add.1

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Paper No. 1: COSTA RICA

REPUBLIC OF COSTA RICA

**NATIONAL REPORT ON ACTIVITIES IMPLEMENTED JOINTLY
DURING THE PILOT PHASE**
(February 1999)*

LEGAL BACKGROUND

Conscious of the importance regarding the integral protection of the environment, in 1994, Costa Rica ratified the “Agreement on Biological Diversity” and the “United Nations Framework Convention on Climate Change” (UNFCCC), through Laws No. 7416 and No. 7414. This way, the country integrated its atmospheric and biodiversity protection problems into a harmonic group of specific laws.

The climax point of these efforts is represented by the approval of the “Environmental Organic Law”, Law No. 7554, which can be defined as a law that collects and synthesizes the modern principles of international legislation in an organic entirety that involves governmental and private organizations

Afterwards, a series of governmental institutions were formed, like the National Environmental Counsel, the Technical Environmental Secretary, the Environmental Comptroller Office and the Environmental Administrative Tribunal, which are the executing and applying instruments of this organic conglomerate of laws.

In 1996, a new Forestry Law was approved (Law No. 7575) which includes innovative concepts, such as:

- The payment of the local and global environmental services of forests and forestry plantations.
- The role-played by the Government regarding the responsibility to protect and control the forests, and its part in promoting and facilitating private forestry activities.

Through Executive Decree, the Procedures to the Forestry Law was emitted to regulate the mechanism for Environmental Services Payment, regulating in this way, the private sector claim of carbon credits in exchange for the global environmental service of greenhouse gas mitigation.

Additionally, as part of the regional efforts to reduce greenhouse gas emissions, Costa Rica ratified as Law No. 7513, the Regional Agreement on Climate Change, subscribed by the Central American countries in Guatemala City in 1993.

* This report was sent to the UNFCCC Secretariat on February 12, 1999.

All this conglomerate of legal instruments has helped to create an appropriate institutional frame to support and strengthen national regulations to control the greenhouse gas emissions to the atmosphere and link us to the international efforts to protect the planet of the adverse effects of climate change.

INSTITUTIONAL BACKGROUND

In agreement with obligations assumed in the UNFCCC, Costa Rica has advanced in the consolidation of an institutional frame to achieve the development of Activities Implemented Jointly (AIJ) projects.

In 1995, a cooperation agreement was signed between the Governmental, Non-governmental and Private Sectors, to create the Costa Rican Office on Joint Implementation (OCIC). This agreement was subscribed by the Ministry of Environment and Energy (MINAE), as the rector entity of the environmental sector, the Coalition of Development Initiatives (CINDE), representing the private sector specialized in investment attraction, the Foundation for the Development of the Central Volcanic Mountain Range (FUNDECOR), a non-governmental organization with recognized experience in forestry, and the Costa Rican Association of Energy Producers (ACOPE), which represent the private generators of electricity with renewable sources.

The OCIC is the national authority which facilitates investment attractions, provides the general lineaments, evaluates and follow-up on AIJ projects, makes reports to the Secretary of the UNFCCC and represents the Costa Rican government in the climate negotiations within the UNFCCC and other multilateral and bilateral organizations.

To legally consolidate this initiative, in 1996 the OCIC was elevated to the rank of “maximum deconcentration office” of the MINAE. This way, it is guaranteed that their policies involve governmental and private sectors; in addition, it also gives enough technical and administrative autonomy to its activity.

BILATERAL AGREEMENTS

In 1994, the “Letter of Intent for Sustainable Development, Cooperation and Joint Implementation of measures to prevent and reduce greenhouse gas emissions” was signed between the governments of Costa Rica and the United States of America, with the purpose of developing a program to contribute to mitigate greenhouse gas emissions with the financial support of its private sector. Additionally, in 1995, both governments signed a complementary Annex to the prior agreement, to broad the cooperation between both countries to develop projects under the AIJ framework.

In 1996, a Letter of Agreement was signed with the Government of Norway to execute an AIJ project combining the energy and forestry sectors. This agreement represents the first international trade of greenhouse gas mitigation accrued to forestry activities, for a total of US\$ 2.0 million. Norway's Government and the Norwegian private sector

received from Costa Rica's government Greenhouse Gas Mitigation Certificates for 200,000 metric tones of Carbon.

In February of 1998, the Costa Rican and the Swiss Governments signed a Memorandum of Understanding in which both parts agreed to support and develop AIJ projects to reduce the emission of greenhouse gases, supporting in this way the Kyoto Protocol and its flexible mechanisms.

In March of 1998, the governments of Costa Rica and Finland signed a Memorandum of Understanding, in which both parts agreed to promote the mechanisms agreed upon the UNFCCC and the Kyoto Protocol. Also agreed to integrate the AIJ experiences generated in the Central American region, to develop joint efforts on the procedures of the Clean Development Mechanism (CDM) and to analyze the different options within the region for investment in Greenhouse Gas Mitigation Certificates.

In June of 1998, Costa Rica's Ministry of Environment and Energy and the Mexican Institute for International Cooperation signed a Memorandum of Understanding to identify bilateral projects which could produce certified emission reductions to be traded with Annex I Parties of the UNFCCC through the financial mechanisms of the Convention and its Protocol, and support each country's private and public sectors participating in the development of AIJ projects.

These agreements are letters of intentions to develop strategies that allow the execution of AIJ projects and the generation of experiences to take advantage of the opportunities provided to developing nations through the AIJ and the CDM, agreed in the UNFCCC and its Protocol.

FINANCIAL BACKGROUND

In article 3 (k), the Costa Rican Forestry Law authorizes the Government to internalize the costs of the environmental service of greenhouse gas mitigation, to enhance the efforts of natural forests owners and developers of forestry plantations, and allowing the Government to claim this environmental service on an international level, assuring to foreign investors that the Government has the faculties, within the legal framework, to promote and commercialize the greenhouse gas mitigation benefits of those projects framed by this concept.

With this legal background, Costa Rica establishes an agile and transparent mechanism for the managing of the economic resources coming from foreign AIJ investors. In this regard, in 1996 an Executive Decree was emitted establishing the "National Specific Fund for the Conservation and Development of Sinks and Deposits of Greenhouse Gases."

The purpose behind this fund is that the contributions made by foreign investors will go into a specific fund destined exclusively to the execution of the terms agreed to in local

AIJ projects. Also, a financial instrument was designed for the international commercialization of greenhouse gas emission reductions, named Greenhouse Gas Mitigation Certificate, known internationally as CTO (Certifiable Tradable Offset).

CTOs are defined as a determined quantity of greenhouse gas emission reductions, expressed in equivalent units of Carbon, which have been reduced or compensated through AIJ projects implemented in Costa Rica, and which have been reported to the Secretary of the UNFCCC.

The internal monitoring of the activities, and the external and independent verification of the environmental benefits coming from the execution of the project, guarantee that the mitigation is real, measurable, and fulfills with the procedures established by the Secretary of the UNFCCC for AIJ projects. In this way, Costa Rica assures to foreign investor, who acquires CTOs, that verification actions by an external and, independent third party, will take place.

SOCIAL BACKGROUND

Through the development of two main activities, Costa Rica has recognized the need to contribute to the mitigation of greenhouse gases,. First, the internalization of environmental services costs, specifically the environmental service of greenhouse gas mitigation. Second, the promotion of renewable energy and its rational use.

In this regard, the following specific activities have been developed:

- With the Forestry Law No. 7575 (1996), the Government has the possibility to charge all national individuals or legal entities, benefiting from an environmental service, for these services, which include among others, the mitigation of greenhouse gas emissions.

- A percentage of the Selective Consumption Tax on fossil fuels is destined to the financing of a Compensation Program for small and medium forest and forestry plantation owners, for the environmental service of greenhouse gas emissions mitigation. The payment made to the forest and forestry plantation owners also works as an incentive to the development of conservation, forest management and reforestation activities, and gives financial sustainability to the private forestry sector. This effort will allow for US\$13.5 million to be destined, annually, to the Compensation Program as a national independent contribution to AIJ.

- Promulgation of Regulations for the control of gas and particles emissions produced by automotive vehicles. Through an Executive Decree, domestic regulations were created to establish maximum limits for the emission of nitrogen oxides, non methane hydrocarbons, carbon monoxide and particulates from automotive transports, obliging owners to submit their vehicles to technical revision.

- Promulgation of national legislation for the rational use of energy and the use of alternative energy sources. As a starting point, in 1990 through Law No. 7200, parallel and independent private electricity generation were authorized, reformed in 1995 by Law No. 7508, in which private entities are allowed to participate in generation of electricity including the use of alternative sources like the processing solid and organic waste material, hydropower, geothermal and wind energy. Later, an Executive Decree established the National Commission for Energy Conservation, an entity ascribed to the MINAE, with the purpose of elaborating and executing a National Program for the Conservation of Energy.

- In 1994, the Law of Rational Use of Energy (No. 7447) was promulgated, which enforces the high consumption local industries to implement programs for the rational use of energy, and promotes the supply and sale of equipments and technologies which allow for energy savings.

- In 1998, Law No. 7779 on "Use, Management and Conservation of Land" was promulgated, which guarantees an adequate arrangement of the national territory, and establishes efficient measures for the recovery of degraded land and for more adequate use of the land, also making an institutional reorganization of public organizations responsible for planning the land use and their recovery. This law guarantees that the lands that have forestry vocation can be recovered and used with this purpose, preventing more degradation through obligations imposed on landowners to adequately manage the resource. Beside, the Biodiversity Law was passed, which regulates the use and sustainable management, associated knowledge and fair distribution of the benefits and costs accrued to the use of biodiversity elements. This Law also establishes the National System of Conservation Areas (SINAC), as an office responsible for the sustainable management of the national Protected Wild Areas.

This way, Costa Rica is fulfilling its obligations assumed with the international community, and is contributing with global efforts for the mitigation of the adverse effects of climate change.

FORESTRY SECTOR

During the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, numerous policies, measures and options regarding the protection and use of the world forestry resources were agreed to contribute for sustainable development and mitigation of climate change.

The debate regarding this issue is centered on the need to find new financial sources, or a better use of the existing ones. In this regard, Costa Rica, through its adopted measures for the reduction of greenhouse gases within the framework of the AIJ pilot phase, is gaining experience in the forestry sector, looking for the attraction of new and additional investment that will make the forestry activity more attractive to the private sector.

The Intergovernmental Panel on Climate Change (IPCC), recognizes that the practices of land use change and management play an important part in the net balance between emission and absorption of carbon dioxide (CO₂). This panel considers that the following are the six most important activities regarding use of soils:

1. Cutting of trees
2. Conversion of forests into areas with no trees
3. Conversion of grasslands
4. Conversion of grasslands into cultivated lands
5. Natural regeneration
6. Forest management (natural or forestry plantations)

Costa Rica forestry sector has developed their experience in AIJ in three generations:

- First Generation - In 1994, Costa Rica inserts itself in the AIJ with the development of small individual projects. This is a stage characterized by private initiative and little governmental lineaments in the field.

- Second Generation - In order to achieve a larger participation of small and medium forest owners, and to maximize the forestry potential of the country in AIJ initiatives, in 1996 Costa Rica decides to formulate two national scope forestry projects, one in the governmental forestry sector and the other in the private forestry sector, as a mean to support the national sustainable development policies.

- Third generation - Looking to reduce the transaction costs per ton of CO₂ equivalent fixed or not emitted associated with the development, evaluation and marketing of the AIJ projects, in 1997 a financial instrument was developed for trading the net greenhouse gases benefits attributed to AIJ projects, named Greenhouse Gas Mitigation Certificate, known internationally as CTO.

CTO represents a specific number of units of greenhouse gas emissions reduced or avoided expressed in Carbon equivalent units. Each CTO is verified and certified by an independent international organization. In 1997, through the Costa Rica/Norway: Reforestation and Conservation AIJ Project, the first international transaction of greenhouse gas compensations, expressed in CTOs took place between the private and governmental sectors of Norway and the Costa Rican Government.

PROJECT SUMMARY

Since 1995, Costa Rica has been able to develop four AIJ forestry projects during the pilot phase, all reported to the Secretary of the UNFCCC. The total amount of investment related to these forestry projects is estimated at US\$158.4 million.

- AIJ Costa Rica/USA Project. ECOLAND: Piedras Blancas National Park

The project will preserve tropical forest through the purchase of approximately 2,340 hectares (ha) in the Piedras Blancas National Park at a cost of US\$1 million. The purchased land will be conveyed to the National System of Conservation Areas for permanent protection. This conservation project has been executed in its entirety and has a life span of 15 years.

The greenhouse gas emission reductions benefit is estimated as 366.200 metric tons of carbon, as a result of avoided deforestation, and stimulation of natural regeneration.

The project participants are:

- Tenaska Inc: Independent energy producer, leader in research and implementation of projects for mitigation of climate change.
- Trexler & Associates, Inc: Private organization dedicated to assist companies on identifying and implementing strategies for greenhouse gas emission reduction and compensation.
- National Wildlife and Fishing Foundation of the USA, a non-governmental organization dedicated to the conservation of natural resources, fishing, wildlife and plants.
- COMBOS: Costa Rican non-governmental organization which promotes conservation and management of tropical rainforest through private initiative.
- MINAE: Costa Rican Ministry of Environment and Energy
- Osa Conservation Area: Administrative office of MINAE responsible for management and administration of Piedras Blancas National Park.

Costa Rica/USA AIJ Project: Klinki Forestry Project

The project will convert pastures and marginal land to commercial tree plantation by promoting the planting of 6,000 ha of private farms with mixture of selected fast-growing trees species in a matrix with Klinki tree (*Araucaria hunsteinii*) as a major component. This project actually in execution, pretends to involve hundreds of private land owners in Turrialba and the financing for the project is intended to come from individuals and organizations in the United States in exchange for the compensation of their greenhouse gas emissions. The environmental benefits of the project in terms of greenhouse gas mitigation are estimated at 1,966,495 metric tones of Carbon.

The project participants are:

- Reforest The Tropics, Inc: Non-profit private organization, specialized in long-term forestry plantations, established in the USA to offer individuals, organizations and companies in the USA, a chance to compensate for their greenhouse gas emissions through private forestry activities.
- Regional Agriculture Center of Turrialba (Costa Rica)

- Other collaborators: Forestry School of Yale University, American Forestry Products Laboratory, and the Tropical Agronomic Research and Training Center (CATIE).

Costa Rica/Norway AIJ Project: Reforestation and Forest Conservation (PFP)

The Private Forestry Project (PFP) is a compromise between the government and the private forestry sector to annually promote, through the Environmental Service Payment (FESP) program, the plantation of 15,000 ha, the sustainable use of 7,000 ha and the protection of at least 50,000 ha.

The PFP starts with the commercialization of 200,000 tones of Carbon with the Government and a Consortium of private companies from Norway, accrued to the forestry component of a hydroelectric project from the National Power and Light Company (CNFL).

The objective of this project is the conservation, sustainable management and reforestation of 4,000 ha in the upper river basin of the Virilla River, to guarantee the availability and the quality of the water resource required for the operation of the hydroelectric plant.

The Norwegians invest a total of US\$ 2 million in CTOs, coming from the FESP program executed by the National Forestry Financing Fund (FONAFIFO). From the total investment, US\$1.7 million come from the Norwegian Carbon Fund of the Government and US\$300,000 from the private Norwegian Consortium.

Additional to the revenues coming from the international commercialization of CTOs, the FESP program includes as well, financing coming from internal sources, such as a neutral tax imposed on fossil fuels consumption. Revenues are to support the private forestry activities that avoid and fix carbon, giving content to the "polluters pay" principle, as part of the national policy to internalize the mitigation costs of fossil fuel emissions.

The Government, based on technical criteria emitted from MINAE and FONAFIFO, fixes the annual financial incentive paid per hectare for each type of forestry activity.

Activity	US\$/ha**	% /year				
		1	2	3	4	5
Reforestation	560	50	20	15	10	5
Forest Management	342	50	20	10	10	10
Conservation/Regeneration	220	20	20	20	20	20

The impact that environmental services payment policies have had on small and medium forest owners is evident, as it is the additionality of the PFP greenhouse gas emission reductions. While in 1994 the total amount of hectares with incentives that

** 1 US\$ = ₡ 275

existed at that time was 15,596 ha, in 1997 through environmental service payment the amount increased to 97,398 ha, representing an approximate investment of US\$14.0 million.

Up to 1998, through the FESP program, forestry incentives have been given for the conservation of 138,044 ha of natural forests, the sustainable management of 17,885 ha and the reforestation of 13,877 ha, meaning a 75% increase regarding 1997, and direct benefits to 8,000 small and medium forest owners.

It is important to reaffirm that under the Costa Rica vision, environmental services payment is not a subsidy; instead, it is a payment for a service that has a cost and must be valued. In this way, this policy intends to make forestry activity more attractive for the private sector, with its consequential local and global environmental benefits.

AIJ Project Costa Rica/USA: Territorial and Financial Consolidation of National Parks and Biological Reserves in Costa Rica (PAP)

Using an innovative market mechanism, this project intends the territorial and financial consolidation of 20 national parks and 7 biological reserves, by the purchasing of land inside areas not yet registered as Forestry Patrimony of the State, and the conformation with the remainders, once the territorial consolidation is completed, of a trust fund for protection in perpetuity. This is a forestry project of great importance, and through the territorial and financial consolidation of 530,498 ha in national parks and biological reserves it intends to avoid the emission to the atmosphere and a fix about 18 million of metric tones of Carbon, equivalent to an approximate cost of US\$180 million, over a 25 years life span of this AIJ project.

The CTOs will be generated through two basic activities: the avoided deforestation of 422,800 ha of primary forest as a result of the project activities; or by the environmental benefits generated by the natural regeneration of 107,698 ha of secondary forest to be purchased and restored. The MINAE and the National Park Foundation participate in this project.

To support the commercialization of emission reductions attributed to the PAP, the Costa Rican government financially assisted by the World Bank, started a certification and verification process of the environmental global benefits in terms of greenhouse gas mitigation.

With this purpose, the Société Générale de Surveillance (SGS), a recognized independent certifier, was approached to certify the first tranche of CTOs from the PAP and to conduct a risk assessment of the CTOs, as well the reserve levels needed to guarantee an standard regarding security for AIJ investors.

SGS determined the buffer size in order to make the certified emission reductions from the first execution phase of the PAP, 98% risk free for any investor from industrialized

countries wishing to compensate greenhouse gas emissions. The methodologies used to estimate the net benefits in equivalent units of Carbon, and the project monitoring system were also assessed by SGS. Additionally, SGS will be the external and independent entity responsible for the verification of the project execution, according with its protocol established for this purpose.

The project in its first implementation phase, possesses a baseline certified by SGS Forestry and 6% of its potential (30,069.6 ha) has been executed. The certifier has determined that due to the project activities implemented in the territorial consolidation of the first 30,069.6 ha, emissions will be reduced by 1,688,434 metric tones of Carbon during the next 20 years, equivalent to 9.4% of the total projected emissions reductions and avoidance potential of the project.

In virtue of its objective and national scope status, it is important to clarify that with the implementation of the PAP, two forestry AIJ projects previously reported to the UNFCCC Secretary are included, CARFIX: a Sustainable Forest Management, which is a conservation, forest management and reforestation project, and BIODIVERSIFIX, a project that seeks the restoration and consolidation of protected areas in the province of Guanacaste.

AIJ FORESTRY PROJECTS

Name	Type	Area (ha)	Lifespan (years)	Total Cost (US\$ million)	Emissions Reductions (mt C)
ECOLAND	Conservation	2,340	15	1	366,200
KLINKI	Reforestation	6,000	40	3.8	1,966,495
CR/Norway (PFP)	Conservation	2,000	25	3.3	313,646
	Reforestation	1,000			
	Regeneration	1,000			
PAP	Conservation	422,800	25	180	18,000,000
	Regeneration	107,698			
TOTAL		542,838		188.1	20,646,341

ENERGY SECTOR

In the Agenda 21 agreed to in Rio de Janeiro (1992), countries are asked to find more efficient ways of producing, distributing and consuming energy, and asks for more support to those sustainable energy systems on an environmental stand point, emphasizing on the use of renewable sources.

In spite of the fact that renewable sources are more capital intensive, the national energy policy is oriented to reduce the emission of greenhouse and polluting gases, taking advantage of the country potential regarding its renewable sources, specially wind and hydropower.

Because of the downward tendency of international hydrocarbon prices, renewable energy has become less competitive. In virtue of the above, the consolidation of an international market for greenhouse gas emission reduction could become a vital element to make renewable energy an instrument for sustainable human development.

According with new environmental regulations agreed upon the UNFCCC and its Protocol, Costa Rica with its hydroelectric potential, could insert itself in the regional energy market by internalizing the global externalities derived from the trade of certified emission reductions attributed to renewable energy projects.

Energy Projects

In the development of renewable energy projects, the AIJ mechanism proved to be a viable option for non-Annex Parties to satisfy their increasing demand with clean energy, as long as the countries with emission reduction commitments to the UNFCCC, economically value and transfer funds to compensate for the environmental benefits given by the projects.

Currently Costa Rica has 4 renewable energy projects reported to UNFCCC Secretariat, one hydroelectric and three wind energy projects. The Doña Julia hydroelectric project (20MW) started operations in December 1998.

Making reference to the wind energy projects, Plantas Eolicas S.A. (20MW) is operating since 1996 and Aeroenergia (6MW), since September 1998. They are the only two commercial wind energy projects in Latin America. Tierras Morenas (20MW) starts operation in September 1999.

This experience demonstrated that wind energy is an important option for energy supply in Costa Rica. Hydropower and windpower in Costa Rica complement each other. During the dry season the wind is stronger and vices versa.

The use of new renewable energy sources has allowed Costa Rica to have a cleaner energy matrix, and less vulnerable to climate change.

The total amount of direct investment related to these projects is estimated at US\$94 million, approximately 6.5% of the total install capacity of the country.

In order to satisfy the incremental electricity demand within the region, Central America is promoting an ambitious project for the regional electric inter-connection. This project will allow for a regional energy market, to be supplied with electricity generated by both public and private companies.

Recognizing that Central America is very dependent on fossil fuels for the electricity generation, the "Energy Export Project to Central America", promoted by the Costa

Rican Association of Private Energy Producers (ACOPE), is considered as a potential AIJ project of national coverage.

This project is seen as a strategic alliance between Costa Rica private sector and the Costa Rican Institute of Electricity (ICE), the national utility. In this alliance the private sector will supply the electricity on a project basis, and ICE will supply their transmission infrastructure, which will allow the energy to be exported to the region.

ENERGY AIJ PROJECTS

Name	Type	Install Capacity (MW)	Annual Generation (GWh/year)	Total Cost (US\$ millions)	Emissions Reductions (mt C)
Plantas Eólicas	Wind	20	98	30.4	506,720
Tierras Morenas	Wind	20	90	27	562,020
Aeroenergía	Wind	6.4	30	8.85	146,000
Doña Julia	Hydroelectric	16	85	27	562,020
TOTAL		62.4	303	93.25	1,776,760

It is designed for an installed capacity of 268 MW and an annual generating potential estimated at 1,400 GWh. The annual net benefit of greenhouse gas mitigation is calculated in approximately 1,4 million tons of CO₂.

The economic compensation from investors of Annex I Parties in exchange for the greenhouse gas emission reduction is considered the vital element to promote the competitiveness of renewable energy at a regional level, and in this way give to the Central American energy matrix a new direction.

AGRICULTURAL SECTOR

In 1992, Costa Rica government signed an agreement with the representatives of the coffee production sector, with the purpose of reducing the discharge of organic matter into rivers. The accessible technological option in Costa Rica was the traditional oxidation lagoon, where methane, a sub-product of the biodegrading process, was liberated into the atmosphere.

In 1997, an agreement was made with the Dutch government to work on a project for the reduction of methane emissions during the treatment of wastewater in four large coffee mills, through the Dutch AIJ program.

With this AIJ project, anaerobic reactor technology, developed by the Dutch Company Biomass Technology Group (BTG), was introduced. This technology captures methane and burns it, generating heat to dry coffee. Additionally, this process is much more stable, and process volumes 15-20 times larger than the oxidation lagoon, even though they are 15-20 times more compact.

The contribution from the Dutch government in exchange for Carbon offsets was US\$372, 257, receiving 17,323 equivalent metric tons of carbon, which will be mitigated by the project during 10 years, which established an abatement cost of US\$21,49 for every equivalent metric ton of Carbon.

The bilateral agreement subscribed between Costa Rica and The Netherlands stipulates that the Dutch will receive recognition for only 50% of the total greenhouse gases emission reductions during the project lifespan, equivalent to 17,323 metric tons of carbon. In conformity with the Costa Rica policy on AIJ, offsets belong to project equity owners. Therefore, the remaining 50% of the offsets belong to the coffee mills owners and would be sold in case any foreign investor wants to acquire this carbon compensation.

AIJ PROJECTS - AGRICULTURAL SECTOR

Name	Type	Total Cost (US\$ millions)	Lifespan (years)	Emissions Reductions	
				(mt C)	(mt CO ₂)
ICAFE/BTG	Wastewater treatment	0.973	10	34,645	127,031

This is because Costa Rica is a non-Annex Party, and does not have obligations to limit nor reduce its emissions, according to the principle of "common but differentiated responsibilities" established by the UNFCCC. Costa Rica government will issue CTOs for this potential offset supply, once the proper implementation of the project and its environmental benefits has been verified jointly between the OCIC and the Dutch JI Registration Centre (JIRC).

CONCLUSIONS

From the Costa Rica perspective, the AIJ mechanism proved to be a new kind of association between developed and developing nations. It helped the Annex I Parties to the UNFCCC to fulfill part of their greenhouse gas emissions reduction voluntary commitments, in a cost-effective way. Additionally, it gave developing countries the opportunity to attract additional resources to finance their agenda on sustainable development, especially in the energy and forestry sectors.

Nevertheless, during the AIJ pilot phase, there has been little participation of Annex I Parties in the execution of projects. Additionally, there has been a lack of action by most of the governments in developed nations, to promote the participation of its private sector in AIJ activities and to take regulatory domestic measures to incite its industrial sector to carry out mitigation actions, both locally and internationally, through AIJ projects. The preliminary evaluations of the Rio +5 Summit and those presented during the Third Conference of the Parties (CoP3), show that the majority of countries which agreed to reduce or limit their emissions, or carry out actions to mitigate them, have not fulfill theirs commitments.

The AIJ report presented by the Subsidiary Body for Scientific and Technological Advice during the CoP4, shows the geographic bias in the distribution of the AIJ reported projects, as well as in the sectors of the economy involved. It is also clear that there has been a scarce transference of resources from the North to the South for the internalization of the environmental service of greenhouse gas mitigation attributed to the execution of AIJ projects.

Additionally, there has been an evident lack of support from the Annex I Parties to developing nations regarding the development of local institutional and negotiating capacities on behalf of AIJ projects and technology transfer to mitigate greenhouse gas emissions.

In accord with what has been agreed in the Convention, it is the Parties not included in Annex I whom have the sovereign right to define their priorities on sustainable development. Therefore, it must be their responsibility to decide which areas of the economy will benefit with the AIJ foreign investments.

Costa Rica experience in the AIJ pilot phase has helped to conclude that the ratification of the Kyoto Protocol by Annex I Parties is vital. Once the protocol becomes effective, the Parties in the convention as a whole, in a common but differentiated way, will carry out concrete actions to accomplish the ultimate objective of the Convention, which is "the stabilization of greenhouse gas concentrations in the atmosphere, at a level that prevents human interference to the climate system...".

As it was stated earlier, the voluntary actions carried out by some of the Annex I Parties have been insufficient to this date. However, once the Kyoto Protocol enters into force, these parties will have to take concrete measures and policies to reduce their emissions of greenhouse gas. This fact will allow for a broad and active participation in the flexible mechanisms, that is a legal option to accomplish part of their goals in limiting and reducing their emissions according with mandatory commitments included in Annex B of the Protocol.

The Clean Development Mechanism (CDM) agreed in the Kyoto Protocol, considers the majority of positive aspects experienced by Costa Rica during the AIJ pilot phase. At the same time, it overcomes most of the barriers founded for the development of a

legal, financial and institutional framework for AIJ. This also applies for the bilateral negotiations needed to be made with governments and representatives of private and non-governmental sectors of countries included in the Annex I of the Convention.

The purpose of CDM, as defined in article 12.2 of the Protocol, allow developing countries to attract additional resources to cover the incremental production costs of renewable energy and to manage its land-use and forestry resources in a sustainable manner, through the internalization of the global externalities of CDM projects.

This gives parts not included in Annex I, the opportunity to contribute effectively to the UNFCCC ultimate objective, as long as there is a significant flow of capital from Annex I Parties in exchange for certified emission reductions coming from activities voluntarily developed by non-Annex Parties, in those sectors of the economy considered as priorities by them.

The experience acquired during the AIJ pilot phase helped significantly in defining the CDM lineaments. For example, the host country approval for a CDM projects; the central authority under the figure of the Executive Board to be defined by the Parties in the Convention; the operation and the supervision of the CDM; the definition of standards regarding certified emission reductions (CERs) which will be traded between Parties, as well as the separation that has to occur between supply and demand of CERs to maximize the long term economic benefits for developing countries. This will give developing countries better conditions for price negotiation of its CERs, and in the definition of the sector of the economy that will have a priority regarding participation in CDM projects.

Finally, the CDM could be the financial instrument that will allow the South to follow, on a project by project basis, a clean development path for sustainable human development, not following the traditional path nor repeating the mistakes done in the past by some industrialized countries to achieve their economic growth. This way, Costa Rica has tried to develop its environmental policy within the framework of the UNFCCC, exploring the opportunities that AIJ have provided in forestry and generation of electricity with renewable sources.

Paper No. 2: JAPAN

Information on Experiences Gained and Lessons Learned from Activities Implemented Jointly Under the Pilot Phase

1. Japan Program for Activities Implemented Jointly Under the Pilot Phase ("AIJ Japan Programme")

(1) Establishment of the AIJ Japan Programme

At the first session of the Conference of the Parties (COP1) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Berlin in March 1995, the establishment of Activities Implemented Jointly (AIJ) under the pilot phase, in which voluntary participation would be open to developing country parties, was decided.

Based on this decision, the Japanese Government established a consensus among relevant ministries and agencies in November 1995 on the fundamental framework of the "Japan Program for Activities Implemented Jointly Under the Pilot Phase ("AIJ Japan Programme")" in order to contribute positively to global efforts to limit greenhouse gas emissions by promoting AIJ activities.

The objectives of the AIJ Japan Programme are as follows:

- (i) To accumulate experience in order to contribute to the deliberative work pertinent to the formation of an international framework of Joint Implementation (JI) based on Article 4.2 (a) & (b) under the UNFCCC;
- (ii) To establish methodologies to conduct comprehensive analysis for the net volume of greenhouse gas reductions and removals resulting from JI; and
- (iii) To study measures to encourage participation of the private sector for JI projects.

(2) Structure of the AIJ Japan Programme

Individual AIJ projects are approved by each ministry or agency on the basis of their specialized knowledge. At the same time, the Japanese Government has established the "Inter-Ministerial Agency Co-ordination Committee for AIJ" (IMACC) among relevant ministries and agencies to share information.

(3) Adoption of "Evaluation Guidelines for Approval of AIJ Projects"

In January 1996, IMACC adopted the "Evaluation Guidelines for Approval of AIJ Projects," which compiled the essential items to be considered when ministries and agencies responsible for projects conduct their evaluation and approval.

2. Projects Approved for AIJ Japan Programme

First of all, in order to make AIJ objectives universally known by potential project participants in Japan and to explore potential AIJ projects, "AIJ Seminars" were held in major cities in Japan. The first public invitation for application was conducted from April 1 to June 10, 1996. During that period, a total of 16 applications were made by industry, local governments and NGOs. From these applications, 11 projects were authorized and publicly announced on July 5, 1996.

Since then, applications have been approved on various occasions. As of February 1999, 18 projects have been approved under the AIJ Japan Programme.

(For a summary of the projects approved under the AIJ Japan Programme, refer to Attachment.)

Among these projects, nine have been approved by the governments of host countries. However, only one notification has been made to the Secretariat of the UNFCCC. This was for "The Model Project for Installation of Coke Dry Quenching (CDQ) Facility" (hereinafter the "CDQ project") in the People's Republic of China. Nevertheless, preparations for notification regarding the other projects are being made with the governments of host countries.

3. Experiences from AIJ Projects

(1) Experiences in Japan

(i) Communication with Host Country Parties

A number of projects have been implemented in various host countries such as China, Indonesia, Thailand and Vietnam involving a wide range of implementing organizations. Thanks to these experiences, we have been able to foster common understanding with host countries on how important and necessary it is to tackle climate change issues together.

Particularly in the CDQ project in China, an expert level working group (WG) was established to prepare for the notification of the project to the Secretariat of the UNFCCC. The WG intensively and sincerely discussed a number of issues, including those mentioned in (iii) below, and finalized their work to draw up a reporting format. Thus, meaningful experience was gained through the work carried out.

A notification WG with China was also formed in regards to "The Model Project for Utilization of Waste Heat from Incineration of Refuse" and "The Model Project for Energy

Conservation in Electric Furnace Use for Ferro-Alloy Refining.” Discussions on reporting are currently taking place.

(ii) Approval by the Governments of Host Countries

Many of the AIJ projects involved much cost and time until they were approved by the governments of the host countries. This was due to the fact that, at the stage when these projects were brought to the host countries, institutional arrangements had not yet been developed and the approval scheme and criteria of AIJ projects were still unclear and opaque.

Therefore, Japan’s AIJ approval scheme and criteria as outlined above were introduced so as to take them into account as one of the references in establishing a system. On top of this, as result of sincere and positive efforts, there have been significant improvements. However, it is also true that there are still areas where further improvement might be needed. Hence, a transparent, simple and predictable approval scheme with clear criteria is highly expected so as to minimize costs and time in launching projects.

(iii) Establishment of the Baseline

AIJ is at the pilot phase, and one of its objectives is the accumulation of various kinds of experiences. From this point of view, methodological issues related to baseline setting have also been discussed with special attention. The following experiences which were obtained from experiences of AIJ baseline setting could also be applied to the discussion of JI and CDM rules based on the Kyoto Protocol.

In calculating emission reductions generated by a project, the baseline is an indispensable assumption. The methodologies used to establish baselines differed from country to country and from project to project. This is why a lot of time and long discussions were required to resolve various complicated issues.

Taking an example of the CDQ project in China, the following issues have become subjects of discussion:

(1) The scope of emission reductions which could be regarded as a result of installing CDQ facilities. By installing CDQ facilities, the following two effects could be predicted:

- a. Steam generation using recovered coke heat at the CDQ facilities (direct effect);
and
- b. A decline in coke usage ratio in blast furnace operations due to coke quality improvement (indirect effect).

In setting the baseline, should both a. and b. above be taken into consideration, or should b., which is an indirect effect, be excluded?

(2) The issue of whether the baseline should change according to future technological advances

Should such factors as improvements in technological level and higher fuel costs in the future be taken into account when setting the baseline, and should the baseline scenario be changed accordingly?

Discussions by the CDQ notification WG were concluded as follows:

With regard to (1), it was decided that only a. (direct effect) would be included in the reduction effect of the projects. With regard to (2), no concrete calculation method for setting a changing baseline was available. Therefore, it was decided to keep it static.

A different issue is under discussion by the WG for "The Model Project for Utilization of Waste Heat from Incineration of Refuse." The question is whether to use the default figures in the IPCC Guideline or to use figures from other sources in calculating methane generation from open dumping.

Further discussion is required concerning the issue of baseline setting in the future. In doing so, the following points should be given due consideration.

(1) In order to promote projects through minimizing transaction costs as well as to ensure a verifiable environmental benefit by avoiding an arbitrary setting of baselines, a standardized baseline would be preferable.

(2) In cases where standardization is difficult, case-by-case baseline setting would be applied. In this case, it is important to make baseline setting transparent and accountable by providing precise grounds.

(3) Would a general method regarding other aspects, such as how to take into account technological progress, be necessary in setting baselines?

(iv) Project Financing

When private enterprises implement AIJ projects, the method to procure the project financing has become an important issue. To increase the number of projects, and to promote global warming countermeasures, technology transfer and capacity building at the private sector level, it has become clear that the AIJ scheme should be more attractive than it is. Furthermore, under the present situation, the implementation of projects may lose geographical balance. In order to solve these issues and raise the benefits of host countries, a study on a scheme which promotes global warming countermeasures and maximizes available funds, including increased public funds mainly through ODA, will be required.

(v) Raising Benefits of the Project

In "The Model Project for Energy Conservation in Electric Furnace Used for Ferro-Alloy Refining," low-cost raw material with lower quality than conventional material became

usable through the introduction of a pelletizer. Due to benefits from energy conservation as well as from a lower cost of raw material, this project has become more profitable and more attractive for enterprises in the host country. When trying to expand business in an environment where energy prices are low, exploring such attractive business opportunities is considered important. Identifying projects most profitable to enterprises in the host countries is the key to promote projects and firmly establish technologies over a wide range.

(2) Benefits for Developing Countries

(i) Contributing to Sustainable Development in Developing Countries

Through the implementation of AIJ projects, such as in the CDQ installation project for example, not only will carbon dioxide be reduced. Economic effects such as saving fuel costs due to reduced energy consumption and social effects such as reduction of air pollution can also be expected. In this manner, AIJ projects are considered to make great contributions to sustainable development in host countries.

(ii) Transfer of New Technologies

Through implementation of AIJ projects by Japan, the latest environmental and energy conservation technologies have been introduced to developing countries. Hence, greenhouse gas emissions could be reduced in a more efficient manner by jointly implementing AIJ projects.

(iii) Capacity Building

At first, concerns over climate change issues seemed to have less significance in developing countries. Because of that, the importance of AIJ and climate change issues were stressed repeatedly on various occasions such as seminars and workshops. For example, the "Workshop on Transfer of Environmentally Sound Technologies and Activities Implemented Jointly" held in Osaka, Japan in June 1996 by the Environmental Agency of Japan, the "Japan-U.S.-China AIJ Seminar" held in China jointly with the United States in July 1996, and the "AIJ Seminar" in Indonesia in February 1997 by Japan's New Energy and Industrial Technology and Development Organization (NEDO) were held consecutively. Furthermore, AIJ approval of projects was requested to the governments and a scheme for approval was established as explained above. In this manner, AIJ contributed not only to project implementation directly, but also to the formation of capacity building in developing countries.

(iv) Other Environmental Benefits (Multi-Benefits)

The CDQ project implemented in China has been useful in other environmental aspects, in particular, as measures to deal with SO_x, NO_x, soot and smoke. Since the amount of coal consumption decreased due to installation of CDQ facilities, scattering of soot in the atmosphere as well as SO_x emissions were reduced. Projects related to coal do not only

contribute to countermeasures against greenhouse gas emissions, but also to local environment measures. Through the implementation of AIJ projects, the contribution to other environmental aspects as well as reduction of greenhouse gas emissions cannot be ignored.

(Attachment)
**Projects Approved by the Japanese Fundamental Framework
(AIJ Japan Program)
for Activities Implemented Jointly under the Pilot Phase
of the Framework Convention on Climate Change**

Project name	Main participating Entities in Japan	Host country and its main participating Entities	Project descriptions
Heat Efficiency Restoring Project of existing thermal power generation plants through operational improvement (Energy saving analysis and improvement in terms of operation and maintenance management)	-Kansai Electric Power Co. -Chubu Electric Power Co. -Electric Power Development Co.	Kingdom of Thailand Electric Generation Association of Thailand (EGAT)	Improve heat efficiency at existing thermal power plant of EGAT by utilizing the know-how and experiences of EGAT and Japanese electric power companies, in cooperation with EGAT, based upon the energy saving technology in operation and maintenance management developed through experiences at existing thermal power generating plants in Japan
Local Electrification Project for Indonesia	-Tokyo Electric Power Co. -Kansai Electric Power Co. -(Promoted jointly by E7)	Republic of Indonesia Science and Technology Application Agency	Install power generation equipment such as home solar system, and mini hydraulic power system in order to promote efficient power generation and utilization and to preserve global environment.
The Model Project for Coke Dry Quenching (CDQ)	New energy and Industrial Technology Development Organization (NEDO)	People's Republic of China Shougang Iron and Steel corporation	By installing coke dry quenching (CDQ) facility and boiler system into existing coke oven in steel works, this project demonstrates to recover heat from hot coke by inert gas and to generate high quality steam which can be utilized in factory.
The Model project for Utilization of Paper Sludge and Solid Waste	New Energy and Industrial Technology Development Organization (NEDO)	Republic of Indonesia PT. FAJAR SURYA WISESA	By adding equipment which consists of a fluidized bed incinerator and waste heat recovery boiler to a paper and pulp plant, steam to be utilized in a paper and pulp plant can be recovered from the waste heat by combusting sludge and solid waste. By means of combusting sludge, Green House Gas such as Methane emitted from landfill of sludge can be reduced.

Project name	Main participating Entities in Japan	Host country and its main participating Entities	Project descriptions
The Model project for Effective Utilization of Energy in Re-heating Furnace in Steel Industries	New Energy and Industrial Technology Development Organization (NEDO)	Kingdom of Thailand The Siam Iron & Steel Co., Ltd.	The objective of the Project is to contribute to efficient use of energy in Thailand by installing a high efficiency recuperator and the Distributed Digital Control System to the furnace at SISCO Saraburi Steel Works and disseminating the technology in Thailand. By means of such energy conservation, emissions of Greenhouse Gases, carbon dioxide gas emission in particular, are expected to be reduced.
The Model Project for Energy Conservation in Electric Furnace used for Ferro-Alloy Refining	New Energy and Industrial Technology Development Organization (NEDO)	People's Republic of China LIAOYANG FERROALLOY GROUP	The objective of the Project is to contribute to efficient use of energy and consequently protection of the environment in People's Republic of China, by installing furnace cover, CO gas recovery system, and a pelletizing electric furnas at Liaoyang Ferroalloy Works and disseminating the technology in People's Republic of China
The Model Project for Utilization of Waste Heat from Incineration of Refuse	New Energy and Industrial Technology Development Organization (NEDO)	People's Republic of China Harbin City, Hei Long Jiang Province	Installing a municipal waste incineration facility and a heat recovery facility to the Garbage Incineration Plant of Harbin City enable supply of steam recovered to facilities and houses around municipal waste treatment facility.
The Model Project for Reduction of Electric Power Consumption in Cement Plant	New Energy and Industrial Technology Development Organization (NEDO)	Socialist Republic of Viet Nam Ha Tien II Cement Company	This project enables to recover the heat as steam and generate electric power by installing a waste heat boiler, steam turbine, and generator in a cement plant.
Demonstration Research Project on a New Cooling System in Cement Clinker Production	New Energy and Industrial Technology Development Organization (NEDO)	Republic of Indonesia PT. SEMEN CIBINONG	This project enables to reduce energy consumption by a installation of New type clinker cooler, High-performance kiln burner and Total advanced control system in a cement clinker production process.

Project name	Main participating Entities in Japan	Host country and its main participating Entities	Project descriptions
The Model Project on Equipment for Recovery of Heat from Combustion of Waste in Paper and Pulp Mill	New Energy and Industrial Technology Development Organization (NEDO)	Kingdom of Thailand Thai Kraft Paper Industry Co., Ltd (under negotiation)	By adding equipment which consists of fluidized bed incinerator and waste heat recovery boiler to paper and pulp mill, recovered steam from waste heat by combusting pulper reject and solid waste can be utilized in the mill. Greenhouse gas such as Methane emitted from landfill of pulper reject can be reduced.
Bangna Intersection Traffic Congestion Improvement Project	Japan Automobile Manufacturers Association (JAMA)	Kingdom of Thailand Thai Automotive Industry Association (TAIA)	This project aims at reducing CO2 form motor vehicles by alleviating regional traffic congestion at the Bangna Intersection in the outskirts of Bangkok in Thailand through intelligent traffic signal system.
Combustion Improvement Project of small-sized coal boilers in Dallan, China	City of Kita-Kyushu	People's Republic of China City of Dallan (Environmental Protection Agency)	Targeting conventional stoker type small-sized coal boilers (steam volume 30 t/hr or less)among 2000 coal boilers in Dallan, jointly design and develop energy deficient, and less expensive small-sized coal boilers that are suitable for the characteristics of Dallan's coal fuels (low quality coal), and promote the broadened use of newly developed boilers at times of the replacement of existing boilers or the installment of a new one.
Forestation in Sabah	Kokousai Ryoukuka Suishin Center	Malaysia Sabah Forestry Public Association)	Plant trees mainly of quick growth species for the purpose of improving local environment and promoting mutual relationship between Malaysia and Japan, through the forestation of desolated forest area and the revenue increase among local residents through job opportunities provided in forestry works.

Project name	Main participating Entities in Japan	Host country and its main participating Entities	Project descriptions
Forestation Project for West Nusa Tenggara	Kokousai Ryoukuka Suishin Center	Republic of Indonesia Ministry of Forestry, Division of Forestation	Plant trees mainly those suitable for forestry industry, in order to contribute to the improvement of local environment and the lives of local residents through the recovery of desolated forest area, and to promote the mutual relationship between Indonesia and Japan
Forestation Project using local tree species	Nissei Green Foundation	Republic of Kenya Kenya Forestry Research Institute :KEFRI	Promote the forestation using Kenyan tree species for the purpose of improving lives and environment.
Forestation Project for volcanic desolated area	Nissei Green Foundation	Republic of Indonesia Ministry of Forestry, Division of Forestation	Improve overall living environment by preventing soil erosion and securing water resource forests through the re-vitalization of water resource forests, as well as the utilization of dead branches as fuels.
Experimental Forestation	Sumitomo Forestry Co., Ltd.	Republic of Indonesia Ministry of forestry, Research and Development Agency / Kutai Timber Indonesia Co., Ltd.)	Development of forestry technology for Persimmon trees, experimental forestation projects for quick growth tree species focused on economy, and forestation experiments in fruit trees that can increase revenues of local residents.
Forestation Project of desert rim area of Inner Mongolian Autonomous Region	Chikyuu Ryoukuka Center	People's Republic of China Inner Mongolian local administrative offices	Forestation activities in cooperation with local government to promote the greening to prevent the spread of desertification as a part of the 3 rd Northern Protective Forestries Plan, a national project of China.

Experiences in Using the Uniform Reporting Format (URF)

When notifying the Secretariat regarding "The Model Project for Installation of Coke Dry Quenching (CDQ) Facility" (hereinafter the "CDQ project"), which is an AIJ project between Japan and China, an expert level working group was established. Discussions were held regarding the contents to be included in the reporting format (Uniform Reporting Format, URF), ways to report, etc., with the aim of reaching an agreement. The usage of URF are presented below based on these discussions.

1. Description of A. 4) Costs

In the URF, the costs of the project and the costs of AIJ components are to be accounted for. A great deal of time was spent by the Japan-China Notification WG to complete the fields. The important points and questions raised in these discussions were:

- (1) Should the operating cost (such as expenses for water, utility, electricity and personnel matters required in the operation of the CDQ facilities) be added to the initial investment (i.e., facility expense, construction expense) when calculating the cost per CO₂?
- (2) The Japanese Government contributes the funds. In a situation where Japanese budgets are decided each year, the contribution amount for subsequent years is not necessarily definite. How should they be described?
- (3) In a situation where the concept of AIJ components is unclear, what range of expenses should be covered under the AIJ component? Should all of the costs involved in the CDQ facilities (CDQ facilities expenses, construction expenses, etc.) be applicable? Should costs related to equipment that is necessary for the operation of the CDQ facility but does not directly contribute to CO₂ reduction (dust elimination systems, etc.) be excluded?

With regard to these points, there were differences in the views of both sides. However, as a result of discussion, the following was decided:

- (1) For the cost per avoided ton of CO₂ equivalent, the amount of the initial investment (AIJ component) deducted by total emissions amount (\$19.60/ton) was described, and \$30.00/ton, figure including the operating cost was entered in parentheses.
- (2) The contribution amount needed for subsequent fiscal years was uncertain. However, it was entered to the extent that it could be estimated.
- (3) All of the costs related to equipment and construction necessary for the operation of the CDQ facilities including in costs for dust elimination systems, etc. were considered as an AIJ component.

The description of the costs, as above, needs further discussion. In that case, the following points would become important.

(1) What are the reasons and the purpose for describing the costs?

(2) What is the appropriate definition of a cost when a description of the cost is required? Will the concerned definition be technologically possible? (Specifically, there would be cases where AIJ components are difficult to separate from the cost of overall investment. In such cases, how should it be treated?) Furthermore, will the necessity of maintaining confidentiality of the project participants, particularly the private sector, for operational reasons and the uncertainty of future governmental budgets be considered in this definition?

2. Description of E) Calculating the Amount of GHG Reduction

In calculating emission reductions generated by a project, the baseline is an indispensable assumption. The methodologies used to establish baselines differed from country to country and from project to project. This is why a lot of time and long discussions were required to resolve various complicated issues.

Taking an example of the CDQ project in China, the following issues have become subjects of discussion:

(1) The scope of emission reductions which could be regarded as a result of installing CDQ facilities. By installing CDQ facilities, the following two effects could be predicted:

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