



**SUMMARY REPORT OF THE ALLIANCE OF
SMALL ISLAND STATES WORKSHOP ON THE
CLEAN DEVELOPMENT MECHANISM OF THE
KYOTO PROTOCOL
14-16 JULY 1999**

The Alliance of Small Island States Workshop on the Clean Development Mechanism of the Kyoto Protocol took place in Majuro, Republic of the Marshall Islands from 14-16 July 1999. The Workshop, organized and hosted by the Alliance of Small Island States (AOSIS) and the Government of the Republic of the Marshall Islands, had over 50 participants, including country representatives from the small island states in the South Pacific, Indian Ocean, South China Sea, Mediterranean and Caribbean. Experts from various UN and regional organizations, a representative from an environmental NGO and special invitees from the Philippines, Mauritania, the US, the UK, Australia, Norway, New Zealand and Switzerland. Participants discussed elements of the Clean Development Mechanism (CDM) of the Kyoto Protocol in eight sessions spanning three days with presentations from speakers followed by open discussions. The participants adopted the "Majuro Statement on Climate Change," which will be presented, *inter alia*, at the Fifth Conference of Parties to the FCCC (COP-5) in Bonn from 25 October-5 November 1999.

BACKGROUND

The Kyoto Protocol, agreed in December 1997, is aimed at contributing to the objective of stabilizing greenhouse gas concentrations in the atmosphere. It requires certain developed country Parties listed in Annex I to the Framework Convention on Climate Change (FCCC) to reduce their overall emissions of a basket of greenhouse gases by at least 5% below 1990 levels in the commitment period of 2008-2012. The US agreed to an emissions cut of 7%, Japan 6% and the EU 8%. The Kyoto Protocol provides three mechanisms to aid Parties in achieving compliance with these commitments - joint implementation (Article 6) and emissions trading (Article 17) between Annex I countries and the Clean Development Mechanism (Article 12) between Annex I and non-Annex I countries. The Clean Development Mechanism (CDM) allows Annex I Parties to invest in project activities in non-Annex I countries and use the certified emission reductions (CERs) accrued from the year 2000 to comply with their commitments in the first commitment period (2008-2012).

At the Fourth Conference of the Parties (COP-4) held in November 1998, Parties adopted the Buenos Aires Plan of Action, under which they resolved to show "demonstrable progress" according to established time frames on, *inter alia*, the mechanisms of the Kyoto Protocol. At the tenth meeting of the FCCC Subsidiary Bodies in Bonn in June 1999, delegates clarified their positions on the

Kyoto Protocol mechanisms and agreed that a new synthesis document should be prepared. The FCCC Subsidiary Bodies are the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA). The Chairs of the Subsidiary Bodies invited Parties to submit further proposals by 31 July 1999 on issues raised in the Buenos Aires Plan of Action relating to principles, modalities and guidelines for the mechanisms, and elements to be included in the plan to facilitate capacity building. The AOSIS Workshop was designed to facilitate this process in the run-up to COP-5.

REPORT OF THE WORKSHOP

In opening the workshop, H.E. Imata Kabua, President of the Republic of the Marshall Islands, welcomed delegates and thanked Canada, Italy, Norway, Switzerland, the US and the UN Trust Fund on New and Renewable Sources of Energy for their support in hosting the Workshop. He noted that though some countries enjoyed economic growth and high standards of living others had their livelihoods and dignity endangered. If no action were taken at an early stage several small islands developing states and low lying coastal areas would be destroyed. He expressed hope that the workshop would agree upon a clear statement that would enable firm and decisive action on the question of climate change. He said part of this action must be to ensure that the CDM becomes a credible tool to fight climate change. In the recent past, the Marshall Islands had witnessed the loss of burial grounds due to the rising sea-level and the increasing frequency of extreme weather events such as storm surges. He concluded on the note that the Marshall Islands relied on AOSIS to help it and counted on the industrialized countries to take the necessary action required by the FCCC.

Marie Maddison, Secretary of Foreign Affairs and Trade, Marshall Islands, described the expected outcome of the Workshop as two-fold - a Majuro Statement on Climate Change and a draft AOSIS position paper on the CDM that would be forwarded to the AOSIS Plenary in New York for final approval.

PRESENTATIONS AND DISCUSSION SESSIONS

OVERVIEW OF THE CLIMATE CHANGE NEGOTIATIONS

Ambassador Tuiloma Neroni Slade, Chair of AOSIS, provided an overview of the climate change negotiations, focusing in particular on the role of AOSIS. He traced the growth of AOSIS, an informal gathering of 42 countries bound together by a fundamental concern over the risks and threats of climate change for their countries. He noted that the AOSIS had been successful in ensuring that its concerns were reflected in the Framework Convention on Climate Change. To illustrate, he highlighted: the principles of preventive action, precaution,

SUSTAINABLE DEVELOPMENTS

common but differentiated responsibility and polluter pays; the duty to cooperate; and equity. He said AOSIS was working towards ensuring the:

- review of adequacy of commitments and the strengthening of industrialized countries' commitments;
- resolution of scientific and methodological uncertainties in the Kyoto Protocol, such as in land use, land use change and forestry (LULUCF);
- creation of a strong monitoring and compliance system;
- creation of mechanisms to ensure funding for adaptation; and,
- use and development of new and renewable sources of energy.

He stressed that "there was not much to celebrate" in the current state of the negotiation. He noted that the ability to tackle the issues lay largely with the developed countries yet there is serious disagreement among them on issues such as the "bubble concept." He underlined the leadership role of the Annex I countries but said that the challenge of climate change lay equally on the shoulders of the developing countries. He called for clarity in the respective roles of developed and developing countries and highlighted the need to think of ways to engage countries like China, India and Brazil. He noted that though developing countries had a role in the process they could not be forced to take it on until they developed confidence that could come only with the demonstration of leadership by the Annex I countries.

In conclusion, he said that as climate change was a problem that would take decades to address, the Kyoto Protocol must be viewed merely as a first step.

In the discussion session, the MARSHALL ISLANDS noted that the negotiations are still extremely difficult and the urgency of concerns is not often accommodated. ANTIGUA AND BARBUDA asked what role AOSIS could play at COP-5 given that it is likely to be a technical meeting rather than a negotiating session? Ambassador Slade underscored the need to work through some of the complications and technicalities such as the EU view on supplementarity. The PHILIPPINES highlighted the concern that existing commitments are not being met. She lamented the fact that Annex I communications do not indicate any commitment to meeting adaptation obligations and that one of the most neglected aspects of the Convention related to public information and awareness. She said that the majority of information proceeded from a manipulated media and hence "we are losing a propaganda battle." She noted that developing countries are taking action but need to get access to energy efficient technologies.

NORWAY noted that language on climate change issues is specialized and complicated and therefore incomprehensible to the media. He noted that the Kyoto Protocol is a first step towards taking stronger commitments and indicated a need to be more operational on commitments. As a means of strengthening regional responses to the Protocol, Ambassador Slade suggested that creation of a regional mechanism similar to the one in the region related to fisheries. GRENADA said that developed and developing countries need to work together as "we are passengers on the same ship." The SOUTH PACIFIC FORUM SECRETARIAT noted the statements made by the 1996 leader of the South Pacific Forum leaders in the Marshall Islands highlighting their concern about climate change and giving their support for the AOSIS position on the draft Kyoto Protocol. She said that the Forum Secretariat stood ready to transmit the outcomes of this meeting to the next South Pacific Forum meeting in Palau. CYPRUS identified a need to develop means to educate the public.

RESPONSES OF AOSIS COUNTRIES TO THE FCCC

In a presentation on the regional response to the implementation of the FCCC, Gerald Miles (South Pacific Region Environment Programme-SPREP) highlighted the importance of maintaining momentum at the national level even if international negotiations stall. On the Pacific Island Climate Change Assistance Programme

(PICCAP), he highlighted a number of initiatives including: monitoring sea-levels; strengthening meteorological services; and providing negotiation support and work on ozone depleting substances as part of the overall goal of PICCAP to strengthen the implementation of the FCCC and to enhance national capacities. On capacity building he noted that PICCAP helps countries to: undertake greenhouse gas (GHG) inventories; develop mitigation options; undertake vulnerability assessments; and initiate national implementation strategies. His presentation was followed by a series of country presentations.

In the first of a series of country presentations, Philip Weech (Bahamas) elaborated on the GEF enabling project in the Bahamas, an 18-month project worth USD 185,000. The elements of the project include GHG inventory, an assessment of vulnerability and adaptation and preparation of national communications. He noted that most of the IPCC support came into the region very late. He highlighted the significance of international bunkers to the Bahamas, which is a ship registry, but said the Bahamas was still working out its position on the issue. He said that the Bahamas had built capacity and trained Bahamians to work on its GHG inventory. However, with the assessment of vulnerability and adaptation, his government had to hire consultants to do a historical study to assess how the climate of the Bahamas had changed in the last 150 years and perform the vulnerability and adaptation analysis using Geographic Information Systems and the output of the historical study. He highlighted the need to take immediate action as things were changing quite fundamentally in the Bahamas.

Clifford Mahlung (Jamaica) noted that Jamaica was in the process of preparing its national communication. He elaborated on the Demand Side Management Demonstration project aimed at reducing energy consumption by utilizing programs whose results benefit consumers, utilities and the society. In the transportation sector, Jamaica is putting in place higher taxes and tariffs on vehicles with larger engines (200%) and phasing out leaded petrol. Regarding sinks, it is experimenting in the growing of fuel woods and encouraging tree planting and replanting projects. At a regional level, he said Jamaica was involved in the Caribbean Planning for Adaptation to Climate Change.

Costas Papastavros (Cyprus) noted that as Cyprus is associated with the EU family it has to harmonize its environmental regulations with those of the EU. Issues such as the reform of electricity tariffs based on marginal costs are under debate. He said Cyprus is considering ways to draft a strategic plan for the reduction of GHGs. He said that, to his knowledge, no monitoring of the sea-level rise has been carried out in Mediterranean. He expressed a readiness to work seriously with AOSIS and a willingness to carry to the EU any concerns AOSIS may voice.

Jorelik Tibon (the Marshall Islands) said that the Marshall Islands was part of PICCAP and coordinated with other agencies in the region including the UNDP and South Pacific Applied Geo-Science Commission (SOPAC). He said the Marshall Islands had established a cross-sectoral national climate change committee, whose work was largely of a "learning nature." He highlighted the inadequacy of funding to continue the work of the committee in the phase between the completion of the first national communication and the commencement of preparation of second national communication.

Beenay Pathack (Mauritius) said that the Mauritian cross-sectoral National Climate Committee, formally established in June 1991, had prepared a National Climate Action Plan, which formed the basis for its initial national communication. The communication, submitted in early 1998, includes *inter alia*, an inventory of GHGs, an assessment of vulnerability and an array of implications of climate change and its variability on health. He said that Mauritius had recently conducted a one-day brainstorming seminar aimed at convincing political leaders and technical experts of the need to put policies into practice. As a result of this seminar, a series of working groups were created for sectors including energy and transport.

SUSTAINABLE DEVELOPMENTS

Tomoavao Wichman (Cook Islands) said that the Cook Islands had completed its GHG inventory with the help of SPREP and made an assessment of its vulnerability and adaptation with the help of PICCAP.

INTRODUCTION TO THE CLEAN DEVELOPMENT MECHANISM

In introducing the discussion on the CDM, Lamuel Stanislaus (Grenada) reminded participants of the expression "cleanliness is next to godliness." He noted that the CDM, which allows for credits starting in 2000, and is still in its conceptual infancy, is a market-based funding concept and needs to be treated with caution. He said, "we do not own the earth and we are only holding it in trust for future generations."

Bernarditas Castro Muller (the Philippines) highlighted the support that the Philippines gives to AOSIS, particularly in relation to representation in the FCCC Bureau. She expressed concern that the effects of climate change are already being experienced by a number of Asian countries and underscored the importance of poverty eradication and economic and social development. She underscored the point that the CDM is about mitigation, but since mitigation is not a commitment of developing countries for developing countries the objective should merely be to achieve sustainable development. She noted that technology transfer was a matter of commitment under the Convention and the CDM should not be used to undermine this commitment.

Jürgen Lefevere (Foundation for International Environmental Law and Development-FIELD) provided an overview of the design issues relevant to the CDM. On project eligibility, he underscored the key elements of the CDM, *inter alia*: achieving sustainable development; voluntary participation; real, measurable and long-term benefits; and reductions that are additional. He indicated that some projects may be excluded, including: nuclear energy and sinks. On sinks, he noted that the reduction of emissions by sources or removal by sinks is not mentioned in Article 12(CDM) and whether they should be included is an open issue. On additionality, he noted two types of additionality—environmental and financial. Environmental additionality requires definition of baselines and these could be done on a case-by-case basis or at a national or regional level, the latter being more cost effective. He indicated that financial additionality would be additional to Global Environmental Facility or ODA support and would be very difficult to operationalize. On certification, he noted that this process is *ex post* to a project, however, investors seek quick results and this must be weighed against real, measurable and long-term benefits.

He indicated that the CDM could be considered on either a bilateral or a multilateral approach. The bilateral approach is, *inter alia*: based on single projects, investor-led, private sector focused and is likely to benefit countries that are already receiving foreign direct investment. The multilateral approach, *inter alia*: is host country-led, emphasizes a project's contribution to sustainable development, allows equity considerations and shields the host from undue pressure. On complementarity, Lefevere indicated two possible approaches, quantitative and qualitative. The quantitative approach sets a cap on claimable CERs whereas the qualitative approach suggests that Parties can only use the CDM if they have taken adequate domestic action. On adaptation, he noted that some delegates have called for a surcharge to be applied across all the mechanisms, thus making the CDM less expensive and more responsive to the equity issue. In relation to the functions of the Executive Board of the CDM, he questioned its relationship with the COP/MOP; whether its membership was limited or open-ended; whether it would have regional representation or be based on personal capacity; and whether there should be third party representation such as business or environmental NGOs.

Ambassador Ole Krisitian Holthe (Norway) referred delegates to a dialogue paper prepared by the Umbrella group and stressed the need to operationalize the Rio and FCCC principles. He informed the delegates about a workshop to be hosted by Norway. The workshop would have

representatives of small island states, donor countries and multilateral organizations and be focused on small island developing states. He stressed the need for the region to ask, "what's in it for us?" and think of ways in which AOSIS, could profit from the CDM.

In the discussion session, the MARSHALL ISLANDS emphasized the need to have the sustainable development dimension clearly in mind in crafting successful CDM projects. She requested a definition of the difficult concept of "additionality," and questioned if Governments should be allowed to take credit for projects in situations where the effect of the projects is far outweighed by action or inaction elsewhere. The SOLOMON ISLANDS requested an elaboration of the notion of baselines. Lefevere responded that determination of baselines in the field of environmental additionality is a difficult concept as it is impossible to determine "what would have been done." He said that currently in the AIJ pilot phase projects baselines are determined on a case-by-case basis but such an approach is both costly and dangerous.

SAMOA noted that the FCCC is predicated on the need to assist developing countries thereby highlighting the division between developed and developing nations. He said the rhetoric that we are caught up in is not reflected in reality and emphasized the need for self-help and self-assurance. He questioned whether it is possible for a country like SAMOA to have, for instance, Shell or BP replace the entire energy system of the country with one based on renewables and then have "something" that could be sold to an Annex I country. In response, Lefevere said such a unilateral approach to the CDM would be possible. He said the relevant questions in the unilateral approach would be the ownership of the CERs and the identification of projects and funders. JAMAICA queried if there could be an investor-driven portfolio approach to the CDM. Lefevere responded that such an approach could be explored. The US highlighted the tremendous potential in the region for the creation of "CDM bubbles."

NEW ZEALAND highlighted the role envisaged for LULUCF in the CDM. He said that if there were no role for LULUCF, only developing countries that had major industrial plants would benefit from the CDM. The PHILIPINES responded that the IPCC had been mandated to deal with the issue and present a report in May 2000. AUSTRALIA echoed NEW ZEALAND's interest and questioned how effective the adaptation fund would be if the projects covered by the CDM were limited. She highlighted the need to be faithful to the principles of the Convention, in particular Article 3(3) (mitigating the adverse effects of climate change through, *inter alia*, the use of sinks).

CURRENT STATUS OF CDM IN INTERNATIONAL NEGOTIATIONS POST SBI/SBSTA-10 AND EXPECTATIONS AT COP-5 AND COP-6

On the current status of the CDM in international negotiations post SBI/SBSTA-10, Espen Rønneberg (Marshall Islands) noted that the climate negotiations were difficult to follow and as such the international system was not particularly friendly to small island states. He highlighted a new reference to "emissions avoidance" and lamented the obstructions by "some Saudi friends." He expressed hope that the SBI/SBSTA would have developed guidelines for CER certificates, but noted that there are a large number of areas where there is general agreement and urged countries to build on this agreement rather than insert acrimony into the dialogue. He stressed that nuclear power and LULUCF should not be part of the CDM and questioned what technology transfer could flow from LULUCF.

David Hales (USAID) said that the FCCC deals with complex science and the complexity of the negotiations puts the nuclear non-proliferation treaty to shame. He highlighted that tomorrow's solutions are not going to come from yesterday's prejudices and indicated general support for the G-77/China set of principles.

SUSTAINABLE DEVELOPMENTS

He listed a series of "things-to-do to ensure failure": design a system that:

- will not deliver real, measurable and long-term benefits;
- does not encourage Annex I countries to aggressively reduce their domestic emissions;
- does not support sustainable development;
- does not build capacity in all countries;
- does not have rules against cheating;
- de-links the CDM and emissions trading;
- fixes arbitrary limits on flexibility mechanisms;
- has exorbitant costs; and
- discourages early action.

He noted that the longer the delay the more expensive it will be and urged each country to determine what its interests are going to be.

In the discussion session, ANTIGUA AND BARBUDA addressed his query to Hales and said that since the Kyoto Protocol only envisaged "part of" the Annex I commitments being satisfied through the mechanisms, his reference to "arbitrary limits" was questionable. He observed that even with the SO₂ trading program in the US, there were only a limited number of emissions to go around. Hales responded that the problem was with arbitrary and purposeless limits not limits *per se*. SWITZERLAND emphasized the need for domestic action. He said the common sense perception of supplemental was that the supplement is smaller than that which it supplements. He said he did not support the EU formula because the supplement there was bigger than the main. The UK said that the EU ceiling was not a purposeless one. It was designed to ensure domestic action. SAMOA highlighted issues of immediate concern to the Small Island States such as salt-water intrusion. He said that though these issues could not readily be fit into the negotiations or Protocol Article 12 (CDM), they need to be addressed. He expressed a fundamental reservation with regard to market approaches in the process and placing the environment in the context of profit making. UN DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS suggested that the workshop focus on ways in which the CDM could constitute an opportunity for the small island states. SPREP stressed the need to identify and address areas of priority and then match the priorities with the projects.

ASSESSMENT OF VULNERABILITY AND ADAPTATION

Phillip Weech (Bahamas) presented an overview of the work of the Intergovernmental Panel on Climate Change (IPCC). He noted that the IPCC had produced two Special Assessment Reports (SARs) and was in the process of producing a third. He indicated that the first two SARs did not draw on traditional knowledge and that this was being considered in the next Report. He regretted the fact that not enough was being reported on the vulnerability of small island states. He highlighted the various review processes required for IPCC Reports but noted that the small island states had not been adequately represented in the process.

Paul Fairbairn (SOPAC) provided an outline of the Pacific Regional Environmental Vulnerability Index (EVI) study. He noted that the EVI had an environmental focus rather than a cost-benefit one and said that it had a total of 39 risk exposure indicators, 5 intrinsic resilience indicators and 13 environmental degradation indicators. He said the project had compared EVIs for Australia, Fiji and Tuvalu and found that Tuvalu had the highest index.

On a presentation on coastal adaptation technologies, Paul Fairbairn noted that SIDS of the Pacific tends to be more vulnerable because people live near or along the coastline and that land has a considerable, cultural, traditional and economic value. He noted that the Pacific needs more data and training.

In the discussion session, the MARSHALL ISLANDS said that while it was clear that the slightest sea-level rise in the Marshall Islands would have severe results, the options for adaptation were unclear. MAURITIUS, the FEDERATED STATES OF MICRONESIA and

BARBADOS expressed interest in using and testing the EVI model in their countries and regions. TONGA expressed concern that as EVI was a scientific and technical model, social concerns, historical events and traditional practices were ignored. He said that in Tonga traditionally no construction is undertaken within 50 meters of the high tide line. He queried whether the EVI model could pick up such factors. SOPAC responded that the model was an environmentally based one developed with input from national counterparts. The MARSHALL ISLANDS stressed the need to look at how traditional practices could be taken into account in reducing vulnerability. He cited the example provided by Tonga as a case in point. NORWAY asked how SOPAC's work was related to that being done elsewhere on vulnerability and how it planned to increase the relevancy of its work to policy makers and international organizations. Fairbairn responded that all existing literature had been reviewed before the model was developed. It differed from other models in that it was based on the environment as opposed to a cost-benefit or a financial basis. SAMOA underscored the importance of a vulnerability index to the small island developing states in the light of its use in the UN system to determine development status and levels of assistance. NIUE highlighted the difficulties small island states faced in funding experts to assist them in assessing vulnerability and suggested creating a pool of funded experts that they could draw on. The PHILIPPINES called for greater developing country participation in the IPCC. NEW ZEALAND said that in funding the SOPAC project, he had hoped that it would have application in other areas where there are small island states. The SOUTH PACIFIC FORUM SECRETARIAT highlighted other work done in the area, in particular by the Commonwealth and the World Bank in association with the South Pacific Forum Secretariat. She said a report of the work was being used by the World Bank in developing policies on the small island states. MAURITIUS said that the EVI model, as a converse statistical model in which all the variables may be interrelated, could be a valuable experimental tool.

Wayne King (SPREP) outlined the vulnerability and adaptation elements of the PICCAP, a GEF-funded, integrated climate enabling project aimed at assisting 10 Pacific island countries enhance capacity to meet their commitments under the FCCC. PICAAP conducted a 6-month training course on assessing vulnerability and adaptation to climate change. The course included intensive instruction in IPCC methodology, field work and practical application such as drafting of national vulnerability and adaptation assessments. The training course led to the conception of a Prototype Integrated Model (PACCLIM) for assessing climate change impacts in the Pacific region. The model will build, *inter alia*, a library of GHG emission scenarios, baseline climatology for representative islands and baseline data on relative sea-level trends.

In the discussion, GRENADA highlighted the vulnerability of small island states to natural disasters, such as hurricanes, earthquakes, tidal waves and volcanic eruptions. SOPAC indicated that it had a hazard assistance unit looking at the vulnerability of earthquakes and tidal waves. The MARSHALL ISLANDS emphasized the importance of ensuring that countries follow the same approach to the determination of vulnerability and hence the process for determining adaptations options and projects. In a response to a question from JAMAICA, King said that the regional climate model was to be introduced at a UNDP workshop in the Caribbean.

CONSIDERING ADAPTATION PROJECTS FOR THE AOSIS REGIONS

On considering adaptation projects for AOSIS, Ravi Sharma (UNEP) gave an overview of financing and managing adaptation activities. On assessing vulnerability, he noted that the IPCC had focused on physical and biological terms rather than on economic risks and that no measure of aggregate vulnerability had been developed. On criteria for adaptation funding he underscored the importance of defining the

SUSTAINABLE DEVELOPMENTS

distinction between adaptation to climate variability and human-induced climate change effects. He identified potential sources to fund adaptation including: taking costs of adaptation out of CERs credited to Annex I Parties, or creating a tax on the value of CERs, on all the mechanisms, or on international bunkers, and/or financial incentives for compliance. He highlighted the need to build substantial capacity in the vulnerable countries to undertake the most cost effective and viable adaptation measures.

In the discussion session, the PHILIPPINES stressed that the FCCC deals not just with climate change but also its adverse effects and as such mitigation and adaptation are on the same footing. She said the financial mechanism has no role in the CDM. The financial mechanism is obliged to fund adaptation projects and does not have to wait until the CDM is operationalized. JAMAICA commented that climate variability was increasing due to climate change and that incremental costs were difficult to determine. Sharma agreed and said that there are far more mitigation projects being funded than adaptation, however the GEF does not have a formal link with Article 12.8 (meeting costs of adaptation) as the Protocol has not come in to force. The US said she wanted a narrow definition of what adaptation involves. The BAHAMAS expressed concern about the use of the term "narrow." The MARSHALL ISLANDS noted the difficulty of writing comprehensive adaptation project proposals. SAMOA said that there has to be an acceptable norm concerning "damage to your neighbor's property." SWITZERLAND sought clarification of the UNEP estimates of adaptation funding from the CDM. The US said that for USAID adaptation is more important than mitigation, but noted that for new and additional funding he has to prove to his political leaders that the effect of climate change is a new phenomenon. He cited an example where dust from the Sahel blowing into the atmosphere, is eventually deposited in the Pacific, the iron in the dust changes the absorption rate of calcium in coral reefs in the Pacific, thus altering the dietary patterns of Pacific Island countries. He questioned whether this is a human induced climate change effect and called for an agreement on the definition of adaptation. ANTIGUA AND BARBUDA said we should not redefine adaptation.

FUNDING OF ADAPTATION UNDER THE CDM

Ambassador John Ashe (Antigua and Barbuda), in addressing funding requirements under the CDM, said there was a need to determine, *inter alia*: the monetary and non-monetary costs of adaptation; the nature of proceeds—whether a share of the value of the CDM project itself, a share of the market value of the certified emissions reductions achieved or a share of the certificate(s) of emission reduction that accrue from a project; and the percentage of the share of proceeds that would go towards adaptation. He clarified that there are two tracks for adaptation, one under the Convention and the other under the Protocol. The former would be funded by GEF and the latter by proceeds from the CDM.

Ambassador Slade identified the need to adopt a practical approach to developing a definition of "adaptation." He referred to Convention Article 4(1) (commitments of all Parties) as providing broad indicia of what adaptation activities could cover. He highlighted the need to identify countries particularly vulnerable to the adverse effects of climate change and determine ways to accord priority to claims from them. Referring to Convention Article 4(8) (special needs and concerns of developing countries), he said that though small island states were the first in the "rat pack" this did not assure them of priority as they would still be measured against the rest of the developing countries. He expressed a need to factor in the enormity of the cost associated with adaptation.

RENEWABLE ENERGY IN THE DESIGN OF MITIGATION PROJECTS UNDER THE CDM

Paul Fairbairn (SOPAC) highlighted the work done by SOPAC in the design of renewable energy mitigation projects, *inter alia*: providing management and technical cooperation to solar cooperatives; conducting wind resources assessment in five countries; and preparing booklets on energy conservation and efficiency. He described AIJ pilot Projects SOPAC had implemented including an air conditioner timer project in the Solomon Islands and a 10Kw grid connected solar photovoltaic in Fiji. Specific energy initiatives of SOPAC include designing regional energy programs and GHG Mitigation programs in PICCAP countries.

Mahendra Kumar (SPREP) highlighted options for CDM mitigation projects in the Pacific Island Countries, in particular in the transportation and power sector. In the transportation sector he said a 5% increase in vehicle efficiency could reduce GHG emissions by 108,000 t CO₂. In the power sector diesel generator and rural electrification projects could be taken up. He outlined several potential renewable energy projects in the region including solar, wind, ocean, hydro, biomass and hybrid systems. He highlighted a need in small island countries for funding, capacity building and effective policies.

Jenny Bryant-Tokalau (UNDP) described a solar and wind energy project in place in Vanua Levu, Fiji dealing with solar and wind energy. She said the project had been an 80% success and several companies had expressed interest in replicating the system elsewhere in Fiji. She said such projects could work towards creating CERs.

Furio de Tomassi (UN Trust Fund for Renewable Energy) described the Ocean Power Technology's system of wave energy technology. He said with wave energy there would be, *inter alia*: a source of energy close to the population; no waste disposal problem; no negative impact on marine life; and no safety or pollution concerns.

Denis Alessio, (Marshall Islands boat builder) described solar technology associated with water pasteurizing in the Marshall Islands. He noted other projects being carried out including, canoe design, solar passive housing and dry composting toilets.

Chris Sherring (Photovoltaics International) highlighted a number of systems using photovoltaics (PV), including water purification, ice making and quality lighting. He noted that PV concentrators may produce 25 percent more energy than equivalent flat plate PV arrays.

Cathleen Kelly (Centre for Clean Air Policy-US) gave an overview of options for simplifying baseline setting. She noted a variety of different methods that have been used to determine baselines. In the context of case-by-case baselines she concluded that they: increased development costs and may be subject to inflated statement of benefits by the host country. In developing simplified baselines she said that the portfolio approach could be used, for example, in regional assessments of a similar fuel use. She suggested that performance benchmarks could be used to determine an emission rate for certain activities. She noted that benchmarks have: lower costs, avoid cheating, increase transparency and provide greater incentive for participation in the CDM.

CAPACITY BUILDING FOR AOSIS MEMBER STATES TO PARTICIPATE IN THE CDM

Taholo Kami (SIDSnet) gave an overview of the Internet services provided by SIDSnet. He noted that while SIDSnet provided very useful information, there were a number of problems associated with getting Internet access in small island countries including lack of awareness, lack of time availability and cost of access. He said that ways of overcoming these problems were being explored.

Peter Martin (International Greenhouse Gas Partnership Office of Australia-IGPO) stressed the need for the capacity building process to be demand driven and contain a range of options and sources. He outlined the capacity building element of the IGPO work and noted that

SUSTAINABLE DEVELOPMENTS

all AIJ projects approved by the IGPO included an appropriate capacity building component. It conducted technical workshops to train developing country experts in areas such as baseline determination and awareness raising workshops to spread information on CDM.

Ambika Chand (University of the South Pacific, Republic of Marshall Islands) described the RMI-USP Joint Education Project, which provides curricular and development support at all levels of schooling.

MAJURO STATEMENT ON CLIMATE CHANGE

In the last session of the workshop, Marie Maddison, Secretary of Foreign Affairs and Trade, Republic of the Marshall Islands, presented the draft of the Majuro Statement on Climate Change, for adoption. The statement had been prepared by key delegates in informal consultations through the week. The statement highlighted the importance of domestic action in achieving the Protocol commitments; noted the need for the CDM to be a credible and viable Protocol mechanism; stressed the need for special capacity building initiatives in the least developed states and small island developing states; underscored the importance of vulnerability assessment and adaptation to the members of the AOSIS; and resolved to work together to coordinate donor activities and domestic priorities to more effectively address capacity building and adaptation needs of small island developing states.

In a discussion on the statement, CYPRUS suggested adding a reference to the historical responsibilities of the developed countries. He stressed the fact that the climate change problem derived from the energy mismanagement of the developed countries, of which the AOSIS countries were the victims. SWITZERLAND said that its strong position on domestic action was not accurately reflected. He also suggested adding a reference that further research on vulnerability and adaptation focus on the development of definitions, principles and common methodologies that could be used to implement adaptation under Protocol Article 12.8 (meeting costs of adaptation). The PHILIPPINES objected to this reference, as she said it would act as a conditionality on the implementation of adaptation under Protocol Article 12.8. SINGAPORE said that if any changes were made to the draft he would have to clear it with his government. At the behest of ANTIGUA AND BARBUDA and MAURITANIA, delegates decided to adopt the draft statement without the suggested amendments.

The Workshop closed with messages of gratitude to the participants, organizers and sponsors of the workshop from Ambassador Slade and Ms. Maddison.

After the close of the workshop, the members of AOSIS met in a closed session to discuss and draft the AOSIS position paper on the CDM. The Chairs of the Subsidiary Bodies had invited Parties at Bonn in June 1999, to submit further proposals by 31 July 1999 on issues raised in the Buenos Aires Plan of Action relating to principles, modalities and guidelines for the mechanisms. The AOSIS position paper is being developed for submission to the FCCC Secretariat on 31 July.

THINGS TO LOOK FOR

INTERNATIONAL GREENHOUSE PARTNERSHIP OFFICE (IGPO)-FORUM SECRETARIAT (FORSEC) WORKSHOP ON CLEAN DEVELOPMENT MECHANISM: The IGPO-FORSEC Workshop on CDM will be held in Nadi, Fiji, from 26-30 July 1999. For more information contact: Monique Fienberg, Forum Secretariat; tel: +679 312600; fax: +679 305554.

FCCC WORKSHOP ON TECHNOLOGY TRANSFER: The FCCC Workshop on Technology Transfer will be held in Arusha, Tanzania, from 16-18 August 1999. For more information contact: the FCCC Secretariat; tel: +49 228 815 1000; fax: +49 228 815 1999; e-mail: secretariat@unfccc.de; Internet: <http://www.unfccc.de/>.

SMALL ISLAND DEVELOPING STATES (SIDS) WORKSHOP: The SIDS Workshop will be held in Lofoten, Norway, from 18-20 August 1999. For more information contact: Ambassador Ole Kristian Holthe, Special Adviser, Ministry of Foreign Affairs, Utenriksdepartementet; tel: +47 (0) 22 243619; fax: +47 (0) 22 249527/82.

INTERNATIONAL SYMPOSIUM ON NON-CO2 GREENHOUSE GASES: The International Symposium on Non-CO2 Greenhouse Gases: Scientific Understanding, Control, and Implementation, will be held in Noordwijkerhout, the Netherlands, from 8-10 September 1999. For more information, contact: Symposium Bureau; e-mail: j.vanham@plant.nl; Internet: <http://pubsys.wolters-kluwer.com/MWEB/deelnemers/100007514.html>.

GLOBAL CONFERENCE ON RENEWABLE ENERGY ISLANDS: The Global Conference on Renewable Energy Islands will be held on the Danish Island, Aroe, from 15-16 September 1999. For more information contact: Thomas Lynge Jensen; tel: +45 (0) 33 121307; fax: +45 (0) 33 121308; e-mail: inforse@inforse.dk.

FCCC WORKSHOP ON ADVERSE EFFECTS: The UNFCCC Workshop on Adverse Effects will be held in Bonn, Germany, from 21-24 September 1999. For more information contact: the FCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.de; Internet: <http://www.unfccc.de/>.

UNFCCC WORKSHOP ON COMPLIANCE: The UNFCCC Workshop on Compliance will be held in Vienna, Austria, from 6-8 October 1999. For more information contact: Mukul Sanwal, UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: msanwal@unfccc.de; Internet: <http://www.unfccc.de/>.

INSTITUTE FOR GLOBAL ENVIRONMENTAL STRATEGIES TECHNICAL WORKSHOP ON CDM: This workshop will be held in October 1999 in Hamaya, Japan. For more information contact: Aki Maruyama, IGES, 1560-39 Kamiyamaguchi, Hayama, Kanagawa, 240-0198, Japan; tel: +81-468-55-3812; e-mail: maruyama@iges.or.jp.

INTERNATIONAL SEMINAR ON KYOTO MECHANISMS BUSINESS OPPORTUNITIES: "Kyoto Mechanisms Business Opportunities: How Much is a Project Worth? Selection, Verification and Certification of Projects," will be held in Basel, Switzerland, from 21-22 October 1999. For more information, contact: Wolfram Kaegi, Institute for Economy and the Environment, University of St. Gallen, Tigerbergstrasse 2, CH-9000 St. Gallen, Switzerland; tel: +41-71-224-2583; fax: +41-71-224-2722; e-mail: Wolfram.Kaegi@unisg.ch; Internet: <http://www.iwoe.unisg.ch/kyoto/>.

FOURTH INTERNATIONAL CONGRESS ON ENERGY, ENVIRONMENT & TECHNOLOGICAL INNOVATION: The 4th International Congress on Energy, Environment & Technological Innovation will be held from 20-24 October 1999 in Rome, Italy. For more information contact: EETI99, Facolta di Ingegneria, Via Eudossiana 18, 00184 Rome, Italy; fax: +39-6-4883235; Internet: <http://www.ing.ucv.ve/ceait/eeti.htm>.

FCCC FIFTH MEETING OF THE CONFERENCE OF THE PARTIES: COP-5 will be held from 25 October - 5 November 1999 at the Maritim Hotel in Bonn, Germany. For more information, contact: the FCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.de; Internet: <http://www.unfccc.de/>.