

**DRAFT REPORT OF THE 25<sup>TH</sup> SESSION OF THE IPCC  
(Port Louis, Mauritius, 26-28 April 2006)**

**1. OPENING OF THE SESSION**

The Chair, Mr Rajendra K Pachauri called the Session to order at 10:00 hours on Wednesday, 26 April 2006.

Mr Sok Appadu, Director of the Meteorological Service of Mauritius, presided the opening ceremony.

The Chair of the IPCC, Mr Rajendra K. Pachauri, welcomed the Honourable Anil K. Bachoo, Minister of Environment and National Development Unit of Mauritius and thanked the Government of Mauritius for hosting the Session, which was taking place at a critical juncture in the development of the AR4 and will adopt the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. He urged governments to continue to contribute generously to the IPCC Trust Fund.

The Deputy Secretary-General of WMO, Mr Hong Yan welcomed progress in the IPCC work and noted that a number of important decisions of the UNFCCC COP-11 were based on findings of the IPCC. He finally reassured WMO's commitment to the IPCC.

The representative of UNEP, Mr Alexander Alusa, recalled the important role of the IPCC for the Climate Convention and the Kyoto Protocol and that the AR4 would continue to assist the parties in their decision-making. He reconfirmed UNEP's support for the IPCC.

The Deputy Executive Secretary of UNFCCC, Mr Halldor Thorgeirsson commended the IPCC for the preparation of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and recalled the importance of IPCC's past and ongoing assessment work for the UNFCCC.

The Minister of Environment and National Development Unit, the Honourable Anil K. Bachoo, welcomed all delegates to Mauritius. He stressed the importance of IPCC findings for climate policy and the need to assist Small Island Developing States to develop adaptation strategies. He appealed to the IPCC to provoke in-depth studies on medium and long-term impacts of climate change on small island states.

The Secretary confirmed the working arrangements, which were from 10.00 to 13.00 hours for the morning sessions and from 15.00 to 18.00 hours for the afternoon sessions.

The Agenda as approved is attached as Annex 1. The list of participants is attached as Annex 7.

**2. APPROVAL OF THE DRAFT REPORT OF THE TWENTY-FOURTH SESSION**

The draft report of the 24<sup>th</sup> Session was approved without amendments.

**3. IPCC PROGRAMME AND BUDGET FOR 2007 TO 2009**

The Secretary introduced the budget document and mentioned that until mid April 2006 less than one Million CHF voluntary contributions had been received. The IPCC Chair requested the Financial Task Team (FiTT) under the Co-chairs, Mr Marc Gillet and Mr Zhenlin Chen, to consider financial and budgetary matters and report back to the Panel for decision.

FiTT met three times during the Session and on Friday Co-chair Mr Marc Gillet presented a revised budget for 2006, a budget for 2007, a forecast budget for 2008 and an indicative budget for 2009, as well as a draft decision. After the presentation the Panel agreed to requests for an increase of developing country participation for two meetings.

Following a concern raised about funding for the scoping meeting for a possible Special Report on Renewable Energy, some delegations agreed to seek additional funds to cover all expenses for that meeting.

The Panel adopted the decisions on the IPCC programme and budget for 2006-2009, the revised budget for the year 2006, and the budget for 2007 as contained in Annex 2, and it took note of the forecast budget for 2008 and of the indicative budget for 2009 contained in Annex 2.

#### **4. ADOPTION AND ACCEPTANCE OF THE 2006 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES**

In the context of consideration of the "2006 IPCC Guidelines for National Greenhouse Gas Inventories" a contact group was set up to solve remaining methodological issues related to emissions from land converted to flooded land, in particular whether to place the description of certain methodologies in the main body or in an appendix, which provides a basis for future methodology development. Further responses to government comments and corrections in the main volumes of the 2006 Guidelines were presented in document IPCC-XXV/Doc. 4b/Add.1/Rev.1 and were explained by the Coordinating Lead Authors in the course of the adoption process of the overview chapter. The "Overview Chapter" as adopted is attached as Annex 3a. The main volumes of the "2006 IPCC Guidelines for National Greenhouse Gas Inventories" as accepted by the Panel can be accessed on the IPCC website as Annex 3b of this report.

#### **5. FURTHER WORK OF THE IPCC ON EMISSION SCENARIOS**

The Chair introduced a proposal for further work on emission scenarios, which was developed based on the recommendations of the Task Group on New Emission Scenarios, established following a decision by the Panel at its 23<sup>rd</sup> Session. He further suggested that instead of convening a scoping meeting the outline for a possible Technical Paper could be prepared by him and the Working Group Co-chairs.

In the plenary debate several countries expressed support for the proposal and some underlined the need to also cover the requirements of impact, adaptation and vulnerability studies, the importance of regional scenarios and developing country involvement in scenario development. Some concern was expressed that integrated scenarios may go beyond the scope of the IPCC. Different views were expressed about the IPCC role in scenario development, including the view that the IPCC should no longer itself commission or direct scenario development. The suggestion was also made to draw on the expertise of the Task Group on Data and Scenario Support for Impact and Climate Assessment (TGICA). It was recommended to take a clear decision on the future role of the IPCC and to focus in the further consultations on aspects where urgent decisions were required. The Chair established an open-ended contact group, which was co-chaired by Mr Jean-Pascal van Ypersele (Belgium) and Mr Ismail Elgizouli (Sudan). The contact group met several times and submitted a revised proposal to the Panel. The delegation of Saudi Arabia objected to points 2 and 5 of the proposal and requested the following statement to be recorded:

"Concerning paragraph 2 the delegation of Saudi Arabia believes that it is not appropriate to decide on any work during the approval process of the AR4 that has implications on the package of decisions that will be taken after the approval of the AR4. Therefore, any work that is decided before that time should not prejudice resources for this package of decisions. Thus resources to scope and develop this Technical Paper should not prejudice the package of technical and special reports to be agreed after completion of the AR4. The activities mentioned under paragraph 5 are part of the normal activities by the Chair of the IPCC to perform the assessment role and does not constitute a change to this role."

No further interventions were made. The decision by the Panel on further work on emission scenarios is contained in Annex 4.

## **6. RULES OF PROCEDURES FOR THE ELECTION OF THE IPCC BUREAU AND ANY TASK FORCE BUREAU**

Rule 20 was accepted as presented in the document before the Panel. The Rules of Procedures for the Election of the IPCC Bureau and any Task Force Bureau were adopted with minor editorial amendments (in this context Rule 20 has become Rule 18) and are contained in Annex 5.

## **7. IPCC COMMUNICATIONS STRATEGY AND OUTREACH**

The Secretary introduced the document, which was prepared based on the views expressed by governments on an IPCC information strategy, and information provided about outreach opportunities in countries or regions. She invited governments to provide additional comments to guide the Secretariat in further developing information and outreach activities. Delegations suggested to specify priority areas for partnership, including for training and capacity building, to intensify contacts among climate change officers and National Meteorological and Hydrological Services (NMHS), to ensure accessibility of IPCC reports for developing countries and to make translations available as soon as possible. The importance of high quality figures in easily accessible format was stressed by several speakers. Some delegations expressed their intention and interest in actively participating in AR4 outreach activities. Some caution was expressed about conferences and workshops. The point was made that development of IPCC reports and outreach need to be clearly separated, also in terms of structuring the websites. The IPCC Chair thanked delegations for their comments and contributions.

## **8. PROCESS AND POLICY FOR ADMITTING OBSERVER ORGANIZATIONS**

The Panel considered the revised proposal for a process and policy for admitting observer organizations. Comments were made concerning the role of the government focal points and the IPCC Bureau in this context. The point was made that decisions should be taken by the Panel by consensus. Provisions that would allow removing organizations and a more frequent review of the list of observer organizations were suggested. The proposal was revised to take into consideration the comments made. The revised document about the IPCC process and policy for admitting observer organizations as adopted by the Panel is attached in Annex 6.

## **9. FUTURE WORK PROGRAMME OF THE IPCC TASK FORCE ON NATIONAL GREENHOUSE GAS INVENTORIES (TFI)**

TFB Co-chair Mr Hiraishi presented proposals for the future work programme of the Task Force on National Greenhouse Gas Inventories. Delegations expressed their appreciation for the work of the Task Force on National Greenhouse Gas Inventories. They asked the IPCC Chair to convey the thanks of the Panel to the Government of Japan for hosting the Technical Support Unit and to express the wish that Japan will continue to do so. Concerning future activities the importance of contributing to training and capacity building activities in developing countries was emphasised. The possible role of National Meteorological and Hydrological Services (NMHS) was mentioned. Preparation of any material such as a brochure and frequently asked questions about the 2006 Guidelines has to follow IPCC procedures. A few countries expressed concerns about activities in the context of satellite and other remote sensing measurements and urged to focus on those aspects of remote sensing that could assist inventory work. Caution was also expressed about activities related to data from accounting of projects and emission trading mechanisms and the interface between emission inventories and projections.

In general the proposed approach, the focus on preparing material for capacity building and a broader discussion of future tasks were supported. The Panel approved the proposed actions and the meeting of inventory experts in late 2006. It urged the TFB to take into account comments raised in the debate, in particular related to activities mentioned under points 7 b, c and d of document IPCC-XXV/Doc. 10.

## **10. PROPOSAL FOR AN IPCC SPECIAL REPORT ON RENEWABLE ENERGY**

The delegate of Germany introduced a proposal for an IPCC Special Report on Renewable Energy, which was developed following a discussion at the 24<sup>th</sup> Session of the Panel. A large number of countries took the floor on that matter. Many countries expressed general support for such a Special Report and for initiating a scoping meeting. In particular developing countries spoke in favour of an in depth analysis of the full set of renewable energy technologies and the environmental and economic costs of various options and approaches. Some countries suggested to expand the scope and to include broader aspects of the energy system, in particular energy efficiency, while others expressed the view to keep the focus on renewable energy. Other delegations expressed concern about resource requirements and current workload and suggested to consider the issue after completion of the AR4 in the context of the future IPCC work programme and other requests and priorities.

Taking into consideration the comments made, the Panel decided to carry out a scoping meeting for a possible Special Report on Renewable Energy in late 2007, after completion of the AR4. In early 2008 the Panel will consider the outcome of the scoping meeting and take a decision on whether to prepare a Special Report on Renewable Energy, its scope and work programme. A view was put forward that the decision may be deferred on grounds of funding this activity. Financial matters related to that decision were considered under item 3.

## **11. MATTERS RELATED TO UNFCCC**

The Secretary informed the Panel about decisions taken by COP-11 and conclusions by SBSTA-23 that are relevant for the IPCC work programme, highlighting in particular the SBSTA five-year programme of work on impacts, adaptation and vulnerability. The representative of the UNFCCC, Mr Thorgeirsson provided additional information about a meeting held recently in Vienna to further develop that programme of work. He also informed delegates about a planned side event at SBSTA-24 about research needs, which is intended to stimulate the dialogue between governments and research organizations.

## **12. PROGRESS REPORTS**

The Co-chairs of the three Working Groups gave their progress reports. In this context the issues of updating the IPCC procedures in view of changes relating to electronic age and carbon footprint of frequent and large IPCC meetings were mentioned. It was suggested that these and other matters be evaluated at the end of the AR4 cycle with the view to pass recommendations on how to improve the writing and review process to the next IPCC Bureau.

The IPCC Chair informed the Panel about the composition of the Core Writing Team for the AR4 Synthesis Report which was agreed by the 35<sup>th</sup> Session of the IPCC Bureau, introduced Mr Andy Reisinger, the new Head of the Synthesis Report Technical Support Unit and thanked the Government of the UK for financing this position.

Mr Jose Marengo, Co-chair of the Task Group on Data and Scenario Support for Impact and Climate Assessment (TGICA) presented a progress report, highlighting support provided for training in the context of the START programme. Mr Taka Hiraishi, TFB Co-chair presented a progress report about the Emission Factor Database (EFDB).

## **13. REVIEW OF THE IPCC TERMS OF REFERENCE**

The Panel considered Resolution 8 by the 14<sup>th</sup> WMO Congress, which encourages the IPCC to review its terms of reference. In the discussion delegations expressed the view that in general the current terms of reference are adequate and allow the Panel to perform its functions. Some delegations saw a "light review" as an opportunity to improve the future work programme. In order to allow a response to the 15<sup>th</sup> WMO Congress the Panel agreed to set up a small task group to review the terms of reference and report to the 26<sup>th</sup> Session of the Panel. Following consideration of the recommendations of the task group by the Panel the IPCC Chair will give an oral presentation to the 15<sup>th</sup> WMO

Congress. Any IPCC decision on that matter will also be brought to the attention of the UNEP Governing Council.

Members of the task group, which is chaired by the IPCC Chair, are Mr Geoff Love (Australia), Ms Thelma Krug (Brazil), Mr Zhenlin Chen (China), Mr Bubu Jallow (Gambia), Mr Sok Appadu (Mauritius), Mr Khalid Abuleif (Saudi Arabia), Mr Jose Romero (Switzerland) and Ms Renate Christ, Secretary of the IPCC.

#### **14. OTHER BUSINESS**

The delegate from the Republic of Korea informed the Panel of the decision to contribute to the IPCC Trust Fund. The suggestion was also made to improve the liaison between GEO and the IPCC through the two Secretariats.

#### **15. TIME AND PLACE OF THE NEXT SESSION**

The 26<sup>th</sup> Session of the Panel is scheduled on 4 May 2007, in Bangkok, Thailand and the 27<sup>th</sup> Session from 12-16 November 2007 in Valencia, Spain. The Panel was also informed that the 10<sup>th</sup> Session of Working Group I is planned from 29 January - 1 February 2007 in Paris, France, the 8th Session of Working Group II from 2-5 April in Brussels, Belgium and the 9th Session of Working Group III from 30 April - 3 May in Bangkok, Thailand.

#### **16. CLOSING OF THE SESSION**

The Chairman closed the Session on 28 April 2006 at 17.45 hours.



## Annex 1

INTERGOVERNMENTAL PANEL  
ON CLIMATE CHANGE

TWENTY-FIFTH SESSION  
Mauritius, 26-28 April 2006

IPCC-XXV/Doc. 1, Rev.1  
(28.II.2006)

Agenda item: 1  
ENGLISH ONLY

Delegates can register at Les Pailles Conference Centre, Port Louis, from 16.00 to 18.00 hours on Tuesday, 25 April 2006 and from 08.00 hours on Wednesday, 26 April 2006 onwards.
--

## ANNOTATED REVISED PROVISIONAL AGENDA

### 1. OPENING OF THE SESSION

The session will be called to order at 10.00 hours on Wednesday, 26 April 2006 at the Les Pailles Conference Centre, Port Louis, Mauritius.

Simultaneous interpretation in Arabic, Chinese, English, French, Russian and Spanish will be provided during the plenary meetings of the session. All documentation will be in English only.

It is suggested that the working hours be from 10.00 to 13.00 hours for the morning meeting and from 15.00 to 18.00 hours for the afternoon meeting.

After introductory comments, the provisional agenda will be submitted for approval. The agenda may be amended at any time during the session.

### 2. APPROVAL OF THE DRAFT REPORT OF THE TWENTY-FOURTH SESSION (IPCC-XXV/Doc. 2)

### 3. IPCC PROGRAMME AND BUDGET FOR 2007 TO 2009 (IPCC-XXV/Doc. 3)

Information about the status of the IPCC Trust Fund and budget proposals for the years 2007-2009 will be submitted for consideration by the Financial Task Team (FiTT) and decision by the Panel.

### 4. ADOPTION AND ACCEPTANCE OF THE 2006 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC-XXV/Doc. 4a and Doc. 4b)

The Overview chapter of the "2006 IPCC Guidelines for National Greenhouse Gas Inventories" will be submitted for adoption and the full report will be submitted for acceptance by the Panel.

### 5. FURTHER WORK OF THE IPCC ON EMISSIONS SCENARIOS (IPCC-XXV/Doc. 11)

Following the decision by IPCC-XXIV to set up a Task Group, with a limited lifetime till the end of IPCC-XXV, for defining further work on emissions scenarios, a plan of work for new emissions scenarios will be presented to the Panel for decision making.

**6. RULES OF PROCEDURES FOR THE ELECTION OF THE IPCC BUREAU AND ANY TASK FORCE BUREAU (IPCC-XXV/Doc. 5)**

Consistent with the decision by IPCC-XXIV the Panel will be invited to revisit Rule 20 and to adopt the Rules of Procedures for the Election of the IPCC Bureau and any Task Force Bureau after agreement has been reached on Rule 20.

**7. IPCC COMMUNICATIONS STRATEGY AND OUTREACH (IPCC-XXV/Doc. 6)**

Following consideration by IPCC-XXIV of outreach activities and of a proposal for an AR4 information strategy, the Secretary invited Governments to submit their views on an IPCC information strategy, and information about outreach opportunities in their country or region and experience with "good practice outreach" activities. A summary of the replies received and suggestions for future information activities will be presented for consideration by the Panel.

**8. PROCESS AND POLICY FOR ADMITTING OBSERVER ORGANISATIONS (IPCC-XXV/Doc. 7 and IPCC-XXV/INF. 1)**

The Panel will have before it information about organisations that are already participating in the IPCC, applications for consideration by the Bureau and the Panel and a revised proposal for a process and policy for admitting observer organisations for consideration and decision by the Panel.

**9. FUTURE WORKPROGRAMME OF THE IPCC TASK FORCE ON NATIONAL GREENHOUSE GAS INVENTORIES (TFI) (IPCC-XXV/Doc. 10)**

The TFB Co-chairs will present proposals for the future workprogramme of the Task Force on National Greenhouse Gas Inventories for consideration and decision by the Panel.

**10. PROPOSAL FOR AN IPCC SPECIAL REPORT ON RENEWABLE ENERGY (IPCC-XXV/Doc. 12)**

A proposal for an IPCC Special Report on Renewable Energy submitted by Germany will be presented to the Panel for consideration.

**11. MATTERS RELATED TO UNFCCC (IPCC-XXV/Doc. 9)**

The Panel will be informed about decisions taken by COP-11 and conclusions by SBSTA-23 that are relevant for the IPCC workprogramme.

**12. PROGRESS REPORTS**

**13. REVIEW OF THE IPCC TERMS OF REFERENCE (IPCC-XXV/Doc. 8)**

The Panel will be invited to consider Resolution 8 by the 14<sup>th</sup> WMO Congress, which encourages the IPCC to review its terms of reference.

**14. OTHER BUSINESS**

**15. TIME AND PLACE OF THE NEXT SESSION**

**16. CLOSING OF THE SESSION**

**IPCC PROGRAMME AND BUDGET FOR 2006 to 2009  
Decisions taken by the Panel at its 25<sup>th</sup> Session**

1. The Panel thanked the Secretariat of the IPCC for the presentation of the IPCC Trust Fund Programme and Budget for 2006 to 2009, as contained in document IPCC-XXV/Doc. 3.
2. The Panel thanked the Chair and the Secretary of the IPCC for their efforts to improve the presentation of the Programme and Budget. It encouraged the Secretariat to continue to make improvements by providing more detail in the presentation of its past and projected expenses, in particular, on lines such as outreach and Secretariat expenses, and to examine the issue of constant over-estimation in the budget and work towards accurate forecasting.
3. The Panel noted the revenues and expenditures for 2005 as presented in document IPCC-XXV/Doc.3.
4. The budget for 2006 had been adopted at the 24<sup>th</sup> Session of the IPCC; the Panel adopted the revised budget of 2006 as attached, with changes to accommodate the agreed adjustments to the programme.
5. The Panel adopted the budget for 2007 as attached.
6. The Panel noted the forecast budget for 2008 and indicative budget for 2009, as attached.
7. The Panel expressed its gratitude to the WMO for financing one position and hosting the Secretariat, and to the UNEP for financing one position and continuing support to disseminating the IPCC findings and to the UNFCCC for its generous contribution and spirit of cooperation.
8. The Panel expressed its gratitude to governments, including those of developing countries, for their generous contributions to the IPCC Trust Fund, the hosting of TSUs and data distribution centres, and numerous in-kind contributions, including that of TERI for the web-site support, and the hosting of IPCC meetings, and the government of the UK for its support to the head of the synthesis report technical unit. The Panel also expressed its thanks to the US government for its special contribution for the translation and publication of the 2006 IPCC Guidelines into the other five non-English UN languages.
9. The Panel noted that, based on the recent history of contributions from governments, the expected contributions to the Trust Fund are likely to be below the adopted budget for 2006 and the proposed budget for 2007. It recognised that a certain amount of carry over is necessary to ensure continuation of the IPCC programme of work and the transition into the next assessment period, and that the carry over may vary from year to year due to the cyclic nature of the assessment.
10. The Panel therefore invited governments that may be in a position to do so to contribute to the IPCC Trust Fund taking into account the work programme and financial requirements for the full assessment period, and requested the Chair to write formally to governments and other possible contributors requesting such contributions.



TABLE 1

## REVISED BUDGET FOR 2006 ADOPTED BY IPCC-XXV

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
<b>Governing bodies</b>				
IPCC-25 3 days	Adopt/accept 2006 Guidelines Discussion BUR size and regional distribution	540,000 120 journeys	156,000	696,000
Bureau	2 sessions	162,000 36 journeys	208,000	370,000
TFB	2 sessions	63,000 14 journeys	8,190	71,190
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
<b>SUB-TOTAL</b>				<b>1,204,690</b>
<b>LA meetings</b>				
2006GL	CLA/LA meeting before IPCC-25	45,000 10 journeys	5,850	50,850
WG I AR4	1 CLA/LA meeting and technical summary meeting	270,000 60 journeys	35,100	305,100
WG II AR4	2 CLA/LA meetings	972,000 216 journeys incl. 40 RE	126,360	1,098,360
	Chapter meetings	180,000 40 journeys	23,400	203,400
	SPM meeting	112,500 25 journeys	14,625	127,125
WGIII AR4	2 CLA/LA meetings	675,000 150 journeys	87,750	762,750
	1 chapter meeting	22,500 5 journeys	2,925	25,425
	LA/ER meeting	67,500 15 journeys	8,775	76,275
AR4 SYR	1 writing team meeting	67,500 15 journeys	8,775	76,275
<b>SUB-TOTAL</b>				<b>2,725,560</b>
<b>Scoping meetings, expert meetings and workshops</b>				
TGICA	2 meetings	90,000 20 journeys	11,700	101,700
EFDB Board	1 meeting	94,500 21 journeys	12,285	106,785
2006 GL software	1 expert meeting	90,000 20 journeys	11,700	101,700
New Emission Scenarios	1 expert meeting	180,000 40 journeys	23,400	203,400
NGGIP future tasks	1 scoping meeting	90,000 20 journeys	11,700	101,700
<b>SUB-TOTAL</b>				<b>615,285</b>
<b>Other expenditures</b>				
Publications	EFDB update/management			40,000
	Revised 2006 guidelines	Publication (English)		300,000
SYR	Part-time staff for SYR TSU P3/4	6 months		48,000
	Graphics guidelines and design			30,000
Outreach	Activities and P3 staff	6 months		300,000
Secretariat				770,000
Co-chairs				200,000
<b>SUB-TOTAL</b>				<b>1,688,000</b>
<b>TOTAL</b>				<b>6,233,535</b>
Translation and publication of 2006 Guidelines (5 UN languages)*				<b>1,568,450</b>

\*US government supports CHF 1.45 million from its Special Contribution allocated for GPG translation and publication.

TABLE 2

## BUDGET FOR 2007 ADOPTED BY IPCC-XXV

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
<b>Governing bodies</b>				
IPCC-26 1day, after WGIII session	Accept WG contributions to AR4 Future of IPCC; Various	270,000 60 journeys	52,000	322,000
IPCC-27 6 days	Adopt AR4 SyR Programme & budget; Various	540,000 120 journeys	312,000	852,000
WG I session 4 days	Approve WG I contribution to AR4	540,000 120 journeys	208,000	748,000
WG II session 4 days	Approve WG II contribution to AR4	540,000 120 journeys	208,000	748,000
WG III session 4 days	Approve WG III contribution to AR4	540,000 120 journeys	208,000	748,000
Bureau	2 sessions	162,000 36 journeys	208,000	370,000
TFB	2 sessions	63,000 14 journeys	8,190	71,190
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
<b>SUB-TOTAL</b>				<b>3,926,690</b>
<b>LA meetings</b>				
WG I AR4	Final CLA/LA meeting before WG session	45,000 10 journeys	5,850	50,850
WG II AR4	Final CLA/LA meeting before WG session	67,500 15 journeys	8,775	76,275
	Second SPM meeting	112,500 25 journeys	14,625	127,125
WG III AR4	Final CLA/LA meeting before WG session	67,500 15 journeys	8,775	76,275
AR4 SYR	4 Writing team meeting incl. REs and final meeting before IPCC-27	292,500 65 journeys	38,025	330,525
TP Mtg Climate Change & Water	2 LA meetings	180,000 40 journeys	23,400	203,400
2006 GL brochure	2 CLA/LA meetings	72,000 16 journeys	9,360	81,360
<b>SUB-TOTAL</b>				<b>945,810</b>
<b>Scoping meetings, expert meetings and workshops</b>				
TGICA	2 meetings + 1 expert meeting	180,000 40 journeys	23,400	203,400
New Emission Scenarios	Expert meeting	225,000 50 journeys	29,250	254,250
	Technical paper meetings	45,000 10 journeys	5,850	50,850
Renewable Energy	Scoping meeting	90,000 20 journeys	11,700	101,700
EFDB Board	1 meeting	67,500 15 journeys	8,775	76,275
Method guidance on Inventories	1 NGGIP expert meeting	45,000 10 journeys	5,850	50,850
<b>SUB-TOTAL</b>				<b>737,325</b>
<b>Other Expenditures</b>				
Publications	EFDB update/management			9,000
	Publication and translation of AR4			1,000,000
	2006 GL brochure			20,000
SYR	Part-time staff for SYR TSU P3/4	12 months		96,000
	Graphics layout			60,000
2006 GL software	Software development			60,000
Outreach	Activities and P3 staff	6 months		400,000
Secretariat				770,000
Co-chairs				200,000
<b>SUB-TOTAL</b>				<b>2,615,000</b>
<b>TOTAL</b>				<b>8,224,825</b>

TABLE 3

## FORECAST BUDGET FOR 2008 PROPOSED TO IPCC-XXV

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
<b>Governing bodies</b>				
IPCC-28 3 days	Future of IPCC Outreach	540,000 120 journeys	156,000	696,000
IPCC-29 3 days	Bureau election Programme & budget	540,000 120 journeys	156,000	696,000
Bureau	2 sessions	162,000 36 journeys	208,000	370,000
TFB	1 session	31,500 7 journeys	4,095	35,595
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
<b>SUB-TOTAL</b>				<b>1,865,095</b>
<b>Scoping meetings, expert meetings and workshops</b>				
TGICA	2 meetings	63,000 14 journeys	8,190	71,190
New Emissions Scenarios	2 expert meetings	270,000 60 journeys	35,100	305,100
EFDB Board	1 meeting	67,500 15 journeys	8,775	76,275
<b>SUB-TOTAL</b>				<b>452,565</b>
<b>Other Expenditures</b>				
EFDB	Update/management			9,000
Publications	Publication & translation AR4 SYR			600,000
	Technical Paper on Climate Change and Water			200,000
Outreach				300,000
Secretariat				770,000
Co-Chairs				200,000
<b>SUB-TOTAL</b>				<b>2,079,000</b>
<b>TOTAL</b>				<b>4,396,660</b>

TABLE 4

## INDICATIVE BUDGET FOR 2009 PROPOSED TO IPCC-XXV

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
<b>Governing bodies</b>				
IPCC-29 3 days	Prepare for AR5, Outreach, Emission Scenarios, Programme & budget	540,000 120 journeys	156,000	696,000
IPCC-30 + WG I, II, III Sessions* 5 days	Approve scope and outline of WG contributions to AR5	1,440,000 320 journeys	364,000	1,804,000
Bureau	2 sessions	162,000 36 journeys	208,000	370,000
TFB	1 session	31,500 7 journeys	4,095	35,595
SBSTA/COP/JWG and other meetings		67,500 15 journeys		67,500
<b>SUB-TOTAL</b>				<b>2,973,095</b>
<b>LA meetings</b>				
Assessment of new Emissions Scenarios	2 to 3 LA meetings	540,000 120 journeys	70,200	610,200
<b>SUB-TOTAL</b>				<b>610,200</b>
<b>Scoping meetings, expert meetings and workshops</b>				
AR5 Scoping (2 meetings)	Develop AR5 outline proposals	270,000 60 journeys	35,100	305,100
TGICA	2 meetings	63,000 14 journeys	8,190	71,190
EFDB Board	1 meeting	67,500 15 journeys	8,775	76,275
<b>SUB-TOTAL</b>				<b>452,565</b>
<b>Other Expenditures</b>				
Publications	EFDB update/management			9,000
Outreach				300,000
Secretariat				770,000
Co-Chairs				200,000
<b>SUB-TOTAL</b>				<b>1,279,000</b>
<b>TOTAL</b>				<b>5,314,860</b>

\* Could be held in early 2010



WMO

# INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

NATIONAL GREENHOUSE GAS INVENTORIES PROGRAMME



UNEP

**Annex 3a**

## **2006 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES**

**Pre-Publication Draft – Subject to Final Copy-Edit**

### **Overview Chapter**

**Adopted by the Twenty-Fifth Session of the IPCC,  
Port Louis, Mauritius, 26-28 April 2006**

Subject to Final Copyedit

# **2006 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES**

---

## **OVERVIEW**

Subject to Final Copyedit

## **Authors**

Jim Penman (UK), Michael Gytarsky (Russia), Taka Hiraishi (Japan), William Irving (USA),  
and Thelma Krug (Brazil)



## Contents

### OVERVIEW

1.	Introduction .....	6
2.	Coverage of the Guidelines .....	7
3.	Approach to developing the Guidelines .....	9
4.	Structure Of The Guidelines.....	11
5.	Specific Developments In The IPCC 2006 Guidelines .....	12

## Figures

Figure 1	Main categories of emissions by sources and removals by sinks .....	8
Figure 2	Example Decision Tree (for CH <sub>4</sub> and N <sub>2</sub> O from Road Transport) .....	10

## Tables

Table 1	Contents of 2006 Guidelines .....	7
Table 2	Gases for which GWP values are available in the TAR.....	9
Table 3	Additional gases for which GWP values are not available in the TAR .....	9
Table 4	General structure of sectoral guidance chapters.....	11

Subject to Final Copyedit

# OVERVIEW

## 1 INTRODUCTION

The *IPCC 2006 Guidelines for National Greenhouse Gas Inventories (IPCC 2006 Guidelines)* provide methodologies for estimating national inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases. The IPCC 2006 Guidelines were prepared in response to an invitation by the Parties to the UNFCCC. They may assist Parties in fulfilling their commitments under the UNFCCC on reporting on inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol, as agreed by the Parties. The *IPCC 2006 Guidelines* are in five volumes. Volume 1 describes the basic steps in inventory development and offers the general guidance in greenhouse gas emissions and removals estimates based on the authors' understanding of accumulated experiences of countries over the period since the late 1980s, when national greenhouse gas inventories started to appear in significant numbers. Volumes 2 to 5 offer the guidance for estimates in different sectors of economy.

The IPCC has previously developed the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*<sup>1</sup> (*IPCC 1996 Guidelines*), together with the *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*<sup>2</sup> (*GPG2000*) and the *Good Practice Guidance for Land Use, Land-Use Change and Forestry*<sup>3</sup> (*GPG-LULUCF*). Taken together, they provide internationally agreed<sup>4</sup> methodologies that countries currently use to estimate greenhouse gas inventories to report to the United Nations Framework Convention on Climate Change (UNFCCC). The three-volume *IPCC 1996 Guidelines* define the coverage of the national inventory in terms of gases and categories of emissions by sources and removals by sinks, and the *GPG2000* and *GPG-LULUCF* provide additional guidance on choice of estimation methodology, improvements of the methods, as well as advice on cross-cutting issues, including estimation of uncertainties, time series consistency and quality assurance and quality control.

At its seventeenth session, held in New Delhi in 2002, the Subsidiary Body for Scientific and Technological Advice (SBSTA) under the UNFCCC invited the IPCC to revise the *IPCC 1996 Guidelines*, taking into consideration the relevant work under the Convention and the Kyoto Protocol<sup>5</sup>, with the aim of completing the work by early 2006.

In response to the UNFCCC's invitation, the IPCC, at its 20<sup>th</sup> session in Paris, in February 2003, initiated a process that led to an agreement at its 21<sup>st</sup> session (in Vienna, November 2003) of Terms of Reference, Table of Contents and a Workplan<sup>6</sup> for the *IPCC 2006 Guidelines*. The Workplan aimed to complete the task in time for adoption and acceptance at the 25<sup>th</sup> session of the IPCC, in April 2006. The Terms of Reference specified that the revision should be based on, *inter alia*, the *IPCC 1996 Guidelines*, *GPG2000*, *GPG-LULUCF*, and experiences from the UNFCCC technical inventory review process.

---

<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC) (1997). Houghton J.T., Meira Filho L.G., Lim B., Tréanton K., Mamaty I., Bonduki Y., Griggs D.J. and Callander B.A. (Eds). *Revised 1996 IPCC Guidelines for National Greenhouse Inventories*. IPCC/OECD/IEA, Paris, France.

<sup>2</sup> Intergovernmental Panel on Climate Change (IPCC) (2000). Penman J., Kruger D., Galbally I., Hiraishi T., Nyenzi B., Emmanuel S., Buendia L., Hoppaus R., Martinsen T., Meijer J., Miwa K., and Tanabe K. (Eds). *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. IPCC/OECD/IEA/IGES, Hayama, Japan.

<sup>3</sup> Intergovernmental Panel on Climate Change (IPCC) (2003). Penman J., Gytarsky M., Hiraishi T., Krug, T., Kruger D., Pipatti R., Buendia L., Miwa K., Ngara T., Tanabe K., and Wagner F (Eds). *Good Practice Guidance for Land Use, Land-Use Change and Forestry* IPCC/IGES, Hayama, Japan.

<sup>4</sup> See the Report of the Fourth Session of the Subsidiary Body for Scientific and Technological Advice (FCCC/SBSTA/1996/20), paragraph 30; decisions 2/CP.3 and 3/CP.5 (UNFCCC reporting guidelines for preparation of national communications by Parties included in Annex I to the Convention, part I: UNFCCC reporting guidelines on annual inventories), decision 18/CP.8, revising the guidelines adopted under decisions 3/CP.5, and 17/CP.8 adopting improved guidelines for the preparation of national communications from Parties not included in Annex I to the Convention, and subsequent decisions 13/CP.9 and Draft Decision /CP.10.

<sup>5</sup> Including, *inter alia*, work by the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, and by the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention, and the technical review of greenhouse gas inventories of Annex I Parties.

<sup>6</sup> The Terms of Reference, Table of Contents and Work plan can be found at <http://www.ipcc-nggip.iges.or.jp/>.

## 2 COVERAGE OF THE GUIDELINES

Table 1 shows the contents of the five volumes that make up the *IPCC 2006 Guidelines*. Estimation methods are provided for the gases shown in Tables 2 and 3, and cover the categories shown in Figure 1. Reporting is described in Chapter 8 of Volume 1. Coverage is complete for all greenhouse gases not covered by the Montreal Protocol, for which the IPCC, at the time of writing, provided a global warming potential (GWP)<sup>7</sup>.

Volumes	Chapters
1 - General Guidance and Reporting	<ol style="list-style-type: none"> <li>1. Introduction to the 2006 Guidelines</li> <li>2. Approaches to Data Collection</li> <li>3. Uncertainties</li> <li>4. Methodological Choice and Identification of Key Categories</li> <li>5. Time Series Consistency</li> <li>6. Quality Assurance/Quality Control and Verification</li> <li>7. Precursors and Indirect Emissions</li> <li>8. Reporting Guidance and Tables</li> </ol>
2 - Energy	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Stationary Combustion</li> <li>3. Mobile Combustion</li> <li>4. Fugitive Emissions</li> <li>5. CO<sub>2</sub> Transport, Injection and Geological Storage</li> <li>6. Reference Approach</li> </ol>
3 - Industrial Processes and Product Use	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Mineral Industry Emissions</li> <li>3. Chemical Industry Emissions</li> <li>4. Metal Industry Emissions</li> <li>5. Non-Energy Products from Fuels and Solvent Use</li> <li>6. Electronics Industry Emissions</li> <li>7. Emissions of Fluorinated Substitutes for Ozone Depleting Substances</li> <li>8. Other Product Manufacture and Use</li> </ol>
4 - Agriculture, Forestry and Other Land Use	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Generic Methodologies Applicable to Multiple Land-use Categories</li> <li>3. Consistent Representation of Lands</li> <li>4. Forest land</li> <li>5. Cropland</li> <li>6. Grassland</li> <li>7. Wetlands</li> <li>8. Settlements</li> <li>9. Other land</li> <li>10. Emissions from Livestock and Manure Management</li> <li>11. N<sub>2</sub>O Emissions from Managed Soils, and CO<sub>2</sub> Emissions from Lime and Urea Application</li> <li>12. Harvested Wood Products</li> </ol>
5 - Waste	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Waste Generation, Composition and Management Data</li> <li>3. Solid Waste Disposal</li> <li>4. Biological Treatment of Solid Waste</li> <li>5. Incineration and Open Burning of Waste</li> <li>6. Wastewater Treatment and Discharge</li> </ol>

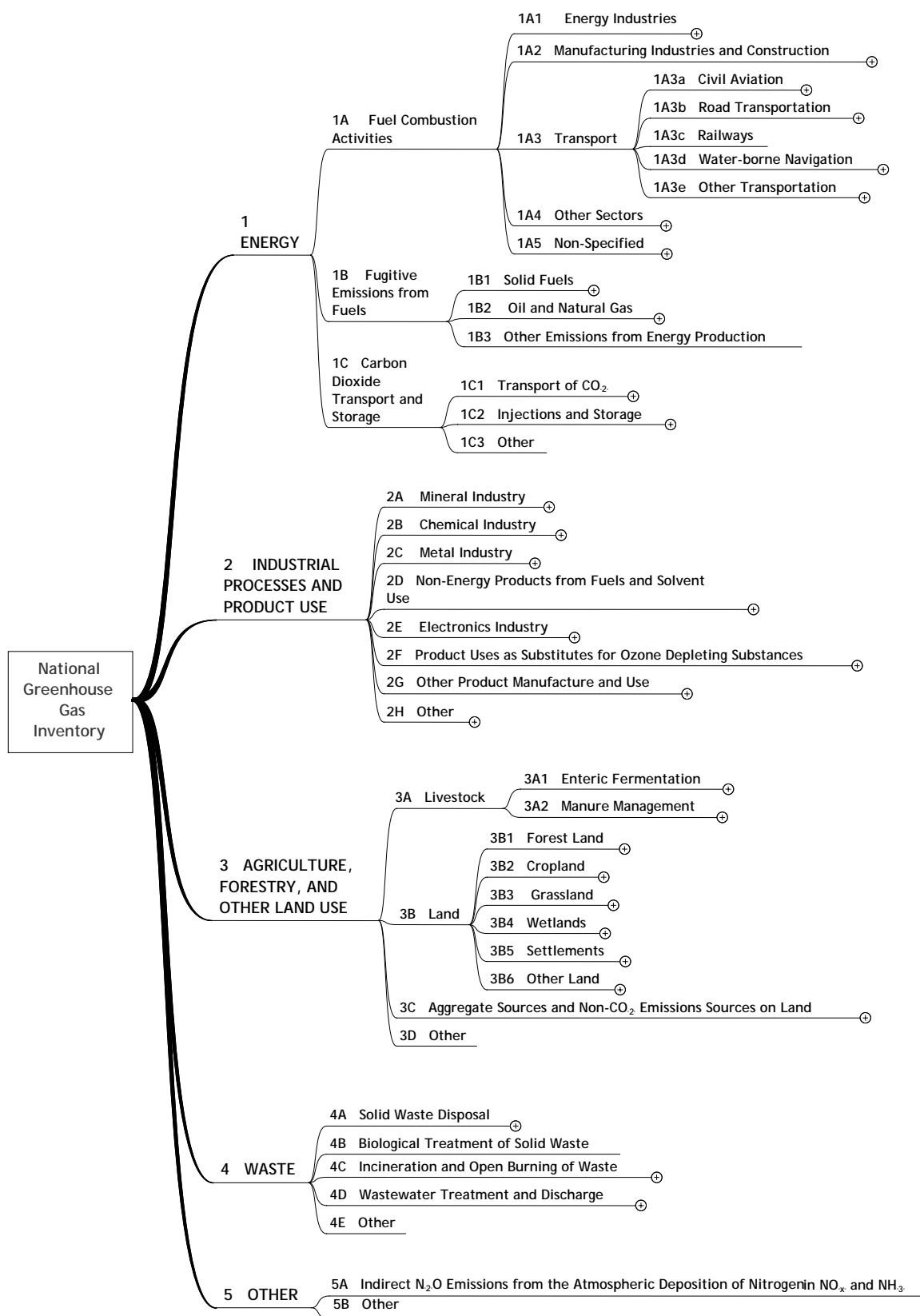
Volume 3 of the *IPCC 2006 Guidelines* also provides estimation methods and/or emission factors for some direct greenhouse gases not covered by the Montreal Protocol for which GWP values were *not* available from the IPCC at the time of writing (Table 3). These gases are sometimes used as substitutes for gases included in Table 2, for industrial and product applications. Until GWP values are made available from the IPCC, countries will be

<sup>7</sup>. Climate Change 2001: The Scientific Basis Contribution of Working Group I to the Third Assessment Report of the IPCC, (TAR), (ISBN 0521 80767 6), Section 6.12.2, Direct GWPs.

Subject to Final Copyedit

unable to incorporate these gases in key category analysis (see Section 3 below) or include them in national total GWP weighted emissions. However, optionally, countries may wish to provide estimates of these greenhouse gases in mass units, using the methods provided in the *IPCC 2006 Guidelines*. Reporting tables are provided for this purpose.

**Figure 1 Main categories of emissions by sources and removals by sinks**



<b>TABLE 2</b> <b>GASES FOR WHICH GWP VALUES ARE AVAILABLE IN THE TAR<sup>8</sup></b>	
<b>Name</b>	<b>Symbol</b>
Carbon Dioxide	CO <sub>2</sub>
Methane	CH <sub>4</sub>
Nitrous Oxide	N <sub>2</sub> O
Hydrofluorocarbons	HFCs (e.g., HFC-23 (CHF <sub>3</sub> ), HFC-134a (CH <sub>2</sub> FCF <sub>3</sub> ), HFC-152a (CH <sub>3</sub> CHF <sub>2</sub> ))
Perfluorocarbons	PFCs (CF <sub>4</sub> , C <sub>2</sub> F <sub>6</sub> , C <sub>3</sub> F <sub>8</sub> , C <sub>4</sub> F <sub>10</sub> , c-C <sub>4</sub> F <sub>8</sub> , C <sub>5</sub> F <sub>12</sub> , C <sub>6</sub> F <sub>14</sub> )
Sulphur Hexafluoride	SF <sub>6</sub>
Nitrogen Trifluoride	NF <sub>3</sub>
Trifluoromethyl Sulphur Pentafluoride	SF <sub>5</sub> CF <sub>3</sub>
Halogenated Ethers	e.g., C <sub>4</sub> F <sub>9</sub> OC <sub>2</sub> H <sub>5</sub> , CHF <sub>2</sub> OCF <sub>2</sub> OC <sub>2</sub> F <sub>4</sub> OCHF <sub>2</sub> , CHF <sub>2</sub> OCF <sub>2</sub> OCHF <sub>2</sub>
Other halocarbons	e.g. CF <sub>3</sub> I, CH <sub>2</sub> Br <sub>2</sub> , CHCl <sub>3</sub> , CH <sub>3</sub> Cl, CH <sub>2</sub> Cl <sub>2</sub> <sup>9</sup>

<b>TABLE 3</b> <b>ADDITIONAL GASES FOR WHICH GWP VALUES ARE NOT AVAILABLE IN THE TAR</b>	
C <sub>3</sub> F <sub>7</sub> C(O)C <sub>2</sub> F <sub>5</sub> <sup>10</sup>	
C <sub>7</sub> F <sub>16</sub>	
C <sub>4</sub> F <sub>6</sub>	
C <sub>5</sub> F <sub>8</sub>	
c-C <sub>4</sub> F <sub>8</sub> O	

The *IPCC 2006 Guidelines* contain links to information on methods used under other agreements and conventions<sup>11</sup>, for the estimation of emissions of tropospheric precursors which may be used to supplement the reporting of emissions and removals of greenhouse gases for which methods are provided here.

### 3 APPROACH TO DEVELOPING THE GUIDELINES

The *IPCC 2006 Guidelines* are an evolutionary development starting from the *IPCC 1996 Guidelines*, *GPG2000* and *GPG-LULUCF*. A fundamental shift in methodological approach would pose difficulties with time series consistency in emissions and removals estimation, and incur additional costs, since countries and the international community have made significant investments in inventory systems. An evolutionary approach helps ensure continuity, and allows for the incorporation of experiences with the existing guidelines, new scientific information, and the results of the UNFCCC review process. The most significant changes occur in Volume 4, which consolidates the approach to Land Use, Land-Use Change and Forestry (LULUCF) in *GPG-LULUCF* and the Agriculture sector in *GPG2000* into a single Agriculture, Forestry and Other Land Use (AFOLU) volume. This, and other important developments and changes, are summarised in Section 5 below.

<sup>8</sup> Third Assessment Report of the IPCC. See also footnote 7.

<sup>9</sup> For these gases, emissions can be estimated following the methods described in Section 3.10.2 of Volume 3 if necessary data are available, and then reported under sub-category 2B10 "Other".

<sup>10</sup> This gas is traded as Novec™612 which is a fluorinated ketone produced by 3M (Milbrath, 2002).

<sup>11</sup> See, for example, Volume 1 Sections 7.1 and 7.2, where inventory developers are referred to the material developed by the Task Force on Emission Inventories and Projections of the UNECE's Convention on Long-Range Transboundary Air Pollution for the purpose of estimating emissions of sulphur dioxide (SO<sub>2</sub>); carbon monoxide (CO); oxides of nitrogen (NO<sub>x</sub>); ammonia (NH<sub>3</sub>) and non-methane volatile organic compounds (NMVOCs).

Subject to Final Copyedit

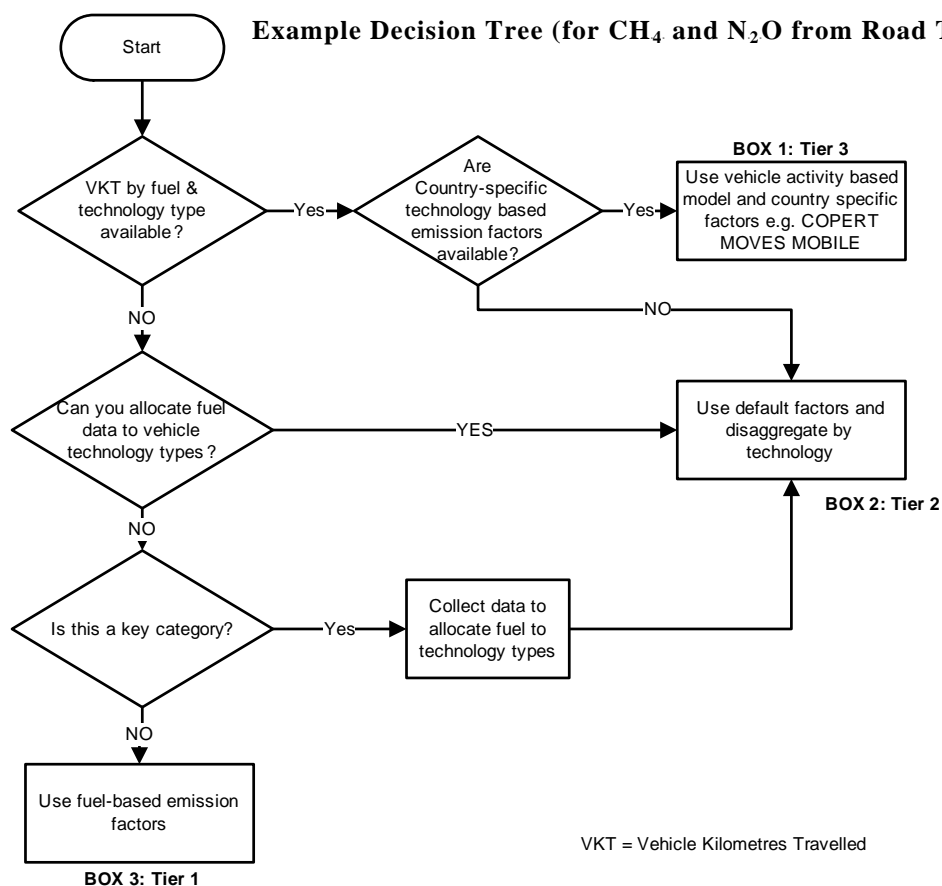
The *IPCC 2006 Guidelines* retain the definition of *good practice* that was introduced with *GPG2000*. This definition has gained general acceptance amongst countries as the basis for inventory development. According to this definition, national inventories of anthropogenic greenhouse gas emissions and removals consistent with *good practice* are those, which *contain neither over- nor under-estimates so far as can be judged, and in which uncertainties are reduced as far as practicable*.

These requirements are intended to ensure that estimates of emissions by sources and removals by sinks, even if uncertain, are *bona fide* estimates, in the sense of not containing any biases that could have been identified and eliminated, and that uncertainties have been reduced as far as practicable, given national circumstances. Estimates of this type are presumably the best attainable, given current scientific knowledge and available resources.

The *IPCC 2006 Guidelines* generally provide advice on estimation methods at three levels of detail, from tier 1 (the default method) to tier 3 (the most detailed method). The advice consists of mathematical specification of the methods, information on emission factors or other parameters to use in generating the estimates, and sources of activity data to estimate the overall level of net emissions (emission by sources minus removals by sinks). Properly implemented, all tiers are intended to provide unbiased estimates, and accuracy and precision should, in general, improve from tier 1 to tier 3. The provision of different tiers enables inventory compilers to use methods consistent with their resources and to focus their efforts on those categories of emissions and removals that contribute most significantly to national emission totals and trends.

The *IPCC 2006 Guidelines* apply the tiered approach by means of *decision trees* (see the example in Figure 2). A decision tree guides selection of the tier to use for estimating the category under consideration, given national circumstances. National circumstances include the availability of required data, and contribution made by the category to total national emissions and removals and to their trend over time. The most important categories, in terms of total national emissions and the trend, are called *key categories*.<sup>12</sup> Decision trees generally require tier 2 or tier 3 methods for *key categories*. The *IPCC 2006 Guidelines* provide for exceptions to this, where evidence demonstrates that the expense of data collection would significantly jeopardize the resources available for estimating other *key categories*.

**Figure 2** Example Decision Tree (for CH<sub>4</sub> and N<sub>2</sub>O from Road Transport)



<sup>12</sup> In the *GPG2000* and *GPG-LULUCF* these were called *key sources*, or *key categories* where there could be removals.

The *IPCC 2006 Guidelines* also provide advice on; i) ensuring data collection is representative and time series are consistent, ii) estimation of uncertainties at the category level, and for the inventory as a whole, iii) guidance on quality assurance and quality control procedures to provide cross-checks during inventory compilation, and iv) information to be documented, archived and reported to facilitate review and assessment of inventory estimates. Reporting tables and worksheets for tier 1 methods are provided. The use of tiered methodologies and decision trees and the cross cutting advice ensure that the finite resources available for inventory development and updating are deployed most effectively, and that the inventory is checked and reported in a transparent manner.

## 4 STRUCTURE OF THE GUIDELINES

The structure of the *IPCC 2006 Guidelines* improves upon the structure of the *IPCC 1996 Guidelines*, *GPG2000* and *GPG-LULUCF* in two respects.

*Firstly*, whereas a user of the *IPCC 1996 Guidelines*, *GPG2000* and *GPG-LULUCF* may need to cross reference between four or five volumes.<sup>13</sup> to make an emission or removal estimate, the *IPCC 2006 Guidelines* may require cross referencing between two volumes: Volume 1 (General Guidance and Reporting), and the relevant sectoral volume (one of Volume 2 (Energy), Volume 3 (Industrial Processes and Product Use), Volume 4 (Agriculture, Forestry and Other Land Use), and Volume 5 (Waste)). This represents a considerable simplification.

*Secondly*, the *IPCC 2006 Guidelines* present Agriculture, Forestry and Other Land Use in a single volume, rather than two volumes comprising Agriculture, on the one hand, and Land-use Change and Forestry on the other. This allows for better integration of information on the pattern of land use and should facilitate more consistent use of activity data (for example, fertilizer application), that affects both agriculture and other land uses, thus reducing or avoiding the possibilities for double counting or omission.

The *IPCC 2006 Guidelines* retain the standardised layout of methodological advice at the category level that was introduced in *GPG2000* and was maintained in *GPG-LULUCF*. Table 4 shows the general structure used for each category. Any user familiar with *GPG2000* and *GPG-LULUCF* should be able to shift to the *IPCC 2006 Guidelines* without difficulty.

The previous IPCC inventory guidance has been reviewed and, where needed, clarified and expanded to improve its user friendliness. Across all the volumes, some additional categories have been identified and included. The guidance focuses on inventory methodologies rather than on scientific discussions of the background material, for which references are provided.

<b>TABLE 4</b>	
<b>GENERAL STRUCTURE OF SECTORAL GUIDANCE CHAPTERS</b>	
•	Methodological Issues <ul style="list-style-type: none"> <li>○ Choice of Method, including decision trees and definition of tiers.</li> <li>○ Choice of Emission Factor</li> <li>○ Choice of Activity Data</li> <li>○ Completeness</li> <li>○ Developing a Consistent Time Series</li> </ul>
•	Uncertainty Assessment <ul style="list-style-type: none"> <li>○ Emission Factor Uncertainties</li> <li>○ Activity Data Uncertainties</li> </ul>
•	Quality Assurance/Quality Control, Reporting and Documentation
•	Worksheets

<sup>13</sup> That is, three volumes of the *IPCC 1996 Guidelines* plus at least one of *GPG2000* or *GPG-LULUCF*.

## 5 SPECIFIC DEVELOPMENTS IN THE IPCC 2006 GUIDELINES

The *IPCC 2006 Guidelines* are based on a thorough scientific review and a structural enhancement of the IPCC's inventory methodology across all categories, including the following specific developments:

### ***Volume 1 (General Guidance and Reporting)***

- *Introductory advice:* A new section has been included, providing for an overview of greenhouse gas inventories and the steps needed to prepare an inventory for the first time.
- *Extended advice on data collection:* The *IPCC 2006 Guidelines* introduce systematic cross-cutting advice on data collection from existing sources and by new activities, including design of measurement programmes.
- *Key category analysis:* General principles and guidance are provided. In the *IPCC 2006 Guidelines*, the integration of Agriculture and LULUCF into the AFOLU volume has been addressed, and key category analysis is better integrated across emission and removal categories.

### ***Volume 2 (Energy)***

- *Treatment of CO<sub>2</sub> capture and storage:* These emissions are covered comprehensively, including fugitive losses from CO<sub>2</sub> capture and transport stages (which are estimated using conventional inventory approaches) plus any losses from carbon dioxide stored underground (estimated by a combination of modelling and measurement techniques, given the amounts injected - which would also be monitored for management purposes). The inventory methods reflect the estimated actual emissions in the year in which they occur. The inventory methods for geological CO<sub>2</sub> capture, transport and storage (CCS) provided in Volume 2 are consistent with the IPCC Special Report on Carbon Dioxide Capture and Storage (2005). Amounts of CO<sub>2</sub> captured from combustion of biofuel, and subsequently injected into underground storage are included in the inventory as a negative emission. No distinction is made between any subsequent leakage of this CO<sub>2</sub> and that of CO<sub>2</sub> from fossil sources.
- *Methane from abandoned coal mines:* A methodology for estimating these emissions is included in the *IPCC 2006 Guidelines* for the first time.

### ***Volume 3 (Industrial Processes and Product Use)***

- *New categories and new gases:* The *2006 Guidelines* have been expanded to include more manufacturing sectors and product uses identified as sources of greenhouse gases. These include production of lead, zinc, titanium dioxide, petrochemicals, and liquid crystal display (LCD) manufacturing. Additional greenhouse gases identified in the IPCC Third Assessment Report are also included where anthropogenic sources have been identified. These gases include nitrogen trifluoride (NF<sub>3</sub>), trifluoromethyl sulphur pentafluoride (SF<sub>5</sub>CF<sub>3</sub>), and halogenated ethers.
- *Non-Energy Uses of Fossil Fuels:* Guidance on demarcation with the energy sector has been improved, and emissions from non-energy uses of fossil fuels are now reported under Industrial Processes and Product Use, rather than in Energy. A method has been introduced for checking the completeness of carbon dioxide emission estimates from the non-energy uses.
- *Actual emissions of fluorinated compounds:* The potential emissions approach used as a tier 1 method in the *IPCC 1996 Guidelines* is no longer considered appropriate, as it does not provide estimates of true emissions, and is not compatible with higher tiers. The Tier 1 methods proposed in this volume are therefore actual emission estimation methods, although these are often based on default activity data where better data are not available. Simplified mass balance approaches have also been proposed in appropriate sectors, such as refrigeration.

### ***Volume 4 (Agriculture, Forestry and Other Land Use)***

- *Integration between agriculture and land use, land-use change and forestry:* This integration removes the somewhat arbitrary distinction between these categories in the previous guidance, and promotes consistent use of data between them, especially for more detailed methods.
- *Managed land is used in these guidelines as a proxy for identifying anthropogenic emissions by sources and removals by sinks.* In most AFOLU sectors anthropogenic GHG emissions by source and removals by sinks are defined as those occurring on *managed land*. The use of managed land as a proxy for anthropogenic effects was adopted in the *GPG-LULUCF*. The preponderance of anthropogenic effects occurs on managed



lands and, from a practical standpoint, the information needed for inventory estimation is largely confined to managed lands.

- *Consolidation of previously optional categories:* Emissions by sources and removals by sinks associated with all fires on managed land are now estimated, removing the previous optional distinction between wildfires and prescribed burning. This is consistent with the concept of managed land as a proxy for identifying anthropogenic emissions by sources and removals by sinks, as discussed above. Wildfires and other disturbances on unmanaged land cannot, in general, be associated to an anthropogenic or natural cause, and hence are not included in the *IPCC 2006 Guidelines*, unless the disturbance is followed by a land-use change. In this case, the land affected by disturbance is considered to be managed, and all the greenhouse gas emissions by sources and removals by sinks associated to the fire and other events are now estimated, irrespective of whether of a natural origin or not. Carbon dioxide emissions and removals associated with terrestrial carbon stocks in settlements and managed wetlands, which were previously optional, have been incorporated into the main guidance.
- *Harvested wood products (HWP):* The *IPCC 2006 Guidelines* provide detailed methods that can be used to include HWP in greenhouse gas inventories using any of the approaches that are currently under discussion within the UNFCCC process.
- *Emissions from managed wetlands:* The *IPCC 2006 Guidelines* now contain methods to estimate CO<sub>2</sub> emissions due to land use change in wetlands. However, due to limited availability of scientific information, methods for CH<sub>4</sub> emissions are contained in an Appendix – Basis for future methodological development.

### **Volume 5 (Waste)**

- *Revised methodology for methane from landfills:* The previous Tier 1 method, based on the maximum potential release of methane in the year of placement, has been replaced by a simple first order decay model that provides the option to use data available from the UN and other sources. This approach includes regional and country-specific defaults on waste generation, composition and management, and provides a consistent basis for estimating greenhouse gas emissions across all tiers. This gives a more accurate time series for estimated emissions and should avoid the situation in which usage of landfill gas apparently exceeds the amount generated in a particular year.
- *Carbon accumulation in landfills:* This is provided as an output from the decay models, and can be relevant for the estimation of HWP in AFOLU.
- *Biological treatment and open burning of waste:* Guidance on estimation of emissions from composting and biogas facilities has been included to ensure a more complete coverage of sources.

### **Relevant to all volumes**

- *CO<sub>2</sub> resulting from the emissions of other gases:* The *IPCC 2006 Guidelines* estimate carbon emissions in terms of the species which are emitted. Most of the carbon emitted as these non-CO<sub>2</sub> species eventually oxidises to CO<sub>2</sub> in the atmosphere; and this amount can be estimated from the emissions estimates of the non-CO<sub>2</sub> gases. In some cases the emissions of these non-CO<sub>2</sub> gases contain very small amounts of carbon compared to the CO<sub>2</sub> estimate and it may be more accurate to base the CO<sub>2</sub> estimate on the total carbon. See Volume 1 Section 7.2.1.5 for an approach to estimating these inputs of CO<sub>2</sub> to the atmosphere. Examples are fossil fuel combustion (where the emission factor is derived from the carbon content of the fuel) and a few IPPU sectors where the carbon mass balance can be estimated much better than individual gases.
- *Treatment of nitrogen (N) deposition:* The *GPG2000* lists sources of anthropogenic nitrogen deposition that subsequently give rise to anthropogenic emissions of nitrous oxide (N<sub>2</sub>O), but provides estimation methods only for a subset of these, associated with agricultural sources of ammonia (NH<sub>3</sub>) and nitrogen oxides (NO<sub>x</sub>). The *IPCC 2006 Guidelines* extend this approach to all significant sources of N deposition, including agriculture, industrial and combustion sources, with the ultimate N<sub>2</sub>O emission attributed to the country responsible for the nitrogen originally emitted.
- *Relationship to entity- or project level estimates:* The Guidelines are intended to help prepare national inventories of emissions by sources and removals by sinks. Nonetheless, the Guidelines can also be relevant for estimating actual emissions or removals at the entity or project level.



WMO

# INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

NATIONAL GREENHOUSE GAS INVENTORIES PROGRAMME



UNEP

**Annex 3b**

## **2006 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES**

**Pre-Publication Draft – Subject to Final Copy-Edit**

**Accepted by the Twenty-Fifth Session of the IPCC,  
Port Louis, Mauritius, 26-28 April 2006**

**The 2006 IPCC Guidelines can be accessed at:**

**<http://www.ipcc-nggip.iges.or.jp/public/2006gl/ppd.htm>**

**FURTHER WORK OF THE IPCC ON EMISSION SCENARIOS**  
**Decision by the Panel at its 25<sup>th</sup> Session, 26-28 April 2006**

- 1) The Panel recalls that it expressed at its 24<sup>th</sup> Session the need for new emission scenarios, to be available well before completion of a possible AR5. It noted with great appreciation the report of the Task Group on New Emission Scenarios, contained in IPCC-XXV/Doc.11. The Panel recognized that the development of scenarios for AR5 would be undertaken by the scientific community. The IPCC may catalyze such work so as to promote its readiness in time for the AR5 cycle.
- 2) The IPCC Chair, assisted by the Working Group Co-Chairs, will prepare a scoping document for an IPCC Technical Paper for consideration by the Panel at its Session in May 2007. The function of this Technical Paper would be to summarize relevant material from the AR4 and to identify, on the basis of the technical information provided, a small number of “benchmark” emission scenarios for potential use by climate modeling groups. The Technical Paper will not assess application of the emission scenarios. These scenarios will take into account the proposal put forward in document IPCC-XXV/ INF. 6 and the relevant consideration of the issue in IPCC-XXV/Doc.11. It will also take into account, as appropriate and to the extent possible, the needs from the impact and adaptation research community. This Technical Paper should be completed within the term of the present IPCC Bureau. The TP should contain one or more scenarios used in past assessments to enable comparisons between assessments.
- 3) The Panel requests the Chair of IPCC to form a steering committee to organize an IPCC meeting as described in the next paragraph. This steering committee should include members of the TGICA, the former Task Group on New Emission Scenarios, and the co-chairs of the 3 Working Groups or their representatives.
- 4) The meeting would consider:
  - a) The desirable and feasible characteristics of emissions scenarios including those characteristics listed below,
  - b) Information exchange on plans for developing scenarios and coordinating activities among the scientific community,
  - c) The enhancement of developing country/EIT involvement in scenario development,
  - d) Relevant issues for the future assessment of scenarios.

This meeting should build on the conclusions of the report of the Workshop on New Emission scenarios (Laxenburg, 2005<sup>1</sup>), and the report of the Task Group contained in IPCC-XXV/Doc. 11. The Panel believes it is desirable that the following elements be addressed in the development of new scenarios:

- o Consistency between scenarios used for studying climate change, climate change impacts and adaptation and mitigation,

---

<sup>1</sup> see [www.ipcc-wg3.org](http://www.ipcc-wg3.org)

- Comparability of scenarios by using comparable definitions and assumptions (the content of the definitions and assumptions should be entirely defined by the scientific community itself),
- Transparency and openness of the development process,
- Substantive involvement of experts from developing countries and economies in transition in the scenario development process.

All relevant subject expertise and disciplines would be included in this meeting: experts from relevant modeling and scenario development groups, representatives from organizations such as the Earth System Science Partnership<sup>2</sup> and experts from the user community including IPCC members.

The meeting should also include representatives of organizations from e.g., the World Bank, FAO, OECD, IEA, WMO and UNEP to exchange information and report on experiences and results in particular of scenario activities that will be finalized by these organizations in the near future and their possible future involvement in scenario development. The meeting should be held as soon as possible following the completion of the contributions of the 3 Working Groups to the AR4 in 2007.

- 5) The IPCC recognized the importance of coordination among and by the scenario development groups in providing scenarios to be used by the research community for studies that would be assessed in the AR5. In preparation for the meeting described in paragraph 4), the Chair of IPCC is requested to write a letter to the groups involved in the development of scenarios inviting them to provide information on their plans and activities relevant to the issues set out in paragraph 4, and on any efforts to coordinate scenario development activities.

The Panel requests the Chair to emphasize the importance of involving developing country and EIT experts in the development of such scenarios. This letter should be written at least a year before the meeting described under paragraph 4 in order to enable the scientific community to timely prepare itself for this meeting.

---

<sup>2</sup> These include WCRP, IGBP, IHDP and Diversitas

**RULES OF PROCEDURES FOR THE ELECTION OF THE IPCC BUREAU AND ANY TASK FORCE BUREAU**

**Adopted by the Panel at its 25<sup>th</sup> Session, 26-28 April 2006**

**I. Scope**

**Rule 1**

These rules of procedures shall apply to any elections of the Intergovernmental Panel on Climate Change Bureau and any Task Force Bureau constituted by the Panel.

**II. Definitions**

**Rule 2**

For the purposes of these rules:

1. "Bureau Member" or "Member of Bureau" refers to any person that holds one of the posts in the IPCC Bureau.
2. "Delegate" means a member of a delegation of a Member of the IPCC.
3. "IPCC Bureau" refers to the body of elected members of the Bureau of the IPCC Bureau as given in Annex B Section I.
4. "Meeting" means a single sitting at a Session of the IPCC.
5. "Members of the IPCC" are countries, which are Members of the World Meteorological Organization and/or the United Nations Environment Programme.
6. "Principal delegate" means Head of the delegation of a Member of the IPCC.
7. "Region" means the geographical limits of the six WMO regions as indicated in Annex A.
8. "Rules of Procedures" means these Rules of Procedures for the Election of the IPCC Bureau and any Task Force Bureau, including any annexes.
9. "Secretariat" means the permanent IPCC Secretariat established by WMO and UNEP.
10. "Session" refers to a series of meetings at the plenary level of the governmental representatives to the IPCC.
11. "Task Force" means an open-ended subsidiary body constituted by the Panel with a clearly defined and approved mandate and work plan as established by the Panel.
12. "Task Force Bureau" refers to the elected members of the Bureau of a Task Force.
13. "Term of the IPCC Bureau" means the fixed period of time during which Bureau members serve in their appropriate capacities. This term will be decided by the Panel as described in Rule 8.
14. "Votes" and "Votes for and against" means affirmative and negative votes only and shall not include abstentions or blank or invalid voting slips.

### **III. Representation and Credentials**

#### **Rule 3**

Each Member of the IPCC participating in a Session of the Panel shall be represented by a delegation consisting of a principal delegate and such other delegates as it may require.

#### **Rule 4**

The credentials of delegates shall be submitted to the Secretariat prior to a Session at which elections will take place. Any later change in the composition of the delegation shall also be submitted to the Secretariat. The credentials shall be signed by, or on behalf of, an appropriate government authority of the Member of the IPCC and shall be regarded as appropriate credentials for the participation of the individuals named therein in all activity of the Session.

#### **Rule 5**

The Panel will establish a Credentials Committee immediately after the completion of the opening formalities and for the duration of the Session in which elections are being held. A representative of the Secretariat at the Session shall attend the Credentials Committee with a consultative status. This Committee shall examine the credentials of delegates, which are to be submitted to it by the Secretariat, of delegates. It shall report thereon as soon as possible to the Panel, starting with the first meeting after the opening. Final decisions regarding credentials shall rest with the Panel.

#### **Rule 6**

Delegates shall be entitled to participate provisionally in a Session, pending a decision by the Panel to accept their credentials. Delegates admitted on a provisional basis are not entitled to vote.

### **IV. Composition**

#### **Rule 7**

The size, structure and composition of the IPCC Bureau and any Task Force Bureau will be reviewed and amended, as necessary, by the Panel at least one IPCC Session prior to the Session, at which the IPCC Bureau or any Task Force Bureau are elected. The overall composition of the IPCC Bureau, the IPCC Working Group Bureaux and the Bureaux of any Task Forces of the IPCC shall reflect balanced geographic representation with due consideration for scientific and technical requirements, as provided for in paragraph 5 of the IPCC Principles. The IPCC Bureau and Task Force Bureau are described in Annex B, Sections I and II, respectively, of these Rules of Procedure. Annex B will be amended in line with decisions taken by the Panel.

### **V. Terms of Appointment**

#### **Rule 8**

The IPCC Bureau shall be elected for the Term of the IPCC Bureau. The Term of the Bureau shall be sufficient for the preparation of an Assessment Report and shall extend approximately one year after the Session at which the Assessment Report has been accepted and shall end at the Session at which the succeeding IPCC Bureau is elected. The Term of the IPCC Bureau shall be defined at least one Session prior to the one at which the IPCC Bureau is elected. The Term of any Task Force Bureau shall normally be the same as the Term of the IPCC Bureau, and elections for any Task Force Bureau shall take place at the same Session at which the IPCC Bureau is elected, unless decided otherwise by the Panel.

### **Rule 9**

The term of office of each Bureau or Task Force Bureau member shall normally be equal to the Term of the IPCC Bureau or the Term of any Task Force Bureau to which the member has been elected, and shall start at the end of the Session at which he/she is elected and shall end at the close of the Session at which their successors are elected.

### **Rule 10**

Members of the IPCC Bureau and of any Task Force Bureau shall be eligible for re-election for a second consecutive term in the same office. Only those members that have served in an office under the provisions of Rules 11 and 12 for less than 2 years, shall be eligible for re-election for further two consecutive terms in the same office.

### **Rule 11**

If the IPCC Chair resigns or is otherwise unable to complete the assigned term of office or to perform the functions of that office, a new IPCC Chair shall be elected at the next IPCC Session to serve the remainder of the term of office of the departing IPCC Chair. Until a new IPCC Chair is elected an IPCC Vice-Chair, as agreed by the IPCC Bureau, shall serve as the Acting IPCC Chair

### **Rule 12**

If a member of the IPCC Bureau or any Task Force Bureau, other than the IPCC Chair, resigns or is otherwise unable to complete the assigned term of office or to perform the functions of that office, a representative of the same Member of the IPCC, with relevant expertise, is to be nominated by that Member of the IPCC. This person shall replace the Bureau member as acting member until the next Session of the Panel. An acting member is to be elected by the Plenary by simple majority as member of the Bureau for the remainder of the Term of the Bureau. If the relevant Member of the IPCC is unable to or fails to nominate a replacement within six months of notification by the IPCC Secretariat, or if an acting member is not elected by the Panel a new member from the same Region shall be elected by simple majority at the next IPCC session to serve the remainder of the term of office of the departing member. Rule 18 shall apply.

## **VI. Elections – general principles**

### **Rule 13**

Elections for all positions shall be held at a single Session of the Panel. If the person chairing the meeting is a candidate for a position for which elections are to be conducted, he/she shall recuse himself/herself from chairing that portion of the meeting during which the election is considered and conducted, in which case the IPCC Bureau will select a temporary Chair, who will be the Presiding Officer for the election.

### **Rule 14**

The IPCC Chair and other IPCC Bureau members will be elected by the Panel in the following order:

- a) the IPCC Chair;
- b) the Co-Chairs of the Working Groups and of any Task Force Bureau ;
- c) the IPCC Vice-Chairs;
- d) remaining IPCC Bureau positions.

### **Rule 15**

Election of any Task Force Bureau shall normally be undertaken at the same Session as elections for the IPCC Bureau unless the Panel has decided otherwise. Task Force Bureau members shall be elected after all members of the IPCC Bureau are elected.

## **Rule 16**

All elections shall be held by secret ballot, unless otherwise decided by the Panel at the Session. Candidates may be declared elected without a ballot if the Panel so decides.

## **Rule 17**

Each delegation of a Member of the IPCC represented in the Panel Session shall have one vote. The Principal Delegate of a Member of the IPCC shall have the right to vote or to designate any other member of the same delegation to vote on his/her behalf.

## **VII. Nominations**

### **Rule 18**

Nominations for the position of the IPCC Chair, the IPCC Bureau and any Task Force Bureau are to be made by the government of a Member of the IPCC.

### **Rule 19**

All nominees for election to the IPCC Bureau or any Task Force Bureau shall have relevant scientific, technological or socio-economic expertise. Curriculum vitae of all nominees shall be submitted to the Secretariat and made available to Members of the IPCC before the elections.

### **Rule 20**

(a) The Secretary of the IPCC shall invite Members of the IPCC to submit to the IPCC Secretariat written nominations and accompanying curriculum vitae of nominees for the IPCC Chair six months or more before the scheduled election of the IPCC Chair, unless Rule 11 applies.

(b) The Secretary of the IPCC shall invite Members of the IPCC to submit to the IPCC Secretariat written proposals and accompanying curriculum vitae of nominees for relevant IPCC Bureau (other than the IPCC Chair) or any Task Force Bureau positions six months or more before the scheduled election of the IPCC Bureau (other than the IPCC Chair) or a Task Force Bureau.

(c) Members of the IPCC wishing to make a nomination shall submit in writing to the IPCC Secretariat between the date of the invitation from the Secretary of the IPCC up until one month before a scheduled election, the names of the nominees that it is nominating or proposing pursuant to paragraphs (a) or (b), above. The IPCC Secretariat shall make a reasonable effort to post the names of persons so nominated or proposed, as well as the identity of the Members making the nomination or proposal, on the IPCC's web site in a time frame that will facilitate consideration of such persons by Members of the IPCC.

(d) Members of the IPCC may also nominate a person for the IPCC Chair, the IPCC Bureau or the Task Force Bureau by making oral representations to the Panel at the IPCC Session at which an election is to be held. Individuals so nominated must provide a curriculum vitae for distribution to the Panel at the time of nomination

### **Rule 21**

If the Panel decides at a Session when an election is being held to establish a Nominations Committee for the duration of the Session, each Region shall nominate two representatives to serve on the Committee. The Committee members shall choose a developed and developing country co-chair from among their members. The Nomination Committee shall prepare and submit to the Session a list of Nominees for each office for which an election is to be held. Any nominee that has the support of a Member of the IPCC shall be included on the list of nominees. A representative of the Secretariat may be invited to attend the Nominations Committee with consultative status.



### **Rule 22**

Prior to each election for a position, or group of positions, a list of the candidates to be voted upon, shall be compiled by the Presiding Officer of the meeting. The list will comprise the nominations contained in the list of the Nominations Committee, if it was established. If not the list will comprise nominations received by the IPCC Secretariat from IPCC Members. The list shall include only the names of those persons who have stated that they are willing to be included among the candidates for election.

### **Rule 23**

Other nominees may be added to the list following any oral representations to the Panel made by any IPCC Member at the Session while the list of nominations remains open. The list of nominations shall remain open until the Presiding Officer formally announces that the election procedure has started.

### **Rule 24**

Where there is consensus support from a Region for the nominees proposed by that Region for Bureau positions, those nominees may be elected without ballots. If a regional consensus cannot be obtained, elections for these positions shall be held.

## **VIII. Elections – voting procedures**

### **Rule 25**

In all voting by secret ballot, two tellers selected from among the Delegates present shall be appointed by the Presiding Officer to count the votes. Before voting begins, the presiding officer of the meeting shall hand to the two tellers the list of Members of the IPCC present at the Session and the list of candidates, prepared in accordance with the provisions of Rule 22.

### **Rule 26**

The Secretariat shall distribute a voting slip to each delegation. Each voting slip shall be of the same size and colour without distinguishing marks.

### **Rule 27**

The tellers shall satisfy themselves and the delegations that the ballot box is empty and lock it.

### **Rule 28**

Members of the IPCC shall be called in turn to vote in alphabetical order. At the conclusion of the calling of the Members of the IPCC, the presiding officer of the meeting shall ensure that all the Members of the IPCC present have been called.

### **Rule 29**

After the ballot box has been opened the tellers shall immediately count the voting slips in the presence of the meeting. The voting slips shall be destroyed after the announcement of the results by the presiding officer and its acceptance by the meeting.

### **Rule 30**

A voting slip shall be invalid if it contains more names than the number of positions to be filled, or if it includes the name of any other person not appearing in the list of candidates as established by the Session in accordance with the provisions Rule 22.

### **Rule 31**

After completion of the elections, the number of votes for each candidate and the number of abstentions shall be recorded in the report of the Session.

### **Rule 32**

Candidates shall be elected by a simple majority of the votes cast. The simple majority shall be the next integer immediately above the half of the voting slips received, excluding abstentions and blank or invalid voting slips.

### **Rule 33**

The candidate who obtains a simple majority as described in Rule 32 shall be declared elected. If, in the first ballot, no candidate obtains a simple majority, a second ballot, which shall be restricted to the two candidates who obtained the highest numbers of votes in the first ballot, shall be held. However, if any other candidate has obtained the same number of votes in the first ballot as the second candidate, he/she shall also be included in the second ballot.

### **Rule 34**

If the number of candidates securing a simple majority exceeds the number of positions to be filled, those candidates who obtained the highest number of votes (to the extent of the number of positions to be filled) shall be declared elected.

### **Rule 35**

If the number of candidates who obtained a simple majority during the first ballot is less than the number of positions to be elected, those who obtained the simple majority shall be declared elected and a further ballot shall be held to fill the remaining positions.

### **Rule 36**

In the subsequent ballot, the list of candidates shall comprise those not previously elected who secured the highest number of votes in the previous ballot, but the number of candidates in the list shall not be greater than twice the number of positions to be filled. However, if in the previous ballot, any candidate has obtained the same number of votes as the last candidate in the list, he/she shall also be included in the list. The procedures applicable to the results of the first ballot shall be applied to those of the second ballot.

### **Rule 37**

Similar ballots shall be held as necessary until all positions on the IPCC Bureau and any Task Force Bureau have been filled.

### **Rule 38**

Whenever more than one ballot is necessary in the elections described in Rules 32,33, and 34 and where any of the ballots results in the attainment of a number of positions for a Region which is equal to the maximum under the provisions of the regional balance determined by the Panel, the names of all the remaining candidates from that Region shall be deleted from the list of candidates for the next ballot.

### **Rule 39**

If, in a ballot, a decision is not reached between two or more candidates because they have obtained the same number of votes, another ballot shall be held and, if no decision is reached in this new ballot, the decision between those candidates shall be made by drawing lots.

## **IX. Amendments and suspension**

### **Rule 40**

These Rules of Procedures or Annexes may be amended only by the Panel.

### **Rule 41**

Any amendments proposed to these Rules of Procedures submitted by Members of the IPCC or by the IPCC Bureau should be communicated to all Members of the IPCC at least eight weeks before they are submitted to the IPCC Session.

**IPCC MEMBERS GROUPED ACCORDING TO WMO REGIONS**

- Region I - Africa  
 Region II - Asia  
 Region III - South America  
 Region IV - North America, Central America and the Caribbean  
 Region V - South-West Pacific  
 Region VI - Europe

Members in a Region shall be deemed to be those having their seat of government (capital) within the Region.

**AFRICA (Region I)**  
 (53 Members)

Algeria	Libyan Arab Jamahiriya
Angola	Madagascar
Benin	Malawi
Botswana	Mali
Burkina Faso	Mauritania
Burundi	Mauritius
Cameroon	Morocco
Cape Verde	Mozambique
Central African Republic	Namibia
Chad	Niger
Comoros	Nigeria
Congo	Rwanda
Côte d'Ivoire	Sao Tome and Principe
Democratic Republic of the Congo	Senegal
Djibouti	Seychelles
Egypt	Sierra Leone
Equatorial Guinea	Somalia
Eritrea	South Africa
Ethiopia	Sudan
Gabon	Swaziland
Gambia	Togo
Ghana	Tunisia
Guinea	Uganda
Guinea Bissau	United Republic of Tanzania
Kenya	Zambia
Lesotho	Zimbabwe
Liberia	

**ASIA (Region II)**  
(32 Members)

Afghanistan	Mongolia
Bahrain	Myanmar
Bangladesh	Nepal
Bhutan	Oman
Cambodia	Pakistan
China	Qatar
Democratic People's Republic of Korea	Republic of Korea
India	Saudi Arabia
Iran, Islamic Republic of	Sri Lanka
Iraq	Tajikistan
Japan	Thailand
Kazakhstan	Turkmenistan
Kuwait	United Arab Emirates
Kyrgyzstan	Uzbekistan
Lao People's Democratic Republic	Vietnam
Maldives	Yemen

**SOUTH AMERICA (Region III)**  
(12 Members)

Argentina	Guyana
Bolivia	Paraguay
Brazil	Peru
Chile	Suriname
Colombia	Uruguay
Ecuador	Venezuela

**NORTH AMERICA, CENTRAL AMERICA AND THE CARIBBEAN (Region IV)**  
(23 Members)

Antigua and Barbuda	Haiti
Bahamas	Honduras
Barbados	Jamaica
Belize	Mexico
Canada	Nicaragua
Costa Rica	Panama
Cuba	Saint Kitts and Nevis
Dominica	Saint Lucia
Dominican Republic	Saint Vincent and the Grenadines
El Salvador	Trinidad and Tobago
Grenada	United States of America
Guatemala	

## **SOUTH-WEST PACIFIC (Region V)**

(22 Members)

Australia	Niue
Brunei Darussalam	Palau
Cook Islands	Papua New Guinea
Fiji	Philippines
Indonesia	Singapore
Kiribati	Samoa
Malaysia	Solomon Islands
Marshall Islands	Timor-Leste
Micronesia, Federated States of	Tonga
Nauru	Tuvalu
New Zealand	Vanuatu

## **EUROPE (Region VI)**

(51 Members)

Albania	Lebanon
Andorra	Liechtenstein
Armenia	Lithuania
Austria	Luxembourg
Azerbaijan	The former Yugoslav Republic of Macedonia
Belarus	Malta
Belgium	Monaco
Bosnia and Herzegovina	Netherlands
Bulgaria	Norway
Croatia	Poland
Cyprus	Portugal
Czech Republic	Republic of Moldova
Denmark	Romania
Estonia	Russian Federation
Finland	San Marino
France	Serbia and Montenegro
Georgia	Slovakia
Germany	Slovenia
Greece	Spain
Hungary	Sweden
Iceland	Switzerland
Ireland	Syrian Arab Republic
Israel	Turkey
Italy	Ukraine
Jordan	United Kingdom of Great Britain & Northern Ireland
Latvia	

**Composition of the IPCC Bureau and Task Force Bureau (as agreed April 2002)**

This annex will be amended in line with relevant decisions of the Panel.

**I. IPCC Bureau**

The IPCC Bureau is composed of 30 members.

It consists of:

1. the IPCC-Chair,
2. three Vice-Chairs with specific responsibilities,
3. two Co-chairs of the Task Force Bureau on National Greenhouse Gas Inventories,
4. three Working Group Bureaux, each with two Working Group Co-chairs and six Working Group Vice-chairs.

The current regional balance of the IPCC Bureau is as follows:

- Region I: 5
- Region II: 5
- Region III: 4
- Region IV: 4
- Region V: 3
- Region VI: 8

The IPCC Chair does not represent a region.

**II. Task Force Bureau**

The Task Force Bureau on National Greenhouse Gas Inventories is composed of 2 Co-chairs and 12 members, 2 each of which should be drawn from each WMO Region.

**IPCC POLICY AND PROCESS FOR ADMITTING OBSERVER ORGANIZATIONS**  
**Adopted by the Panel at its 25<sup>th</sup> Session, 26-28 April 2006**

**Admission policy for observer organizations**

The following policy for admitting observer organizations to Sessions of the IPCC and any of its Working Groups applies:

1. A body or an agency, whether national or international, governmental or non-governmental, which is qualified in matters covered by the Intergovernmental Panel on Climate Change (IPCC) and which has informed the IPCC Secretariat of its wish to be represented at Sessions of the IPCC and any of its Working Groups, may be so admitted subject to acceptance by the Panel.
2. In judging whether an organization is "qualified in matters covered by the Intergovernmental Panel on Climate Change" the Secretariat should be guided by the Principles Governing IPCC Work.
3. Organizations need to be non-profit organizations and are required to furnish proof of their nonprofit and/or tax-exempt status in a State Member of the United Nations, of one of its specialized agencies or of the International Atomic Energy Agency, or in a State Party to the International Court of Justice.
4. Bodies and organizations, which are part of the UN System, are considered participating organizations of the IPCC and are not requested to submit an application or other documentation.
5. Organizations, which already have observer status with WMO, UNEP or UNFCCC, are considered as observer of the IPCC if they request so, subject to acceptance by the Panel. They are not required to submit other documentation.
6. Applications from national organizations will be brought to the attention of the IPCC Focal Point of that IPCC Member. They need to provide evidence of independence from governments. Otherwise, they are encouraged to participate as part of their government delegations.
7. Only admitted observer organizations may designate representatives to attend Sessions of the IPCC and Sessions of a Working Group at plenary level. Observer organizations have to register their representatives for each Session in advance.
8. Being admitted as observer organization to Sessions of the Panel and of its Working Groups does not imply that the organization is admitted or invited to workshops, expert meetings and other closed meetings. During a Session of the Panel or a Working Group certain meetings may be closed to observers. Observer organizations are not admitted to any Session of the IPCC Bureau or Task Force Bureau.
9. Consistent with the IPCC procedures experts from "international, intergovernmental and non-governmental organizations may be invited in their own right to contribute to the work of the IPCC Working Groups and Task Forces."
10. Subject to availability of sufficient space in the conference room UN and other international and intergovernmental organizations will be provided with nameplates.

**Process of admitting observer organizations**

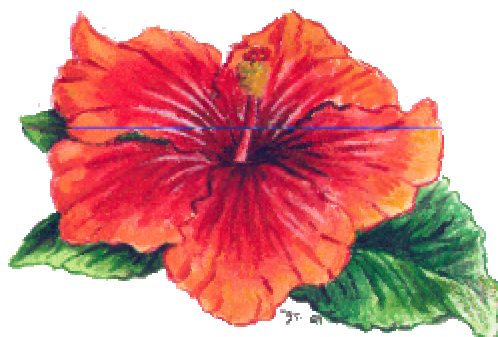
For admitting observer organizations the following process applies:

1. Organizations interested in being admitted as an observer to Sessions of the Panel and any of its Working Groups will be asked to send by post a letter of application with copies of
  - a) Documents describing the mandate, scope and governing structure of the organization, such as the charter/statutes/constitution/by-laws or articles of association.
  - b) Evidence of the non-profit and/or tax-exempt status of the organization.
  - c) Any other information that supports the competence of the organization in matters related to the IPCC.
  - d) Information on the affiliation with other non-governmental organizations or institutions involved in climate change activities as appropriate.
  - e) Completed form with contact information of the organization and of a designated focal point.
2. New requests for admission as an observer to Sessions of the IPCC and any of its Working Groups shall be submitted at least 4 months before a Session of the Panel or a Working Group.



3. Organizations, which are already on the list of observers of the IPCC Secretariat and which have received invitations to Sessions of the IPCC and any of its Working Groups in the past, will be asked whether they wish to continue to receive invitations to Sessions of the Panel and any of its Working Groups on a provisional basis until the Panel has taken a decision, and if so, they will be asked to submit documentation listed under item 1 above.
4. The Secretariat will bring all requests for admission as observer organization to the attention of Members of the Panel at least four weeks before a Session of the Panel or Working Group.
5. The Secretariat will screen the submissions and make a proposal to be considered by the IPCC Bureau.
6. The list of observer organizations as reviewed by the IPCC Bureau will be presented to the next Session of the Panel for acceptance.
7. An organization is admitted as observer organization by the Panel by consensus.
8. Any organization accepted as observer organization by the IPCC may retain that observer status only as long as they satisfy the conditions set out for observer organizations.
9. The Secretariat of the IPCC maintains information on observer organizations.
10. The Secretariat shall extend invitations to Sessions of the Panel and its Working Groups to accepted observer organizations. The IPCC shall not provide financial assistance to the observers for participating in the IPCC process.
11. Admission of observer organizations will be included as a regular agenda item of Sessions of the IPCC Bureau and the Panel at the discretion of the Chair. The IPCC Bureau and the Panel shall review the list of accepted observer organizations annually.
12. If the observer status has to be withdrawn for any reason, the Chair may suspend the observer status of that organization subject to ratification by the Panel.

## LIST OF PARTICIPANTS



### TWENTY-FIFTH SESSION OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

Port Louis, Mauritius, 26-28 April 2006

N.B.	(H) - Head of Delegation
	(B) - IPCC Bureau member

1. Rajendra K. PACHAURI B  
**Chairman of the IPCC**  
TERI, Darbari Seth Block  
Habitat Place, Lodhi Road  
New Delhi 110 003  
INDIA  
Tel: +91 11 2468 2121/2  
Fax: +91 11 2468 2144/5  
E-mail: pachauri@teri.res.in
2. Abdul Baqi AHMADZAI H  
National Environmental Protection Agency  
Darul Aman Road  
Kabul  
**AFGHANISTAN**  
Tel: +93 799 199 605  
Fax:  
E-mail: abaqi\_ahmadzai@yahoo.com
3. Ermira FIDA H  
Ministry of Environment  
Climate Change Unit  
Rr."Duresit", 27  
Tirana  
**ALBANIA**  
Tel: +355 42 25101/ 355 68 2029754  
Fax: +355 32 270627 / 355 42 25101  
E-mail: mirafida@icc-al.org
4. Redouane HADDADJI  
SONATRACH  
Centrale HSE  
Djenane el Malik  
Hydra 16035  
Algiers  
**ALGERIA**  
Tel: +213 71 60 2591  
Fax: +213 2154 8598  
E-mail: redouane.haddadji@sonatrach.dz
5. Badaoui ZEDDIGHA  
Ministère des Transports  
1, avenue Poirson  
El-Biar  
Algiers  
**ALGERIA**  
Tel: +213 21 92 98 73  
Fax: +213 21 92 98 73  
E-mail: zeddigha@yahoo.fr
6. Carlos C. LEMOS SARDINHA DIAS H  
DORINT/MIREX  
6 Andar Largo Antonio Yacinto  
Luanda  
**ANGOLA**  
Tel: +244 9235 59052  
Fax:  
E-mail: casard62\_9@yahoo.com.br  
casard62\_9@hotmail.com
7. Eliana SAISSAC H  
Oficina del Representante Especial para  
Negociaciones Ambientales Internacionales  
Ministerio de Relaciones Exteriores, Comercio  
Internacional y Culto  
Esmeralda 1212, piso 14  
1007 Buenos Aires  
**ARGENTINA**  
Tel: +54 11 4819 7414  
Fax: +5411 4819 7413  
E-mail: see@mrecic.gov.ar  
esaissac@yahoo.com
8. Martiros TSARUKYAN H  
Ministry of Nature Protection  
Dept. of Environment Protection  
Government Bldg 3  
Republic Square  
Yerevan 375010  
**ARMENIA**  
Tel: +3741 583 934  
Fax: +3741 583 933  
E-mail: martiros@nature.am
9. Geoff B. LOVE B  
Bureau of Meteorology  
GPO Box 1289K  
Melbourne, VIC 3001  
**AUSTRALIA**  
Tel: +613 9669 4558  
Fax: +613 9669 4548  
E-mail: g.love@bom.gov.au
10. Gary Ph. RICHARDS  
Australian Greenhouse Office  
Department of the Environment and Heritage  
GPO Box 787  
Canberra ACT 2601  
**AUSTRALIA**  
Tel: +61 2 6274 1926  
Fax: +61 2 6274 1439  
E-mail: gary.richards@deh.gov.au
11. Robert. G. STURGISS  
Australian Greenhouse Office  
Department of the Environment and Heritage  
GPO Box 787  
Canberra ACT 2601  
**AUSTRALIA**  
Tel: +61 2 6274 1836  
Fax: +61 2 6274/439  
E-mail: rob.sturgiss@deh.gov.au
12. Klaus RADUNSKY H  
Federal Environment Agency  
Spittelauer Lände 5  
A-1090 Vienna  
**AUSTRIA**  
Tel: +43 1 31304 5534  
Fax: +43 1 31304 5959  
E-mail: klaus.radunsky@umweltbundesamt.at

13. Umayra TAGHIYEVA H  
Ministry of Ecology & Natural Resources  
100 A, B. Aghayev Street  
Baku 370073  
**AZERBAIJAN**  
Tel: +994 12 441 1175 / 492 4173  
Fax: +994 12 492 5907  
E-mail: utagiyeva@yahoo.com
14. Jeffrey W. SIMMONS H  
National Climate Change Committee  
Bahamas Environment, Science & Technology  
(BEST) Commission  
c/o Department of Meteorology  
Seaban House, Crawford Street  
P.O. Box N -8330  
Nassau  
**BAHAMAS**  
Tel: +1 242 356 3736  
Fax: +1 242 356 3739  
E-mail: jws.met@batelnet.bs  
simmons\_jeffrey@hotmail.com
15. Shah Md S. U.IQBAL H  
Ministry of Defence  
Gana Bhaban Complex Sher-e-Bangla Nagar  
Dhaka  
**BANGLADESH**  
Tel: +8802 811 7022  
Fax: +8802 811 7945  
E-mail: modgob@bttb.net
16. Nicole SUE H  
Environmental Protection Department  
Ministry of Energy & Environment  
Jemmotts Lane  
St. Michael  
**BARBADOS**  
Tel: +1 246 436 4820  
Fax: +1 246 228 7103  
E-mail: enveng@caribsurf.com
17. Vladimir TARASENKO H  
Ministry of Natural Resources & Environment  
Protection  
10, Kollektornaya Street  
220048 Minsk  
**BELARUS**  
Tel: +375 172 003 972  
Fax: +375 172 005 113  
E-mail: climat@minpriroda.by
18. Martine VANDERSTRAETEN H  
Belgian Federal Public Planning Service  
Science Policy  
Rue de la Science 8  
B-1000 Brussels  
**BELGIUM**  
Tel: +32 2 238 3411  
Fax: +32 2 2383 411  
E-mail: vdst@belspo.be
19. Jean-Pascal van YPERSELE B  
Institut d'Astronomie et de Géophysique  
G. Lemaître  
Université catholique de Louvain  
2, chemin du Cyclotron  
B-1348 Louvain-la-Neuve  
**BELGIUM**  
Tel: +32 10 473296 or 97  
Fax: +32 10 474722  
E-mail: vanypersele@astr.ucl.ac.be
20. Ann Josephine GORDON H  
National Meteorological Service  
Philip Goldson International Airport  
P.O. Box 717  
Belize City  
**BELIZE**  
Tel: +501 225 2011  
Fax: +501 225 2101  
E-mail: cccbze@btl.net
21. Epiphane D. AHLONSOU H  
Service Météorologique National  
ASECNA  
B.P. 379  
Cotonou  
**BENIN**  
Tel: +229 21 301 413  
Fax: +229 21 300 839  
E-mail: ahlonsdepi@yahoo.com
22. Karma TSE-RING H  
Agromet Office  
CoRRB  
Ministry of Agriculture  
Thimphu  
**BHUTAN**  
Tel: +975 2 333 240  
Fax: +975 2 333240  
E-mail: ka\_tsering@moa.gov.bt
23. Dorcas N. MASISI H  
Botswana Meteorological Services  
P.O. Box 10100  
Gaborone  
**BOTSWANA**  
Tel: +267 395 6281  
Fax: +267 395 6282  
E-mail: dmasisi@gov.bw
24. Jose D. GONZALES MIGUEZ H  
Ministerio da Ciencia e Tecnologia  
Esplanada dos Ministerios  
Bloco E, sala 473  
ZIP 10067-900  
Brasilia DP  
**BRAZIL**  
Tel: +5561 3317 7923  
Fax: +5561 3317 7657  
E-mail: miguez@mct.gov.br

25. ThelmaKRUG B  
**Co-chair TFI**  
 Interamerican Institute for Global  
 Change Studies  
 National Institute for Space Research  
 C.P. 515  
 12227 -010 Sao Jose dos Campos  
**BRAZIL**  
 Tel: +55 12 3945 6895  
 Fax: +55 12 3941 4410  
 E-mail: thelma@dir.iai.int
26. Jose MARENGO  
**Co-chair TGICA**  
 INPE/CPTEC  
 Rodovia Dutra km. 40  
 Cachoeira Paulista  
 12630 -000 Sao Paulo  
**BRAZIL**  
 Tel: +55 12 3103 1779  
 Fax: +55 12 3101 2835  
 E-mail: marengo@cptec.inpe.br
27. Teodor IVANOV H  
 Ministry of Environment & Water  
 22, Maria Luiza Street  
 1000 Sofia  
**BULGARIA**  
 Tel: +359 2 981 4412  
 Fax: +359 2 980 3926  
 E-mail: ivanovt@moew.government.bg
28. Maurice SHIRAMANGA H  
 IGEBU (Institut Géographique du Burundi)  
 B.P. 331  
 Bujumbura  
**BURUNDI**  
 Tel: +257 72 5820  
 Fax: +257 40 2625  
 E-mail: igebu@cbinf.com
29. Chan Thou CHEA H  
 Ministry of Environment, Climate Change Office  
 No. 48 Samdech Preah Sihanouk  
 Chamkarmon  
 Phnom Penh  
**CAMBODIA**  
 Tel: +855 23 21 83 70  
 Fax: +855 23 21 83 70  
 E-mail: chanthouchea@yahoo.com
30. Brian T. GRAY H  
 Environment Canada  
 Science and Technology Branch  
 Place Vincent Massey  
 351 St. Joseph Boulevard  
 Gatineau, Quebec  
**CANADA**  
 Tel: +1 819 934 6851  
 Fax: +1 819 934 6845  
 E-mail: brian.gray@ec.gc.ca
31. Michel BELAND  
 Environment Canada  
 2121 TransCanada Highway  
 Dorval, QC H9P 1J3  
**CANADA**  
 Tel: +1 514 421 4771  
 Fax: +1 514 421 2106  
 E-mail: michel.beland@ec.gc.ca
32. Pascale COLLAS  
 Environment Canada  
 19th floor, Place Vincent Massey  
 351 St. Joseph Boulevard, 19th Floor  
 Hull, Quebec, K1A 0H3  
**CANADA**  
 Tel: +1 819 994 0888  
 Fax: +1 819 953 3006  
 E-mail: pascale.collas@ec.gc.ca
33. Patti EDWARDS  
 Environment Canada  
 4905 Dufferin Street  
 Downsview, Ontario M3H 5T4  
**CANADA**  
 Tel: +1 416 739 4432  
 Fax: +1 416 739 4882  
 E-mail: patti.edwards@ec.gc.ca
34. Art JAQUES  
 Environment Canada  
 19th floor, Place Vincent Massey  
 351 St. Joseph Boulevard, 19th Floor  
 Hull, Quebec, K1A 0H3  
**CANADA**  
 Tel: +1 819 994 3098  
 Fax: +1 819 953 3006  
 E-mail: art.jaques@ec.gc.ca
35. John M.R.STONE B  
 3411 Paul Anka Drive, Unit 32  
 Ottawa, Ontario K1A 9R8  
**CANADA**  
 Tel: +1 613 862 3393 (Cell.)  
 Fax:  
 E-mail: john.stone@rogers.com
36. Tana STRATTON  
 Foreign Affairs Canada  
 Climate Change and Energy Division  
 Rideau Pavilion - Floor R2-08  
 125 Sussex Drive  
 Ottawa, Ontario K1A 0G2  
**CANADA**  
 Tel: +1 613 944 6134  
 Fax: +1 613 944 0064  
 E-mail: tana.stratton@international.gc.ca

37. Etienne NDORYAM H  
 Direction Générale de l'Aviation civile et de la  
 Météorologie  
 B.P. 941  
 Bangui  
**CENTRAL AFRICAN REPUBLIC**  
 Tel: +236 61 4362  
 Fax: +236 61 0636/4918  
 E-mail: ndoryam\_etienne@yahoo.fr
38. Tchitchaou MOUSSA H  
 Ministère de l'Environnement et de l'Eau  
 Direction des Ressources en Eau  
 et de la Météorologie  
 B.P. 429  
 N'Djamena 429  
**CHAD**  
 Tel: +235 52 30 81/ 52 60 01  
 Fax: +235 52 38 39/ 52 20 31  
 E-mail: moussatchit@yahoo.fr
39. Fernando FARIAS H  
 CONAMA  
 Piso 5  
 Teatinos 254  
 Santiago  
**CHILE**  
 Tel: +56 2 240 5647  
 Fax: +56 2 240 5782  
 E-mail: ffarias@conama.cl
40. Sergio GONZALEZ-MARTINEAUX  
 Centro Regional de Investigacion La Platina  
 INIA  
 Santa Rosa Street 11.610  
 (La Pintana)  
 Santiago  
**CHILE**  
 Tel: +56 2 7575 115  
 Fax: +56 2 5417 667  
 E-mail: sgonzale@inia.cl
41. Dahe QIN B  
**Co-chair WG I**  
 China Meteorological Administration  
 46, Zhongguancun Nandajie  
 Beijing 100081  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +8610 6840 6662  
 Fax: +8610 6217 4797  
 E-mail: qdh@cma.gov.cn
42. Panqin CHEN  
 Chinese Academy of Sciences  
 52, Sanlihe Road  
 Beijing 100864  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +86 10 6859 7529  
 Fax: +86 10 6859 7583  
 E-mail: pqchen@cashq.ac.cn
43. Zhenlin CHEN  
 China Meteorological Administration  
 Dept. of International Cooperation  
 46, Zhongguancun Nandajie  
 Beijing 100081  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +86 10 6840 6146  
 Fax: +8610 6217 4797  
 E-mail: guoji@cma.gov.cn
44. Xiaosu DAI  
 China Meteorological Administration  
 Dept. of Scientific and Technological  
 Development  
 46, Zhongguancun Nandajie  
 Beijing 100081  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +8610 6840 6732  
 Fax: +8610 6217 2954  
 E-mail: daixs@cma.gov.cn
45. Hongmin DONG  
 Chinese Academy of Cultural Sciences  
 11, Nongzhanguan Nanbi  
 Beijing 100026  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +8610 6419 3031  
 Fax: +8610 6419 3031  
 E-mail: shthjch@agri.gov.cn
46. Xuejie GAO  
 China Meteorological Administration  
 National Climate Centre  
 46, Zhongguancun Nandajie  
 Beijing 100081  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +8610 6840 8648  
 Fax: +8610 6217 6804  
 E-mail: gaouxj@cma.gov.cn
47. Chunpeng SUN  
 Ministry of Water Resources  
 Bureau of Hydrology  
 Lane 2, Bengnang Road  
 Beijing  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +8610 6320 2425  
 Fax: +8610 6354 8035  
 E-mail: chpsun@mwr.gov.cn
48. Cuihua SUN  
 National Development and Reform Commission  
 No. 38 Yue Tan Nan Jie  
 Beijing  
**CHINA, PEOPLE'S REPUBLIC OF**  
 Tel: +8610 6850 2963  
 Fax: +8610 6850 2358  
 E-mail: suncuihua@yahoo.com.cn

49. YingSUN  
China Meteorological Administration  
National Climate Centre  
46, Zhongguancun Nandajie  
Beijing 100081  
**CHINA, PEOPLE'S REPUBLIC OF**  
Tel: +8610 6840 0843  
Fax: +8610 6217 4797  
E-mail: sunying@cma.gov.cn
50. Baoguo TIAN  
Ministry of Science and Technology  
15-B Fuxing Road  
Beijing 100862  
**CHINA, PEOPLE'S REPUBLIC OF**  
Tel: +86 10 5888 1432  
Fax: +86 10 5888 1441  
E-mail: tianbg@most.gov.cn
51. Qingli WANG  
Ministry of Agriculture  
11, Nongzhanguan Nanli  
Beijing 100026  
**CHINA, PEOPLE'S REPUBLIC OF**  
Tel: +8610 6419 3031  
Fax: +8610 6419 3031  
E-mail: huanjing3031@163.com
52. Hongwei YANG  
Energy Research Institute  
Muxidi Beili Jia-11  
Xicheng District  
Beijing 100038  
**CHINA, PEOPLE'S REPUBLIC OF**  
Tel: +8610 6390 8456  
Fax: +8610 6390 8457  
E-mail: yanghw@mx.cei.gov.cn
53. Carlos COSTA POSADA H  
Ministerio del Medio Ambiente  
Instituto de Hidrología, Meteorología y Estudios Ambientales  
Carrera 10, No. 20-30  
Bogota  
**COLOMBIA**  
Tel: +571 352 7111  
Fax: +571 352 7131  
E-mail: direccion@ideam.gov.co
54. Batouli SAID ABDALLAH FAICK H  
Ministère du Développement Rural, de la Pêche, de l'Artisanat et de l'Environnement  
B.P. 41  
Moroni  
**COMOROS**  
Tel: +269 736388  
Fax: +269 736388  
E-mail: dge.cc@comorestelecom.km
55. Juan Carlos FALLAS H  
Instituto Meteorológico Nacional (IMN)  
Barrio Aranjuez  
P.O. Box 5583-1000  
San José 7-3350-1000  
**COSTA RICA**  
Tel: +506 222 5616 ext 139  
Fax: +506 223 1837  
E-mail: jcfallas@imn.ac.cr
56. Zvonimir KATUSIN H  
Meteorological & Hydrometeorological Service  
Griec 3  
HR-10000 Zagreb  
**CROATIA**  
Tel: +385 1 4565 706  
Fax: +385 1 4851 903  
E-mail: katusin@cirus.dhz.hr
57. Tomas GUTIERREZ PEREZ H  
CITMA/Instituto de Meteorología  
Av. Loma de Casablanca  
Apartado 170 32  
CP 11700  
Habana 17  
**CUBA**  
Tel: +537 867 0711  
Fax: +537 33 8010/8670710  
E-mail: tomasg@met.inf.cu
58. Ramon PICHES MADRUGA B  
Centro de Investigaciones de Economía Mundial (CIEM)  
Calle 22 No. 309, entre 3ra y 5a Avenida Miramar, Habana 13, CP 11300  
**CUBA**  
Tel: +537 202 2958/209 2969  
Fax: +537 204 2507  
E-mail: rpichs@ciem.cu  
rpichs@yahoo.com.mx
59. Jan PRETEL H  
Czech Hydrometeorological Institute  
Na Sabatce 17  
14306 Praha 4 Komorany  
**CZECH REPUBLIC**  
Tel: +420 2 4403 2414  
Fax: +420 2 4403 2415  
E-mail: pretel@chmi.cz
60. Jesper GUNDERMANN  
Danish Environmental Protection Agency  
Strandgade 29  
DK-1401 Copenhagen  
**DENMARK**  
Tel: +45 25 44 1246  
Fax: +45 32 66 0131  
E-mail: jgu@mst.dk

61. Hans LARSEN  
Risø National Laboratory  
Building 110  
DK-4000 Roskilde  
**DENMARK**  
Tel: +45 4677 5101  
Fax: +45 46 77 5199  
E-mail: hans.larsen@risoe.dk
62. Abdoukader O. ABDALLAH H  
Ministère de l'habitat de l'Urbanisme, de  
l'Environnement et de l'Aménagement du  
Territoire  
B.P. 2091  
Djibouti  
**DJIBOUTI**  
Tel: +253 351020 /351097  
Fax: +253 354837  
E-mail: metade@intnet.dj
63. Mohamed A. EL-SHAHAWY H  
Egyptian Environmental Affairs Agency (EEAA)  
30 Misr Helwan El-Zyrae Rd. Maadi  
Cairo 11728  
**EGYPT**  
Tel: +202 5314 926  
Fax: +202 5256 450  
E-mail: mshahawy2000@yahoo.com
64. Mohamed AHMED  
Egyptian Environmental Affairs Agency (EEAA)  
30 Misr Helwan El-Zyrae Rd. Maadi  
Cairo 11728  
**EGYPT**  
Tel: +202 817 3892  
Fax: +202 817 3892  
E-mail: arashad81@yahoo.com
65. Jaan SAAR H  
Estonian Meteorological and Hydrological  
Institute  
Rävala 8  
Tallinn 10143  
**ESTONIA**  
Tel: +273 5090 390  
Fax: +372 645 4277  
E-mail: jaan.saar@emhi.ee
66. Abebe YESHANEW H  
National Meteorological Agency  
P.O. Box 1090  
Addis Ababa  
**ETHIOPIA**  
Tel: +251 1 512299/615779  
Fax: +251 1 517066  
E-mail: ayesha@ethionet.et
67. Raino HEINO H  
Finnish Meteorological Institute  
P.O Box 503  
FIN-00101 Helsinki  
**FINLAND**  
Tel: +358 9 1929 4120  
Fax: +H136\$+H146+358 9 1929 3503  
E-mail: raino.heino@fmi.fi
68. Suvi MONNI  
Benviroc  
Vanha Saunalahdentie 11 A8  
FI-02330 Espoo  
**FINLAND**  
Tel: +358 40 5431 476  
Fax:  
E-mail: suvi.monni@benviroc.fi
69. Jaakko OJALA  
Ministry of the Environment  
P.O. Box 35  
FIN-00023 Helsinki  
**FINLAND**  
Tel: +358 9 160 39478  
Fax: +358 9 160 39439  
E-mail: jaakko.ojala@ymparisto.fi
70. Marc GILLET H  
Observatoire National sur les Effets du  
Réchauffement Climatique  
39, rue Saint Dominique  
75007 Paris  
**FRANCE**  
Tel: +33 1 42 75 55 04  
Fax: +33 1 42 75 55 05  
E-mail: marc.gillet@onerc.pm.gouv.fr
71. Jean JOUZEL B  
Institut Pierre Simon Laplace  
Université Versailles Saint Quentin  
23, rue du Refuge  
78035 Versailles CEDEX  
**FRANCE**  
Tel: +33 1 39255816  
Fax: +33 1 39255822  
E-mail: jouzel@Isce.saclay.cea.fr
72. Bernard E. GOMEZ H  
Dept. of Water Resources  
7 Marina Parade  
Banjul  
**GAMBIA**  
Tel: +220 422 4122 / 422 8216  
Fax: +220 422 7631  
E-mail: be63gomez@yahoo.co.uk



73. Bubu P. JALLOW B  
 Meteorology Division  
 Department of State for Fisheries and Water  
 Resources  
 Marina Parade  
 Banjul  
**GAMBIA**  
 Tel: +220 422 8216 / 991 1323  
 Fax: +220 422 5009 / 422 5344  
 E-mail: bubujallow@hotmail.com  
 bubupateh@yahoo.com  
 dwr@gamtel.gm
74. Revaz ENUKIDZE H  
 Ministry of Environment Protection & Natural  
 Resources  
 6 Gulua str  
 0114 Tbilisi  
**GEORGIA**  
 Tel: +99532 275716  
 Fax: +99532 275716  
 E-mail: gmep@access.sanet.ge
75. Ursula FUENTES H  
 Federal Ministry for the Environment  
 Alexanderplatz 6  
 D-11055 Berlin  
**GERMANY**  
 Tel: +49 18 88 305 2312  
 Fax: +49 18 88 10 305 2312  
 E-mail: ursula.fuentes@bmu.bund.de
76. Daniel ARGYROPOULOS  
 Federal Ministry for the Environment  
 Alexanderplatz 6  
 D-11055 Berlin  
**GERMANY**  
 Tel: +49 18 88 305 3647  
 Fax: +49 18 88 305 3649  
 E-mail: daniel.argyropolous@bmu.bund.de
77. Marion DREHER  
 German Environment Protection Agency  
 Worlitzer Platz 1  
 D-06844 Dessau  
**GERMANY**  
 Tel: +49 340 2103 2402  
 Fax: +49 340 2103 2282  
 E-mail: marion.dreher@uba.de
78. Pauline MIDGLEY  
 German IPCC Coordination Office  
 IER, University Stuttgart  
 Heßbrühlstrasse 49a  
 D-70565 Stuttgart  
**GERMANY**  
 Tel: +49 711 685 78776  
 Fax: +49 711 685 78773  
 E-mail: pm@ier.uni-stuttgart.de
79. Olav HOHMEYER B  
 International Institute for Management  
 University of Flensburg  
 Auf dem Campus 1  
 D-24943 Flensburg  
**GERMANY**  
 Tel: +49 461 805 2533  
 Fax: +49 461 805 2538  
 E-mail: hohmeyer@uni-flensburg.de
80. Zinedeme MINIA H  
 Ghana Meteorological Agency  
 P.O. Box LG 87  
 Legon - Accra  
**GHANA**  
 Tel: +233 21 701 2520  
 Fax: +233 21 511 981/701 2519  
 E-mail: meteo@africaonline.com.gh
81. Mohamed Fonikiry MARA H  
 Direction de la Météorologie  
 BP 566  
 Conakry  
**GUINEA**  
 Tel: +224 45 48 15/452106  
 Fax: +224 41 35 77  
 E-mail: meteogui@sotelgui.net.gn
82. José P. SILVA DOS SANTOS H  
 Direccao Geral do Servico Meteorologico  
 Nacional  
 Caixa Postal 75  
 1001 Bissau  
**GUINEA-BISSAU**  
 Tel: +245 212 332  
 Fax: +245 201 753  
 E-mail: dgmteobissau@yahoo.fr
83. Wilfrid SAINT JEAN H  
 Ministry of Environment  
 Haut Turgeau #181  
 P.O. Box BME 2174  
 Port-Au-Prince  
**HAITI**  
 Tel: +509 246 2249/2459  
 Fax: +509 246 2248 / 245 7360  
 E-mail: wstjean@haitelonline.com
84. Subodh K. SHARMA H  
 Ministry of Environment & Forests  
 Paryavaran Bhavan, CGO Complex  
 Lodi Road  
 New Delhi 110003  
**INDIA**  
 Tel: +91 11 2436 0861  
 Fax: +91 11 24360 861  
 E-mail: subodh.kumar@nic.in

85. R.T.M. SUTAMIHARDJA B  
 Ministry of Environment  
 Jalan Flamboyan 3, Kompl. IPB  
 Sindang Barang Bogor  
 Jawa Barat  
**INDONESIA**  
 Tel: +62 251 325 811 / 324820  
 Fax: +62 251 325 811 / 324 820  
 E-mail: suta-ipb@indo.net.id
86. Ali M. NOORIAN H  
 Islamic Republic of Iran Meteorological  
 Organization  
 P.O. Box 13185-461  
 Tehran  
**IRAN, ISLAMIC REPUBLIC OF**  
 Tel: +98 21 2204 2720  
 Fax: +98 21 2204 4887  
 E-mail: amnoorian@yahoo.com
87. Saad H. FARAJ H  
 Ministry of Transportation  
 Iraqi Meteorological Organization  
 P.O. Box 6078  
 Baghdad  
**IRAQ**  
 Tel: +96 7901 415 978  
 Fax:  
 E-mail: swattar2001@yahoo.com
88. Antonio DE MAIO  
 Environmental Protection National Agency  
 Via Vitaliano Brancati 48  
 00144 Roma  
**ITALY**  
 Tel: +39 06 5007 2450  
 Fax: +39 06 5007 2059+H34  
 E-mail: antonio.demaio@apat.it
89. Domenico GAUDIOSO  
 Environmental Protection National Agency  
 Via Vitaliano Brancati 48  
 00144 Roma  
**ITALY**  
 Tel: +39 06 5007 2056  
 Fax: +39 06 5007 2048  
 E-mail: gaudioso@apat.it
90. Filippo GIORGI B  
 Physics of Weather and Climate Section  
 The Abdus Salam Int. Centre for Theoretical  
 Physics  
 P.O. Box 586  
 (Strada Costiera 11 for courier mail)  
 34100 Trieste  
**ITALY**  
 Tel: +39 040 2240 425  
 Fax: +39 040 2240 449 / 224 163  
 E-mail: giorgi@ictp.trieste.it
91. Daniela ROMANO  
 Environmental Protection National Agency  
 Via Vitaliano Brancati 48  
 00144 Roma  
**ITALY**  
 Tel: +39 06 5007 2541  
 Fax: +39 06 5007 2048  
 E-mail: romano@apat.it
92. Jacqueline SPENCE H  
 Meteorological Services  
 65 3/4 Half way Tree Road  
 Kingston 10  
**JAMAICA**  
 Tel: +1 876 929 3700  
 Fax: +1 876 960 8989  
 E-mail: metservice.cbh@jamweb.net  
 jampence21@yahoo.com
93. Harumi AKIBA  
 Japan Agency for Marine-Earth Science &  
 Technology  
 3173-25 Showa-machi, Kanazawa-ku  
 Yokohama, Kanagawa 236-0001  
**JAPAN**  
 Tel: +81 45 778 5684  
 Fax: +81 45 778 5497  
 E-mail: harumi@jamstec.go.jp
94. Takahiko HIRAISHI B  
**Co-chair TFI**  
 c/o Institute for Global Environmental Strategies  
 2108-11, Kamiyamaguchi, Hayama  
 Kanagawa 240-0115  
**JAPAN**  
 Tel: +81 468 55 3750  
 Fax: +81 468 55 3808  
 E-mail: hiraishi@iges.or.jp
95. Koji KADONO  
 GISPRI  
 3rd Floor, Shousen-Mitsui Building  
 2-1-1 Toranomom, Minato-ku  
 Tokyo 105-0001  
**JAPAN**  
 Tel: +81 3 5563 8800  
 Fax: +81 3 5563 8810  
 E-mail: kadono@gispri.or.jp
96. Kotaro KIMURA  
 GISPRI  
 3rd Floor, Shousen-Mitsui Building  
 2-1-1 Toranomom, Minato-ku  
 Tokyo 105-0002  
**JAPAN**  
 Tel: +81 3 5563 8800  
 Fax: +81 3 5563 8810  
 E-mail: kimura@gispri.or.jp

97. Hiroki KONDO  
Japan Agency for Marine-Earth Science and Technology  
3173-25 Showa-machi, Kanagawa-ku  
Yokohama, Kanagawa 236-0001  
**JAPAN**  
Tel: +81 45 778 5583  
Fax: +81 45 778 5707  
E-mail: hkondo@jamstec.go.jp
98. Anne McDONALD  
Global Environmental Forum  
Toranomom 10 Mori building, 5th floor  
1-18-1 Toranomom, Minato-ku  
Tokyo 105-0001  
**JAPAN**  
Tel: +81 3 3592 9735  
Fax: +81 3 3592 9737  
E-mail: mcdonald@myu.ac.jp
99. Masahiro NISHIO  
Environmental Policy Division  
Ministry of Economy, Trade and Industry (METI)  
1-3-1 Kasumigaseki, Chiyoda-ku  
Tokyo 100-8901  
**JAPAN**  
Tel: +81 3 3501 7830  
Fax: +81 3 3501 7697  
E-mail: nishio-masahiro@meti.go.jp
100. Yoko NOBUOKA  
GISPRI  
3rd Floor, Shousen -Mitsui Building  
2-1-1 Toranomom, Minato-ku  
Tokyo 105-0001  
**JAPAN**  
Tel: +81 3 5563 8800  
Fax: +81 3 5563 8810  
E-mail: nobuoka@gispri.or.jp
101. Naoya TSUKAMOTO  
Global Environment Bureau  
Ministry of the Environment  
1-2-2 Kasumigaseki, Chiyoda-Ku  
Tokyo 100-8975  
**JAPAN**  
Tel: +81 3 5521 8247  
Fax: +81 3 3581 4815  
E-mail: naoya\_tsukamoto@env.go.jp
102. Noriko YAMAGISHI  
Global Environmental Forum  
5F, Mori-10 Building  
1-18-1 Toranomom, Minato-ku  
Tokyo 105-0001  
**JAPAN**  
Tel: +81 3 3592 9735  
Fax: +81 3 3592 9737  
E-mail: jdv04746@nifty.com
103. Jabur DARADKAH  
Ministry of Environment  
Faisal str. Um Othaina  
P.O. Box 1804  
11941 Amman  
**JORDAN**  
Tel: +962 6 55 24693  
Fax: +962 6 55 24693  
E-mail: J\_daradkah@yahoo.com
104. Mambetali KARABEKOV  
Ministry of Environmental Protection  
31, Pobeda Avenue  
Astana  
**KAZAKHSTAN**  
Tel: +731 7259 1955  
Fax: +731 7259 1952  
E-mail: a\_karabekov@nature.kz
105. Joshua WAIROTO  
Kenya Meteorological Department  
P.O. Box 30259  
00100 GPO  
Nairobi  
**KENYA**  
Tel: +254 020 387 6028  
Fax: +254 020 387 6955  
E-mail: joshua-wairoto@yahoo.co.uk  
joshua.wairoto@meteo.go.ke
106. Richard S. ODINGO  
**Vice-chair**  
University of Nairobi  
P.O. Box 30197 G.P.O.  
Nairobi  
**KENYA**  
Tel: +254 020 318262  
Fax: +254 020 245 6655  
E-mail: odingo01@yahoo.com  
r.odingo@meteo.go.ke
107. Syamphone SENGCHANDALA  
Science Technology and Environment Agency (STEA)  
P.O. Box 2279  
Ban: Sisavad  
Vientiane  
**LAO, PEOPLE'S DEMOCRATIC REPUBLIC**  
Tel: +856 21 218712/213470  
Fax: +856 21 218712/213472  
E-mail: syamphone\_sengchandala@yahoo.com
108. Andris LEITASS  
Latvian Environmental, Geological and Meteorological Agency Hydrometeorological Agency  
165 Maskavas Street  
Riga, LV-1019  
**LATVIA**  
Tel: +371 7032 601  
Fax: +371 7145 154  
E-mail: lvgma@lv.gov.lv

109. Berj HATJIAN H  
 Ministry of Environment  
 Al-Azarieh Building  
 P.O. Box 11-2727  
 Beirut  
**LEBANON**  
 Tel: +961 1 976 555  
 Fax: +961 1 976 530  
 E-mail: dgmoee@moe.gov.lb
110. Mabafokeng F. MAHAHABISA H  
 Lesotho Meteorological Services  
 P.O. Box 14515  
 Maseru 100  
**LESOTHO**  
 Tel: + 266 22 317 250  
 Fax: + 226 22 325 057  
 E-mail: mahahabisa@lesmet.org.ls
111. Khalifa A. ELAWEJ H  
 Environmental General Authority  
 P.O. Box 83618  
 Tripoli  
**LIBYAN ARAB YAMAHIRIYA**  
 Tel: +218 21 487 0266  
 Fax: +218 21 487 1395  
 E-mail: elawej@hotmail.com
112. Jolanta KOTVICKAJA H  
 Ministry of Environment  
 Air Division  
 A. Jaksto Street 4/9  
 LT-0115 Vilnius  
**LITHUANIA**  
 Tel: +3705 266 3672  
 Fax: +3705 266 3663  
 E-mail: j.kotvickaja@am.lt
113. Nirivololona RAHOLIJAO H  
 Direction Générale de la Météorologie  
 Ministère des Travaux Publics et des  
 Transports  
 B.P. 1254  
 101 Antananarivo  
**MADAGASCAR**  
 Tel: +261 20 22 408 32  
 Fax: +261 20 22 405 81  
 E-mail: niriraholijao@yahoo.fr
114. Donald KAMDONYO H  
 Meteorological Services  
 Ministry of Transport and Public Works  
 P.O. Box 2  
 Chileka  
**MALAWI**  
 Tel: + 265 1 824 712  
 Fax: + 265 1 822 215  
 E-mail: metdept@metmalawi.com
115. Wan Azli WAN HASSAN H  
 Malaysian Meteorological Service  
 Jalan Sultan  
 Petaling Jaya  
 Selangor  
**MALAYSIA**  
 Tel: +603 7967 8226  
 Fax: +603 7955 0964  
 E-mail: wanazli@kjc.gov.my
116. Birama DIARRA H  
 Direction Nationale de la Météorologie  
 B.P. 237  
 Bamako  
**MALI**  
 Tel: +223 220 6204  
 Fax: +223 220 2110  
 E-mail: biramadia@yahoo.fr  
 dnm@afribone.net.ml
117. Soobaraj N. SOK APPADU H  
 Meteorological Services  
 St. Paul Road  
 Vacoas  
**MAURITIUS**  
 Tel: +230 696 5626  
 Fax: +230 686 1033  
 E-mail: meteo@intnet.mu
118. Pritabala AUJEET  
 Ministry of Finance  
 New Government Centre  
 Port Louis  
**MAURITIUS**  
 Tel: +230 201 3857/2209  
 Fax:  
 E-mail: paujeet@mail.gov.mu
119. Rezah BADAL  
 Mauritius Oceanography Institute  
 France Centre  
 Avenue Victoria  
 Quatre Bornes  
**MAURITIUS**  
 Tel: +230 427 4434  
 Fax: +230 427 4433  
 E-mail: rezahmb@moi.intnet.mu
120. Yadowun BOODHOO  
 Meteorological Services  
 St. Paul Road  
 Vacoas  
**MAURITIUS**  
 Tel: +230 696 1031  
 Fax: +230 686 1033  
 E-mail: meteo@intnet.mu

121. Suzanne BOODHOO  
Water Resources Unit  
Ministry of Public Utilities  
3rd floor, Royal Commercial Centre  
St. Ignace Street  
Rose Hill  
**MAURITIUS**  
Tel: +230 465 7988  
Fax: +230 465 7177  
E-mail: wru@intnet.mu
122. Doolaree BOODHUN  
Ministry of Environment  
2nd floor Ken Lee Tower  
Barracks Street  
Port Louis  
**MAURITIUS**  
Tel: +230 212 4385  
Fax: +230 212 6671  
E-mail: dboodhun@mail.gov.mu
123. Prithviraj BOONEEADY  
Mauritius Meteorological Service  
St Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 264 1867  
Fax: +230 686 1033  
E-mail: raj5010@yahoo.co.uk
124. Venkata R. BUMMA  
Ministry of Housing and Lands  
10<sup>th</sup> floor, Victoria House  
Port Louis  
**MAURITIUS**  
Tel: +230 213 4870  
Fax:  
E-mail: vbumma@mail.gov.mu
125. Balraj DUNPUTH  
Mauritius Meteorological Service  
St Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 686 1031  
Fax: +230 686 1033  
E-mail: meteo@intnet.mu
126. Jean Thomas GENAVE  
Rodrigues Regional Assembly  
Port Mathurin  
Rodrigues  
**MAURITIUS**  
Tel: +8320 588  
Fax: +8320208  
E-mail: tgenave@mail.gov.mu
127. Premchand GOOLAUP  
Mauritius Meteorological Service  
St Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 686 1031  
Fax: +230 686 1033  
E-mail: meteo@intnet.mu
128. Poorushotam GUJADHUR  
Ministry of Tourism & Leisure  
Level 12, Air Mauritius Centre  
John Kennedy Street  
Port Louis  
**MAURITIUS**  
Tel: +230 210 3640  
Fax: +230 208 6776  
E-mail: pgujadhur@mail.gov.mu
129. Bhye M. HEETUN  
Meteorological Service  
St. Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 686 1031  
Fax: +230 686 1033  
E-mail: meteo@intnet.mu
130. Nassir Ally KHADUN  
National Transit Authority  
MSI Building  
Les Cassis  
Port Louis  
**MAURITIUS**  
Tel: +230 202 2817  
Fax: +230 213 1402  
E-mail: nkhadun@mail.gov.mu
131. Sudarsun KOONJAH  
Mauritius Sugar Industry Research Institute  
Moka Road  
Réduit  
**MAURITIUS**  
Tel: +230 454 1061  
Fax: +230 454 1971  
E-mail: skoonjah@msir.intnet.mu
132. Maryeven MOOTOO  
Prime Minister's Office  
Port Louis  
**MAURITIUS**  
Tel: +230 201 1110  
Fax: +230 201 1107  
E-mail: mmootoo@mail.gov.mu
133. Rajan MUNGRA  
Mauritius Meteorological Service  
St Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 686 1031  
Fax: +230 686 1033  
E-mail: meteo@intnet.mu

134. Rasack NAYAMUTH  
Mauritius Sugar Industry Research Institute  
Moka Road  
Réduit  
**MAURITIUS**  
Tel: +230 454 1061  
Fax: +230 454 1971  
E-mail: r.nayamuth@yahoo.com
135. Amita PATHACK  
Ministry of Health  
CDCU  
Pope Hennessy Street  
Beau-Bassin  
**MAURITIUS**  
Tel: 230 250 2354  
Fax: 230 454 7835  
E-mail: apatack@mail.gov.mu
136. Beenay PATHACK  
Mauritius Meteorological Service  
St Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 686 1031  
Fax: +230 686 1033  
E-mail: meteo@intnet.mu
137. Yahyah PATHEL  
Ministry of Environment  
2nd floor Ken Lee Tower  
Barracks Street  
Port Louis  
**MAURITIUS**  
Tel: +230 211 0229  
Fax: +210 0865  
E-mail: ypathel@mail.gov.mu
138. Sharveen PERSAND  
Mauritius Oceanographic Institute  
4th floor France Centre  
corner St Jean Rd & Victoria Avenue  
Port Louis  
**MAURITIUS**  
Tel: +230 427 4434  
Fax: +230 427 4433  
E-mail: persands@intnet.mu
139. Ramesh RAJUMAR  
ARELI  
3rd floor Venty Building  
St Jean Road  
Quatre Bornes  
**MAURITIUS**  
Tel: +230 466 3885  
Fax: +230 464 8809  
E-mail: ....@intnet.mu
140. Poorundeo RAMGOLAN  
Ministry of Environment  
51, Royal Road  
Coromandel  
**MAURITIUS**  
Tel: +230 233 4237  
Fax:  
E-mail: poramgolan@mail.gov.mu
141. Indoomatee RAMMA  
Agricultural Research and Extension Unit  
Neary Complex  
St Jean road  
Quatre Bornes  
**MAURITIUS**  
Tel: +230 4660723  
Fax: +230 466 4379  
E-mail:
142. Seewonlall SEERUTTUN  
Ministry of Agro-Industry and Fisheries  
Réduit  
**MAURITIUS**  
Tel: +230 465 5285  
Fax: +230 465 5285  
E-mail: sseeruttun@mail.gov.mu
143. Jogeewar SEEWOOBADUTH  
Ministry of Environment  
3rd floor Ken Lee Tower  
Barracks Street  
Port Louis  
**MAURITIUS**  
Tel: +230 212 4385  
Fax: +230 212 6671  
E-mail: jseewoobaduth@mail.gov.mu
144. Djaheezah SUBRATTY  
Ministry of Environment  
3rd floor Ken Lee Tower  
Barracks Street  
Port Louis  
**MAURITIUS**  
Tel: +230 212 3363  
Fax: +230 212 6671  
E-mail: dsubratty@mail.gov.mu
145. Shyamnath VEERASAMY  
Mauritius Meteorological Service  
St Paul Road  
Vacoas  
**MAURITIUS**  
Tel: +230 686 1031  
Fax: +230 686 1033  
E-mail: meteo@intnet.mu

146. Andres FLORES MONTALVO H  
 Instituto Nacional de Ecologia  
 SEMARNAT  
 Periferico Sur 5000, 4º piso  
 Col. Insurgentes Cuicuilco, Coyoacan  
 04530 Mexico, D.F.  
**MEXICO**  
 Tel: +5255 5424 6479  
 Fax: +5255 5424 5404  
 E-mail: aflores@ine.gob.mx
147. Edmundo de ALBA ALCARAZ B  
 Presa 12  
 San Jerónimo Lídice  
 10200 Mexico D.F.  
**MEXICO**  
 Tel: +52 55 5595 3873  
 Fax: +52 55 5668 0124  
 E-mail: edeaa@prodigy.net.mx
148. TsesedBANZRAGCH H  
 Ministry for Nature & Environment  
 Government Building-3  
 Toiruu-44  
 Ulaanbaatar 11  
**MONGOLIA**  
 Tel: +976 11 264166  
 Fax: +976 11326616  
 E-mail: mne@mongol.net
149. Abdelkader ALLALI B  
 Ministry of Agriculture, Rural Development  
 and Fisheries  
 DPV B.P. 595  
 Rabat  
**MOROCCO**  
 Tel: +212 656 01170  
 Fax: +212 377 61557  
 E-mail: allali05@yahoo.fr
150. Emmanuel KAMBUEZA H  
 Ministry of Works, Transport and  
 Communication  
 Meteorological Service  
 Private Bag 13224  
 Windhoek  
**NAMIBIA**  
 Tel: +264 61 257 7002  
 Fax: +264 61 287 7009  
 E-mail: kambuezae@meteona.com
151. Madan L.SHRESTHA H  
 Department of Hydrology & Meterology  
 G.P.O. Box 406  
 Babar Mahal  
 Kathmandu  
**NEPAL**  
 Tel: +977 1 426 2411  
 Fax: +977 1 426 2348  
 E-mail: madanlall.shrestha@gmail.com  
 madanls@hotmail.com
152. Gerbrand J. KOMEN H  
 Royal Netherlands Meteorological Institute  
 KNMI  
 P.O. Box 201  
 3730 AE De Bilt  
**NETHERLANDS**  
 Tel: +31 30 2206 676  
 Fax: +31 30 2210 407  
 E-mail: komen@knmi.nl
153. Abraham BREGMAN  
 Royal Netherlands Meteorological Institute  
 KNMI  
 P.O. Box 201  
 3730 AE De Bilt  
**NETHERLANDS**  
 Tel: +31 30 2206 759  
 Fax: +31 30 2210 407  
 E-mail: bregman@knmi.nl
154. Ronald FLIPPHI  
 Directorate Climate Change & Industry  
 Ministry of Housing, Spatial Planning & the  
 Environment  
 P.O. Box 30945  
 2500 GX Den Haag  
**NETHERLANDS**  
 Tel: +31 70 339 4003  
 Fax: +31 70 339 1310  
 E-mail: ronald.flipphi@minvrom.nl
155. Harry H.J. VREULS  
 SenterNovem Sittard  
 P.O. Box 17  
 6130 AA Sittard  
**NETHERLANDS**  
 Tel: +31 46 420 22 58  
 Fax: +31 46 452 82 60  
 E-mail: h.vreuls@senternovem.nl
156. Helen PLUME H  
 Ministry for the Environment  
 P.O. Box 10-362  
 Wellington 6001  
**NEW ZEALAND**  
 Tel: +644 439 7627  
 Fax: +644 439 7700  
 E-mail: helen.plume@mfe.govt.nz
157. Howard LARSEN  
 Ministry for the Environment  
 P.O. Box 10362  
 Wellington 6001  
**NEW ZEALAND**  
 Tel: +64 4 439 7417  
 Fax: +64 4 439 7700  
 E-mail: howard.larsen@mfe.govt.nz

158. Abdoul Karim TRAORE H  
 Direction de la Météorologie Nationale  
 BP 218  
 Niamey  
**NIGER**  
 Tel: +227 732 160 / 734 992  
 Fax: +227 733 837  
 E-mail: traore.karim@caramail.com
159. Ejike J. ALOZIE  
 Nigerian Meteorological Agency  
 P.M.B. 1215, Oshodi  
 Lagos  
**NIGERIA**  
 Tel: +234 1555 6821/22  
 Fax: +234 1 555 6821/23  
 E-mail: alozieje@yahoo.com
160. Samuel Ojo GBUYIRO  
 Nigerian Meteorological Agency  
 P.M.B. 1215, Oshodi  
 Lagos  
**NIGERIA**  
 Tel: +234 1 555 6821/22  
 Fax: +234 1 555 6821/22  
 E-mail: samuel\_gbuyiro@yahoo.com
161. Øyvind CHRISTOPHERSEN H  
 Norwegian Pollution Control Authority  
 Post Box 8100 Dep  
 0032 Oslo  
**NORWAY**  
 Tel: +4722 57 37 24  
 Fax: +4722 67 67 06  
 E-mail: oyvind.christophersen@sft.no
162. Shahzad IQBAL H  
 Ministry of Environment  
 CDA Block 4, Civic Center, G-6  
 Islamabad  
**PAKISTAN**  
 Tel: +92 51 920 2725  
 Fax: +92 51 920 5287  
 E-mail: shahzadiqbal@yahoo.com
163. José D. HURTADO FUDINAGA H  
 Ministry of Foreign Affairs  
 Lampa 545  
 Lima 1  
**PERU**  
 Tel: +511 311 2631  
 Fax: +511 311 2628  
 E-mail: dhurtado@ree.gob.pe
164. Eduardo CALVO B  
 Jr. Nicanor Arteaga 549  
 San Borja  
 Lima 41  
**PERU**  
 Tel: +511 346 2299  
 Fax: +511 346 2299  
 E-mail: ecalvo@terra.com.pe  
 e13calvo@hotmail.com
165. Raquel FRANCISCO H  
 Philippine Atmospheric, Geophysical &  
 Astronomical Services Administration  
 (PAGASA)  
 WFFG -PAGASA Building  
 Diliman, Quezon City  
**PHILIPPINES**  
 Tel: +632 920 4052  
 Fax: +632 920 4070  
 E-mail: raquelfrancisco2001@yahoo.com
166. Anna OLECKA H  
 Institute of Environmental Protection  
 National Emission Centre  
 Kolektorska 4  
 Warszawa 01-692  
**POLAND**  
 Tel: +48 22 833 4241 x 40  
 Fax: +48 22 833 6928  
 E-mail: anna.olecka@ios.edu.pl
167. Won-Tae KWON H  
 Korea Meteorological Administration  
 460-18, Sindaebang-dong, Dongjak-gu  
 Seoul 156-042  
 REPUBLIC OF KOREA  
 Tel: +82 2 846 2852  
 Fax: +82 2 846 2853  
 E-mail: wontk@metri.re.kr
168. Jae-Cheon CHOI  
 Korea Meteorological Administration  
 460-18, Sindaebang-dong, Dongjak-gu  
 Seoul  
 REPUBLIC OF KOREA  
 Tel: +82 2 2181 0823  
 Fax: +82 2 2181 0839  
 E-mail: jcchoi@kma.go.kr
169. Young-Eun CHOI  
 Konkuk University  
 Department of Geography  
 1 Hwayang-dong  
 Kwanjang-dong  
 Seoul  
**REPUBLIC OF KOREA**  
 Tel: +82 2 450 3447  
 Fax: +82 2 3436 5433  
 E-mail: yechoi@konkuk.ac.kr
170. Valeriu CAZAC H  
 The State Hydrometeorological Service  
 193 Grenoble Str.  
 MD 2043 Chisinau  
**REPUBLIC OF MOLDOVA**  
 Tel: +37322 773 611  
 Fax: +37322 773 529  
 E-mail: cazac@cni.md  
 valeriucazac@hotmail.com



171. Vlad TRUSCA H  
Ministry of Environment & Water Management  
12 Libertatii Blvd  
040129 Bucharest  
**ROMANIA**  
Tel: +40 21 316 2220  
Fax: +4021 316 0298  
E-mail: vlad.trusca@mmediu.ro
172. Yuri A. IZRAEL B  
**Vice-chair**  
Institute of Global Climate & Ecology  
Glebovskaya Street 20B  
107258 Moscow  
**RUSSIAN FEDERATION**  
Tel: +7095 169 2430  
Fax: +7095 160 0831  
E-mail: yu.izrael@g23.relcom.ru
173. Anna ROMANOVSKAYA  
Institute of Global Climate & Ecology  
Glebovskaya Street 20B  
107258 Moscow  
**RUSSIAN FEDERATION**  
Tel: +7 095 169 2198  
Fax: +7 095 160 0831  
E-mail: an\_roman@mail.ru  
ARomanovskaya@comail.ru
174. Didace MUSONI H  
Rwanda Meteorological Services  
B.P. 898  
Kigali  
**RWANDA**  
Tel: +250 575 813 / 08 502 319  
Fax: +250 585 755  
E-mail: meteo@rwanda1.com
175. Crispin D AUVERGNE H  
Ministry of Physical Development,  
Environment and Housing  
P.O. Box 709  
Castries  
**SAINT LUCIA**  
Tel: +1 758 451 8746  
Fax: +1 758 453 0781  
E-mail: cdauvergne@planning.gov.lc
176. Reima LELEIMALEFAGA H  
Ministry of Natural Resources,  
Environment & Meteorology  
Meteorology Office  
P.O. Box 3020  
Apia  
**SAMOA**  
Tel: +685 20855  
Fax: +685 21341  
E-mail: rleimalefaga@meteorology.gov.ws
177. Aderito M. FERNANDES SANTANA H  
Instituto Nacional de Meteorologia  
CP 30  
Sao Tome  
**SAO TOME AND PRINCIPE**  
Tel: +239 221 975  
Fax: +239 221 975  
E-mail: aderitosantana@hotmail.com
178. Khalid M. ABU-ALEIF  
Ministry of Petroleum and Mineral Resources  
P.O. Box 8710  
Dhahran 31311  
**SAUDI ARABIA**  
Tel: +966 3 874 7003  
Fax: +966 3 873 6693  
E-mail: khalid.abuleif@mopm.gov.sa
179. Ahmad M. AL-ABDULKADER  
KACST - 6086  
Riyadh 11442  
**SAUDI ARABIA**  
Tel: +966 1 481 3302  
Fax: +966 1 481 3611  
E-mail: akader@kacst.edu.sa
180. Abdelaziz H. AL-BASSAM  
Ministry of Finance  
P.O. Box 29254  
Riyadh 11457  
**SAUDI ARABIA**  
Tel: +966 1 405 7437  
Fax: +966 1405 7537  
E-mail: azbssam@hotmail.com
181. Mohammed S. AL-SAHAFI  
P.O. Box 6649  
Jeddah 21452  
**SAUDI ARABIA**  
Tel: +966 2 651 2312  
Fax: +966 2 651 7832  
E-mail: malsahafi@pme.gov.sa
182. Sameer A. BUKHARI  
Presidency of Meteorology & Environment  
(PME)  
P.O. Box 12871  
Jeddah 21483  
**SAUDI ARABIA**  
Tel: +966 2 651 1018  
Fax: +966 2 651 8960  
E-mail: dr\_bukhari@yahoo.com
183. Taha M. ZATARI B  
Presidency of Meteorology & Environment  
(PME)  
P.O. Box 6089  
Jeddah 21442  
**SAUDI ARABIA**  
Tel: +966 5 555 20344  
Fax: +966 2 6518887  
E-mail: taha@pme.gov.sa  
tahazat@yahoo.com

184. Fareed AL-ASALY  
REP  
P.O. Box 989  
Dhahran 31311  
**SAUDI ARABIA**  
Tel: +966 5068 29558  
Fax:  
E-mail: alasayfs@yahoo.com
185. CherifDIOP  
Senegal Meteorological Service  
Ministère du Tourisme et des Transports  
Aériens & Transport  
Aéroport Leopold Sedar Sanghor  
BP 8257  
Dakar-Yoff  
**SENEGAL**  
Tel: +221 869 5339  
Fax: +221 820 1327  
E-mail: cherifdiop@yahoo.fr
186. Branko ZIVLAK  
Hydrometeorological Institute of Serbia  
Omladinskih Brigada 1  
11.070 N. Belgrade  
**SERBIA AND MONTENEGRO**  
Tel: +381 112 545 240  
Fax: + 381 11 3537847  
E-mail: zivlak@hidmet-sr.gov.yu
187. TommyBRAIMA  
Meteorological Department  
F-18 Charlotte Street  
Freetown  
**SIERRA LEONE**  
Tel: +232 22 22 3871  
Fax: +232 22 22 4439  
E-mail: braimatommy@yahoo.com
188. Ogunlade DAVIDSON  
**Co-chair WG III**  
Faculty of Engineering  
University of Sierra Leone  
Private Mail Bag  
Freetown  
**SIERRA LEONE**  
Tel: +232 22 226325  
Cell: +232 76 670933  
Fax: +232 22 224260  
E-mail: ogunlade@sierratel.sl  
ogunladedavidson@hotmail.com
189. Andrej KRANJC  
Ministry of the Environment,  
Spatial Planning & Energy  
Dunajska c. 48  
1000 Ljubljana  
**SLOVENIA**  
Tel: +386 1 478 7434  
Fax: +386 1 478 7419  
E-mail: andrej.kranjc@gov.si
190. Lucka KAJFEZ-BOGATAJ  
University of Ljubljana  
Biotechnical Faculty  
Jamnikarjeva 101  
SI-1000 Ljubljana  
**SLOVENIA**  
Tel: +386 1 4231161  
Fax: +386 1 4231088  
E-mail: lucka.kajfez.bogataj@bf.uni-lj.si
191. Jonas MPHEPYA  
South African Weather Service  
Private Bag X097  
Pretoria 0001  
**SOUTH AFRICA**  
Tel: +27 12 367 6138  
Fax: +27 12 367 6205  
E-mail: jonasmphepya@weathersa.co.za
192. Bhawoodien PARKER  
South African Weather Service  
P.O. Box 320  
Stellenbosch  
**SOUTH AFRICA**  
Tel: +27 21 888 2624  
Fax: +27 21 888 2688  
E-mail: baparker@weathersa.co.za
193. Takalani B. THOVHAKALE  
Department of Environmental Affairs &  
Tourisme  
Private Bag X447  
Pretoria 0001  
**SOUTH AFRICA**  
Tel: +27 12 310 3365  
Fax: +27 12 320 0448  
E-mail: btovhakare@deat.gov.za
194. Concepcion MARTINEZ-LOPE  
Spanish Bureau for Climate Change  
Ministry of Environment  
Plaza San Juan de la Cruz, s/n  
E-28071 Madrid  
**SPAIN**  
Tel: +34 91 597 6781  
Fax: +34 91 597 5950/5982  
E-mail: cmlope@mma.es
195. Sara AAGESEN  
Oficina Española de Cambio Climatico  
Ministerio de Medio Ambiente  
Plaza San Juan de la Cruz, s/n  
E-28071 Madrid  
**SPAIN**  
Tel: +34 91 597 6732  
Fax: +34 91 597 5982  
E-mail: saagesen@mma.es

196. Maria J. SANZ  
Fundación CEAM  
Parque Tecnológico  
C/Charles H. Darwin 14  
E-46980 Paterna (Valencia)  
**SPAIN**  
Tel: +34 96 131 8227  
Fax: +34 96 131 8190  
E-mail: mjose@ceam.es
197. Gardi H.P. DHARMARATNA H  
Department of Meteorology  
No. 383 Baudhaloka Mawatha  
Colombo 7  
**SRI LANKA**  
Tel: +94 11 269 4104  
Fax: +94 11 269 8311  
E-mail: gdharmaratna@yahoo.com
198. Mohan MUNASINGHE B  
**Vice-chair**  
MIND  
10, De Fonseka Place  
Colombo 5  
**SRI LANKA**  
Tel: +94 11 2500289  
Fax: +94 11 255 1608  
E-mail: mohan-MIND@Eureka.Lk
199. Salah Eldin HAKIM H  
Higher Council for Environment & Natural  
Resources (HCENR)  
P.O. Box 10488  
Khartoum  
**SUDAN**  
Tel: +249 9 1111 3832  
Fax:  
E-mail: hcenr@sudanmail.net
200. Ismail A. ELGIZOULI B  
Higher Council for Environment & Natural  
Resources (HCENR)  
P.O. Box 10488  
Khartoum  
**SUDAN**  
Tel: +249 183 787617/249 912 252612 (mob)  
Fax: +249 183 787617 /777 017  
E-mail: elgizouli@yahoo.com  
hcenr@sudanmail.net
201. Duduzile NHLENGETHWA H  
National Meteorological Service  
P. O. Box 58  
Mbabane H100  
**SWAZILAND**  
Tel: +268 404 5728  
Fax: +268 404 1530  
E-mail: dudu@swazimet.gov.sz
202. Marianne LILLIESKOLD H  
Swedish Environmental Protection Agency  
SE 10648 Stockholm  
**SWEDEN**  
Tel: +46 8 698 1269  
Fax: +46 8 698 1664  
E-mail:  
marianne.lillieskold@naturvardsverket.se
203. Matthias LUNDBLAD  
Swedish Environmental Protection Agency  
SE 10648 Stockholm  
**SWEDEN**  
Tel: +46 8 698 1159  
Fax:  
E-mail: mattias.lundblad@naturvardsverket.se
204. José ROMERO H  
Bundesamt für Umwelt (BAFU)  
Division des Affaires internationales  
Papiermühlestrasse 172, Ittigen  
CH-3003 Bern  
**SWITZERLAND**  
Tel: +41 31 322 6862  
Fax: +41 31 323 0349 or + 322 9981  
E-mail: jose.romero@bafu.admin.ch
205. Khaled JBOUR H  
Ministry of Local Administration & Environment  
Mazraa St.  
P.O. Box 3773  
Damascus  
**SYRIAN ARAB REPUBLIC**  
Tel: +963 11 446 5905  
Fax: +963 11446 1079  
E-mail: env-min@net.sy  
sezka@yahoo.com
206. Ilhom RAJABOV H  
State Committee on Environmental Protection  
and Forestry  
Shevchenko Street 47  
Dushanbe 734025  
**TAJIKISTAN**  
Tel: +992 372 276 181  
Fax: +992 372 276 181  
E-mail: ilhomrajabov@mail.ru
207. Natarika COOPER H  
Ministry of Natural Resources & Environment  
Office of Natural Resources & Environmental  
Policy & Planning  
60/1 Soi Phibun Wattana 7  
Rama VI Road, Phayatai District  
Bangkok 10400  
**THAILAND**  
Tel: +662 265 6612  
Fax: +662 265 6602  
E-mail: natarika@onep.go.th

208. Kansri BOONPRAGOB B  
 Department of Biology - Faculty of Science  
 Ramkhamhaeng University  
 Thanon Ramkhamhaeng, Hau Mak  
 Bangkok  
 Bangkok 10240  
**THAILAND**  
 Tel: +66 2 310 8395  
 Fax: +66 2 310 8395  
 E-mail: kansri@ram1.ru.ac.th  
 bkansri@hotmail.com
209. Jesada LUANGJAME  
 Royal forest Department  
 61, Phaholyothin Road  
 Bangkok 10900  
**THAILAND**  
 Tel: +662 940 6586  
 Fax: +662 579 9576  
 E-mail: jesada@mozart.inet.co.th
210. Natasa MARKOVSKA H  
 Research Centre for Energy, Informatics and  
 Materials  
 Macedonian Academy of Sciences and Arts  
 St. K. Misirkov 2  
 P.O. Box 428  
 1000 Skopje  
**THE FORMER YUGOSLAV REPUBLIC  
 OF MACEDONIA**  
 Tel: +389 2 3235 427  
 Fax: +389 2 3235 423  
 E-mail: natasa@manu.edu.mk
211. Tata AMEGBOH H  
 Direction de l'Environnement  
 Ministère de l'Environnement et  
 des Ressources Forestières  
 B.P. 4825  
 Lomé  
**TOGO**  
 Tel: +228 221 2897  
 Fax: +228 221 0333  
 E-mail: tjamegboh@yahoo.fr
212. Ezekiel SAMPSON H  
 T&T Meteorological Services  
 South Terminal, Piarco Airport  
 P.O. Box 3141  
 National Mail Centre  
 Piarco  
**TRINIDAD AND TOBAGO**  
 Tel: +1 868 669 5465  
 Fax: +1 868 669 4009  
 E-mail: dirmet@tstt.net.tt
213. ChedlyBEN MHAMED H  
 Institut National de la Météorologie  
 BP 156  
 2035 Tunis-Carthage  
**TUNISIA**  
 Tel: +216 71 773 400  
 Fax: +216 71 772 609  
 E-mail: ben\_mhamed@meteo.tn
214. Irina ATAMURADOVA H  
 Ministry of Nature Protection  
 15 Bitarap Turkmenistan St.  
 Ashgabat  
**TURKMENISTAN**  
 Tel: +99312 398703  
 Fax: +99312 356621  
 E-mail: atamuradova@yandex.ru  
 ira-ccoffice@online.tm
215. Stephen A.K.MAGEZI H  
 Department of Meteorology  
 P.O. Box 7025  
 Kampala  
**UGANDA**  
 Tel: +256 41 251 798  
 Fax: +256 41 251797  
 E-mail: stephen.magezi@meteo-uganda.net
216. Viacheslav LIPINSKY H  
 State Hydrometeorological Service  
 6 Zolotovorotskaya Street  
 01034 Kiev 34  
**UKRAINE**  
 Tel: +380 44 239 9333  
 Fax: +380 44 278 1375  
 E-mail: lipins@ukrweather.kiev.ua
217. David WARRILOW H  
 Dept. for Environment, Food & Rural Affairs  
 Global Atmosphere Division  
 3/B3 - Ashdown House  
 123 Victoria Street  
 London SW1E 6DE  
**UNITED KINGDOM**  
 Tel: +44 20 7082 8149  
 Fax: +44 20 7082 8143  
 E-mail: david.warrillow@defra.gsi.gov.uk
218. James DAVEY  
 Dept. for Environment, Food & Rural Affairs  
 Global Atmosphere Division  
 3/A1 - Ashdown House  
 123 Victoria Street  
 London SW1E 6DE  
**UNITED KINGDOM**  
 Tel: +44 20 7082 8920  
 Fax: +44 20 7082 8151  
 E-mail: james.davey@defra.gsi.gov.uk

219. Cinzia LOSENNO  
Dept. for Environment, Food & Rural Affairs  
Global Atmosphere Division  
Ashdown House  
123 Victoria Street  
London SW1E 6DE  
**UNITED KINGDOM**  
Tel: +44 20 7082 8153  
Fax: +44 20 7082 8151  
E-mail: cinzia.losenno@defra.gsi.gov.uk
220. Martin PARRY B  
**Co-chair WG II**  
Hadley Centre  
Met Office, Fitzroy Road  
Exeter EX1 3PB  
**UNITED KINGDOM**  
Tel: +44 1986 781437  
Fax: +44 1986 781437  
E-mail: parryml@aol.com
221. Jim PENMAN  
Dept. for Environment, Food & Rural Affairs  
Global Atmosphere Division  
3/A1, Ashdown House  
123 Victoria Street  
London SW1E 6DE  
**UNITED KINGDOM**  
Tel: +44 20 7082 8152  
Fax: +44 20 7082 8151  
E-mail: jim.penman@defra.gsi.gov.uk
222. Deusdedit A. KASHASHA H  
Tanzania Meteorological Agency  
P.O. Box 3056  
Dar Es Salaam  
**UNITED REPUBLIC OF TANZANIA**  
Tel: +255 22 246 0706  
Fax: +255 22 246 0718  
E-mail: dkashasha@yahoo.co.uk
223. Harlan WATSON H  
Oceans, Environmental and Scientific Affairs  
US Department of State  
2201 C Street N.W.  
Room 4330  
Washington D.C. 20520-7818  
**USA**  
Tel: +1 202 647 1555  
Fax: +1 202 647 3970  
E-mail: watsonhl@state.gov
224. William HOHENSTEIN  
US Department of Agriculture  
Room 112-A, Whitten Federal Building  
1400 Independence Avenue, SW  
Washington, D.C. 20250-3810  
**USA**  
Tel: +1 202 720 6698  
Fax: +1 202 401 1176  
E-mail: whohenst@oce.usda.gov
225. Nancy HOLT  
US Department of State  
Office of Global Change  
2201 C Street N.W.  
Washington D.C. 20520  
**USA**  
Tel: +1 202 647 2425  
Fax: +1 202 647 0191  
E-mail: holtne@state.gov
226. William IRVING  
US Environmental Protection Agency  
1200 Pennsylvania Ave. N.W.  
Washington D.C. 20460  
**USA**  
Tel: +1 202 343 9065  
Fax: +1 202 343 2753  
E-mail: irving.bill@epa.gov
227. Susan SOLOMON B  
**Co-chair WG I**  
NOAA Aeronomy Laboratory  
Mailstop R/AL, Room 3A127  
Boulder, CO 80305-3328  
**USA**  
Tel: +1 303 497 3483  
Fax: +1 303 497 5686  
E-mail: ssolomon@al.noaa.gov
228. Trigg TALLEY  
Office of Global Change, Room 4330  
US Department of State  
2201 C Street N.W.  
Washington DC 20520  
**USA**  
Tel: +1 202 647 3984  
Fax: +1 202 647 0191  
E-mail: talleyt@state.gov
229. Magdalena PREVE H  
Climate Change Unit  
Ministry of Housing, Land Planning &  
Environment  
Galicia 1133, 3rd floor  
Montevideo  
**URUGUAY**  
Tel: +598 2 9170710 ext 4310  
Fax: +598 2 9170710 ext 4321  
E-mail: mpreve@ozono.gub.uy
230. Tatyana OSOSKOVA H  
Main Administration of Hydrometeorology  
72 K Makhsumov Street  
Tashkent 700052  
**UZBEKISTAN**  
Tel: +998 71 133 6117 / 136 0758  
Fax: +998 71 133 2025  
E-mail: ososkova@meteo.uz

231. Miriam DIAZ H  
 CIEZA - UNEFM  
 Universidad Francisco de Miranda  
 & Ministerio del Ambiente  
 Calle Maparan  
 Coro - Edo. Falcon 4101  
 Caracas  
**VENEZUELA**  
 Tel: +55 268 25133776  
 Fax: +58 268 252 4922  
 E-mail: mdiaz54@cantv.net
232. Washington ZHAKATA H  
 Climate Change Office  
 Ministry of Environment and Tourism  
 P. Bag 7753  
 Causeway  
 Harare  
**ZIMBABWE**  
 Tel: +263 4 701 681-5  
 Fax: +263 4 702 758  
 E-mail: climate@ecoweb.co.zw
- COORDINATING LEAD AUTHORS**
233. Amit GARG  
 (INDIA)  
 UNEP Risoe Centre (temporary until Nov. 2006)  
 P.O. Box 49  
 DK-4000 Roskilde  
 Denmark  
 Tel: +45 4677 5169  
 Fax: +45 4632 1999  
 E-mail: amit.garg@risoe.dk
234. Jochen HARNISCH  
 Ecofys GmbH  
 Landgrabenstrasse 94  
 D-90443 Nürnberg  
 Germany  
 Tel: +49 911 99 44 677  
 Fax: +49 911 99 44 678  
 E-mail: j.harnisch@ecofys.de
235. Newton PACIORNIK  
 Ministry of Science and Technology  
 Praia do Flamengo 200 - 24ºAnd.  
 22210-901 Rio de Janeiro - RJ  
 Brazil  
 Tel: +55 21 2555 0308  
 Fax: +55 21 2555 0202/0306  
 E-mail: newton@finep.gov.br
236. Keith PAUSTIAN  
 Colorado State University  
 NREL, Colorado State University  
 Ft. Collins, CO, 80523  
 USA  
 Tel: +1 970 491 1547  
 Fax: +1 970 491 1965  
 E-mail: keithp@nrel.colostate.edu
237. Riitta PIPATTI  
 Statistics Finland  
 P.O.Box 6A  
 FIN-00022 Tilastokeskus  
 Finland  
 Tel: +358 9 1734 3543  
 Fax: +358 9 1734 3429  
 E-mail: Riitta.Pipatti@stat.fi
238. Tinus PULLES  
 TNO Built Environment & Geosciences  
 Laan van Westenenk 501  
 7334 DT Apeldoorn  
 Netherlands  
 Tel: +31 55 549 3762  
 Fax: +31 55 549 3252  
 E-mail: Tinus.Pulles@tno.nl
239. Nijavalli H. RAVINDRANATH  
 Centre for Ecological Sciences  
 Indian Institute of Sciences  
 Bangalore 560 012  
 India  
 Tel: +9180 2360 1455/2334 1838  
 Fax: +9180 2360 1428/2360 0683  
 E-mail: ravi@ces.iisc.ernet.in
240. Kristin RYPDAL  
 Center for International Climate and  
 Environmental Research (CICERO)  
 P.O. Box 1129 Blindern  
 N-0318 Oslo  
 Norway  
 Tel: +47 22 85 87 80  
 Fax: +47 22 85 87 51  
 E-mail: kristin.rypdal@cicero.uio.no
241. Tim SIMMONS  
 Avonlog Ltd.  
 49 Headley Chase  
 Brentwood, Essex CM14 5DH  
 United Kingdom  
 Tel: +44 1277 222 125  
 Fax:  
 E-mail: tim@avonlog.net
242. Andre VAN AMSTEL  
 Wageningen University, Environmental  
 Systems Analysis  
 P.O. Box 47  
 NL 6700 AA Wageningen  
 Netherlands  
 Tel: +31 317 484812  
 Fax: +31 317 484839  
 E-mail: andre.vanamstel@wur.nl

243. Sonia Maria M. VIEIRA  
**CETESB**  
 Av. Prof. Frederico Hermann Jr., 345  
 SP 05489 - 900 Sao Paulo  
 Brazil  
 Tel: +55 11 3872 6525  
 Fax: +55 11 3872 6525  
 E-mail: soniav@ipt.br  
 soniammv@terra.com.br
244. Michael L. GYTARSKY  
 Institute of Global Climate and Ecology  
 20-B Glebovskaya Str  
 107258 Moscow  
 Russian Federation  
 Tel: +7 095 169 2198  
 Fax: +7 095 160 0831  
 E-mail: Mike.Gytarsky@g23.relcom.ru

#### **ORGANIZATIONS**

245. Alexander ALUSA  
**United Nations Environment Programme**  
 Division of Environmental Conventions  
 P.O. Box 30552  
 Nairobi  
 KENYA  
 Tel: +254 20 62 3455  
 Fax: +254 20 7624255  
 E-mail: alex.alusa@unep.org
246. Hong YAN  
 Deputy Secretary-General  
**World Meteorological Organization**  
 P.O. Box 2300  
 1211 Geneva 2  
 SWITZERLAND  
 Tel: +41 22 730 8230  
 Fax: +41 22 730 8  
 E-mail: dsgo@wmo.int
247. Halldor THORGEIRSSON  
**UNFCCC**  
 Climate Change Secretariat  
 P.O. Box 260 124  
 D-53153 Bonn  
 GERMANY  
 Tel: +49 228 815 1424  
 Fax: +49 228 815 1999  
 E-mail: hthorgeirsson@unfccc.int
248. Ravina BRIZMOHUN  
**UNDP GEF Small Grants Programme**  
 Anglo-Mauritius House  
 P.O. Box 253  
 Port Louis  
 MAURITIUS  
 Tel: +230 208 24 16  
 Fax: +230 208 48 71  
 E-mail: ravina.brizmohun@undp.org
249. Lars MULLER  
**European Commission**  
 DG Environment  
 BU 5 02/158  
 9, rue de la Loi  
 B-1160 Brussels  
 BELGIUM  
 Tel: +32 2 2299 0565  
 Fax: +32 2 2296 9970  
 E-mail: lars.muller@cec.eu.int
250. Pynee CHELLAPERMAI  
**CEDREFI**  
 P.O. Box 91  
 Rose Hill  
 MAURITIUS  
 Tel: +230 465 5036  
 Fax: +230 465 1422  
 E-mail: pynee@mu.refer.org
251. Kheswar B. PANRAY  
**Environmental Protection and Conservation Organisation**  
 EPCO  
 75, Chevreau Lane, Coastal Lane  
 Calodyne Grand Gaube  
 MAURITIUS  
 Tel: +230 2820423  
 Fax: +230 282 0423  
 E-mail: kheswar@intnet.mu
252. Jusswan tsing NOBUTSING  
**Friends of the Earth**  
 1st floor Beeltah House  
 St. Jean Road  
 Quatres Bornes  
 MAURITIUS  
 Tel: +230 696 1152  
 Fax:  
 E-mail: maudesco@intnet.mu
253. Robert Mc FADDEN  
**GHG Associates**  
 5902 Mt. Eagle Drive, Suite 1415  
 Alexandria, VA 22303  
 USA  
 Tel: +1 703 329 0780  
 Fax: +1 703 329 9630  
 E-mail: mcfadden-ghg@att.net
254. Mhairi DUNLOP  
**Greenpeace International**  
 Otto Heldringstraat 5  
 1066 AZ Amsterdam  
 NETHERLANDS  
 Tel: +44 7801 212960  
 Fax: +44 20 7865 8200  
 E-mail: mdunlop@diala.greenpeace.org

255. Gabriela von GOERNE  
**Greenpeace International**  
 Grosse Elbstrasse 39  
 22767 Hamburg  
 GERMANY  
 Tel: +49 40 30618 352  
 Fax: +49 40 30631 152  
 E-mail: gabriela.goerne@greenpeace.de
256. William HARE  
**Greenpeace International**  
 PIK  
 Telegrafenberg A31  
 P.O. Box 601203  
 Potsdam  
 GERMANY  
 Tel: +49 331 288 2412  
 Fax: +49 331 288 2570  
 E-mail: hare@pik-potsdam.de
257. Stephanie TUNMORE  
**Greenpeace U.K.**  
 Canonbury Villas  
 London N1 2PN  
 UNITED KINGDOM  
 Tel: +44 207 865 8211  
 Fax: +44 207 865 8200  
 E-mail: stephanie.tunmore@uk.greenpeace.org
258. HaroonKHESHGI  
**(IPIECA)**  
 Exxon Mobil Research and Engineering  
 Company  
 Route 22 East  
 Clinton Township  
 Annandale, NJ 08801  
 USA  
 Tel: +1 908 730 2531  
 Fax: +1 908 730 3301  
 E-mail: haroon.s.kheshgi@exxonmobil.com
259. Katherine ABEND  
**Union of Concerned Scientists**  
 1707 H Street NW, suite 600  
 Washington DC 20006-3962  
 USA  
 Tel: +1 202 223 6133  
 Fax: +1 202 223 6162  
 E-mail: kabend@ucsusa.org
260. Brenda EKWURZEL  
**Union of Concerned Scientists**  
 1707 H Street NW, suite 600  
 Washington DC 20006-3962  
 USA  
 Tel: +1 202 331 5443  
 Fax: +1 202 223 6162  
 E-mail: bekwurzel@ucsusa.org

## TECHNICAL SUPPORT UNITS

261. Martin MANNING  
**Head, IPCC WG I Technical Support Unit**  
 NOAA Aeronomy Laboratory  
 325 Broadway, R/AL8  
 Boulder, CO 80305  
 USA  
 Tel: +1 303 497 4479 (direct)  
 Fax: +1 303 497 5686  
 E-mail: mmanning@al.noaa.gov
262. Melinda TIGNOR  
**IPCC WG I Technical Support Unit**  
 NOAA Aeronomy Laboratory  
 325 Broadway, R/AL8  
 Boulder, CO 80305  
 USA  
 Tel: +1 303 497 7072(direct)  
 Fax: +1 303 497 5628  
 E-mail: tignor@ucar.edu
263. Kristen AVERYT  
**IPCC WG I Technical Support Unit**  
 NOAA Aeronomy Laboratory  
 325 Broadway, R/AL8  
 Boulder, CO 80305  
 USA  
 Tel: +1 303 497 4885  
 Fax: +1 303 497 5628  
 E-mail: averyt@ucar.edu
264. Melinda MARQUIS  
**IPCC WG I Technical Support Unit**  
 NOAA Aeronomy Laboratory  
 325 Broadway, R/AL8  
 Boulder, CO 80305  
 USA  
 Tel: +1 303 497 4487  
 Fax: +1 303 497 5628  
 E-mail: marquis@ucar.edu
265. Henry LeRoy MILLER  
**IPCC WG I Technical Support Unit**  
 NOAA Aeronomy Laboratory  
 325 Broadway, R/AL8  
 Boulder, CO 80305  
 USA  
 Tel: +1 303 497 7072(direct)  
 Fax: +1 303 497 5628  
 E-mail: henry.leroy.miller@noaa.gov
266. Jean PALUTIKOF  
**Head, IPCC WG II Technical Support Unit**  
 Hadley Centre for Climate Prediction and  
 Research  
 Met Office, Fitzroy Road  
 Exeter EX1 3PB  
 UNITED KINGDOM  
 Tel: +44 1344 856 212  
 Fax: +44 1344 856 912  
 E-mail: jean.palutikof@metoffice.gov.uk



267. Clair HANSON  
**IPCC WG II Technical Support Unit**  
 Hadley Centre for Climate Prediction & Research  
 Met Office, Fitzroy Road  
 Exeter EX1 3PB  
 UNITED KINGDOM  
 Tel: +44 1392 886 888  
 Fax: +44 1392 885681  
 E-mail: clair.hanson@metoffice.gov.uk
268. Leo A. MEYER  
**Head, IPCC WG III Technical Support Unit**  
 Netherlands Environmental Assessment Agency (MNP) at RIVM  
 P.O. Box 303  
 3720 BA Bilthoven  
 NETHERLANDS  
 Tel: +31 30 274 4090  
 Fax: +31 30 274 4464  
 E-mail: leo.meyer@mnp.nl
269. Rutu DAVE  
**IPCC WG III Technical Support Unit**  
 Netherlands Environmental Assessment Agency (MNP) at RIVM  
 P.O. Box 303  
 3720 BA Bilthoven  
 NETHERLANDS  
 Tel: +31 30 274 2926  
 Fax: +31 30 274 4464  
 E-mail: rutu.dave@mnp.nl
270. Simon EGGLESTON  
**Head, Technical Support Unit TFI**  
 National Greenhouse Gas Inventories Programme (NGGIP)  
 c/o Institute for Global Environmental Issues  
 2108-11, Kamiyamaguchi, Hayama  
 Kanagawa 240-0115  
 JAPAN  
 Tel: +81 468 55 3750  
 Fax: +81 468 55 3808  
 E-mail: eggleston@iges.or.jp
271. Leandro BUENDIA  
**Technical Support Unit TFI**  
 National Greenhouse Gas Inventories Programme (NGGIP)  
 c/o Institute for Global Environmental Issues  
 2108-11, Kamiyamaguchi, Hayama  
 Kanagawa 240-0115  
 JAPAN  
 Tel: +81 468 55 3750  
 Fax: +81 468 55 3808  
 E-mail: lbuendia@iges.or.jp
272. Todd NGARA  
**Technical Support Unit TFI**  
 National Greenhouse Gas Inventories Programme (NGGIP)  
 c/o Institute for Global Environmental Issues  
 2108-11, Kamiyamaguchi, Hayama  
 Kanagawa 240-0115  
 JAPAN  
 Tel: +81 468 55 3750  
 Fax: +81 468 55 3808  
 E-mail: ngara@iges.or.jp
273. Kyoko MIWA  
**Technical Support Unit TFI**  
 National Greenhouse Gas Inventories Programme (NGGIP)  
 c/o Institute for Global Environmental Issues  
 2108-11, Kamiyamaguchi, Hayama  
 Kanagawa 240-0115  
 JAPAN  
 Tel: +81 468 55 3750  
 Fax: +81 468 55 3808  
 E-mail: kyoko.miwa@iges.or.jp
274. Kyoto TANABE  
**Technical Support Unit TFI**  
 National Greenhouse Gas Inventories Programme (NGGIP)  
 c/o Institute for Global Environmental Issues  
 2108-11, Kamiyamaguchi, Hayama  
 Kanagawa 240-0115  
 JAPAN  
 Tel: +81 468 55 3750  
 Fax: +81 468 55 3808  
 E-mail: tanabe@iges.or.jp
275. Andy REISINGER  
**Head, Technical Support Unit AR4 SYR**  
 Hadley Centre for Climate Prediction and Research  
 Met Office, Fitzroy Road  
 Exeter EX1 3PB  
 UNITED KINGDOM  
 Tel: +44 7920 296 938  
 Fax: +44 1392 885 681  
 E-mail: andy.reisinger@metoffice.gov.uk
276. Francis HAYES  
**Conference Officer**  
 World Meteorological Organization  
 P.O. Box 2300  
 1211 Geneva 2  
 SWITZERLAND  
 Tel: +41 22 730 8111  
 Fax: +41 22 730  
 E-mail: FHayes@wmo.int

## **IISD REPORTING SERVICES**

277. Langston GOREE  
ENB  
c/o **IISD Reporting Services**  
212E 47th Street 21F  
10017 New York, NY  
USA  
Tel: +1 212 644 0204  
Fax: +1 212 644 0206  
E-mail: enb@iisd.org

278. Ingrid BARNESLEY

279. Alexis CONRAD

280. Sarah STEWART JOHNSON

281. Maria GUTIERREZ

282. Tallash N. KANTAI

## **IPCC SECRETARIAT**

283. Renate CHRIST  
Secretary of the IPCC  
E-mail: RChrist@wmo.int

284. Jian LIU  
Deputy Secretary of the IPCC  
E-mail: Jianliu@wmo.int

285. Rudie BOURGEOIS  
Administrative Assistant  
E-mail: RBourgeois@wmo.int

286. Annie COURTIN  
IPCC Secretariat  
E-mail: ACourtin@wmo.int

287. Joelle FERNANDEZ  
IPCC Secretariat  
E-mail: JFernandez@wmo.int