

International Group of
Funding Agencies for
Global Change Research

IGFA

Meeting Report No. 13

Wenner-Gren Center
Stockholm, Sweden
October 21 - 24, 2001

The goal of the **International Group of Funding Agencies for Global Change Research (IGFA)** is to foster Global Change Research. IGFA is a forum through which national agencies that fund Research on Global Change identify issues of mutual interest and ways to address these through national and when appropriate through coordinated international actions.

Important issues for consideration in IGFA include:

- information exchange about national global change research programs, as well as about supporting initiatives and facilities;
- approaches to the integration and implementation of global change research
- optimal allocations of available resources for global change research and its international coordination;
- infrastructural topics of mutual interest, including data accessibility and observation systems;
- ways to improve the interaction between science and policy; and
- possible fields of action for the future in the light of a constantly changing scientific landscape, e.g. changing scopes of the international research programs.

Additional copies of this report may be obtained upon request from:

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Print: DLR Hausdruckerei, Köln-Porz, Germany

Copies: 150

Bonn, March 2002

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EXECUTIVE SUMMARY

During the IGFA Plenary 2001, representatives from 18 agencies in 14 countries and the EC, from the International Global Change Research Programs WCRP, IGBP, IHDP and DIVERSITAS, and from the Regional Networks START, APN and IAI exchanged information on the funding of global change research and discussed the state of and developments in the international global change research programs. The most important conclusions, recommendations and action items can be summarized as follows*:

National Updates

In general, the funding levels of global change research are stable. In several countries funding levels increased slightly. Global change research is developing a new science infrastructure with ships, aircraft, satellites, institutes and computing facilities. Biodiversity and natural resources related to sustainability are emerging issues.

New Direction in Global Change Science and Implications for IGFA

Berrien Moore (IGBP) gave a stage setting talk on potential scientific challenges for the global change community and for IGFA. WCRP, IGBP, IHDP and DIVERSITAS reported good scientific progress that had been presented at the very successful Global Change Open Science Conference in Amsterdam (July 2001), and outlined the ongoing restructuring and integration of the programs, including the establishment of three Joint Programs on Global Sustainability.

Capacity Building as an Issue for IGFA

The plenary identified a list of challenges and recommendations for IGFA with regard to capacity building. Two major challenges were:

- It is especially important to focus more on maintaining built-up capacity and avoiding brain-drain, and to come away from training individuals (Ph.D.s etc.) to building institutional capacity (universities etc.).
- With regard to regional coverage, there is the need for advancing regional co-operation also for Africa. It was suggested that European countries should play a more active role in promoting and encouraging such co-operation in GCR in Africa.

Future Issues

The session comprised two major topics: international agenda setting and infrastructural issues. There was an extensive discussion on options and alternatives for IGFA to be engaged in scientific priority setting.

- ⇒ It was agreed that the issue of different national priority setting processes should be part of next year's National Updates.
- ⇒ The Staff Group was asked to facilitate the discussion in IGFA on prioritization processes for the next meeting.

* Action items and concrete recommendations are highlighted with the symbol '⇒'.

Unfortunately, only limited time was available for a discussion on infrastructural issues.

- Ⓓ It was agreed that infrastructural issues should be a prominent topic at the next plenary meeting.

Financial Continuity

It was reported that the IGFA 'Statement on the Mode of Operation' had so far been signed by 11 funding agencies, 3 GCR-programs and ICSU. Reminders will be sent to agencies not having responded so far.

IHDP and DIVERSITAS presented their current financial situation. Progress has been achieved towards a prolongation of the basic funding contracts for IHDP. There is the outlook that the IHDP Secretariat will continue its successful work after the end of the current funding period. A discussion about the possibility to create a more formal funding framework for IHDP (comparable to that of IGBP) was launched.

- Ⓓ IHDP was asked to prepare a target budget containing a prioritized list of expenditures felt necessary for fulfilling the Secretariat's tasks and a potential list of contributions by different funding agencies based on some form of contribution scale. This budget should indicate clearly which measures could not be realized if insufficient funding was provided.

It was reported that considerable progress has been made towards a successful re-launch of DIVERSITAS. This progress was made possible by the financial contributions of several IGFA members. It became clear, however, that the next steps of the implementation process could soon be limited by financial constraints.

- Ⓓ DIVERSITAS was asked to prepare a target budget similar to the one discussed for IHDP. This budget should include all financial contributions dedicated to DIVERSITAS.
- Ⓓ IGFA members that up to now have not contributed to the funding of the DIVERSITAS Secretariat were urged to do so.
- Ⓓ The Chair was asked to contact France as a potential host of the central Secretariat, ICSU, UNESCO and the IGFA members, encouraging consultations for stabilizing the long-term operation of the DIVERSITAS Secretariat.

The discussion then broadened and centered around the further development of the overall GCR-funding system. A proposal giving a list consecutive steps for IGFA was presented.

- Ⓓ The Staff Group was asked to prepare appropriate material on that topic for input to the Steering Committee with the objective of providing a set of options for a discussion in IGFA.

Vice Chair

Kazuhiko Takemoto (Japan) was elected Vice Chair of IGFA.

Next meeting

The next IGFA plenary meeting will take place in the United Kingdom from October 23rd – 25th, 2002.

OPENING SESSION

On behalf of the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS) and the Swedish Research Council (Vetenskapsrådet), Uno Svedin welcomed the participants from 18 agencies in 14 countries and the EC as well as the representatives of the International Global Change Research Programs and the Regional Networks to Stockholm.

The Chair of IGFA, Hansvolker Ziegler, gave a short talk setting this 13th IGFA Plenary meeting in its context and introducing the rationale behind the single sessions.

The agenda was adopted.

SESSION 1: NATIONAL UPDATES

In 14 presentations members reported highlights regarding the funding of global change research. In general the funding situation is stable, and slightly positive in several countries. Only one or two countries reported that funding levels are under pressure.

Many representatives announced initiatives for new research programs. There is some widening of the scope of global change research funding. Biodiversity is getting higher on the agenda, though less than might be expected. Issues related to natural resources and sustainability are getting more prominent. Also several countries mentioned a new focus on vulnerability. The regional context of the issues is receiving more attention as well, in some countries and the EC related to development of technology.

Global change research is developing an own landscape of infrastructure. Germany announced the development of a new aircraft and ships. In Germany, Spain, UK, South Africa and Switzerland new research centers are created. The Netherlands, Japan and Germany mentioned new computing facilities. The US and China-Taipei announced new initiatives on satellites/space programs.

During the discussion it was remarked that several issues had hardly been mentioned, such as natural risks and hazards, monitoring, education, health/diseases, the science-policy interface and Rio+10, or new technologies.

In view of the increased attention for regional issues it was noted that more attention should be given to regional cooperation including cooperation in funding.

The chair called for the IGFA members to remain alert to keep funding levels at least stable. The points mentioned above should be kept in mind for future national updates. Specific items that should be addressed are:

- funding perspectives
- trends in science themes
- infrastructural issues
- bi-/multilateral cooperation in funding.

SESSION 2: NEW DIRECTION IN GLOBAL CHANGE SCIENCE AND IMPLICATIONS FOR IGFA

In the beginning of the session, Berrien Moore outlined what he saw as the most pressing challenges in global change research. He pointed out that by the year 2010, relevant institutions will have to be strengthened and there must be more reliable results on some of the 'hard problems', e.g. in the physical system the cloud-water-aerosol feedback and other questions of variability and predictability; and in biogeochemical systems the global carbon cycle and any impact of multiple stresses to ecosystems. With regards to food and water systems he saw the main problem in the fact that the existing institutional setup is not tackling those as a common 'global change' problem but the different quarters are rather trying to defend their turf while food systems and water supply do have truly global dimensions that have to be addressed in an integrated way.

He then presented a set of four basic challenges:

1. What are the most promising technologies and systems for reducing CO₂ emissions? What are the most promising technologies and systems for enhancing CO₂ sequestration? How can these be wisely implemented? What are the road blocks (scientific, technological, institutional, ...)?
2. What changes in human behavior and markets can weaken the coupling between energy consumption and economic activity? How can such changes be realized? What are the road blocks? Are there key regional case studies and/or differences?
3. What are the characteristics of the 'economic stress – ecological degradation' system? How can the negative consequences be avoided?
4. What are the consequences (ecological, health, social, economic, ...) of the growth of Megacities over the next 20-50 years (what is the state of things now)? What can be done to avoid the negative consequences?

He concluded that for reaching the given goals now, solutions to problems will have to be delivered, not only problem definitions.

Thereafter, the program directors of WCRP, IGBP, IHDP, and DIVERSITAS informed IGFA about new directions and new structures, given the fact that internationally organized global change research during the last years had entered a new phase of integration and synthesis. They indicated that the programs had grown together to increasingly tackle policy relevant questions, continuing to 'assemble building blocks', but now also putting them into perspective so that 'the shape of the building can emerge'. The Global Change Open Science Conference in Amsterdam (July 2001) had given an excellent presentation of this growing integration.

The Programs informed IGFA on developments amongst their core projects (e.g. WOCE and IGAC end in 2002, with IGAC II starting in 2003; LUCS ends in 2005). The new Joint Programs on Global Sustainability dealing with research into the fields of food (GECaFS), water, and carbon are envisioned to run until 2010-2012. They will largely act as 'integrators', drawing on the work of existing and new core projects of the GCR programs to address higher level questions.

Reactions by IGFA members were manifold:

- In spite of the research challenges to come, incredible achievements have been made so far (being also the basis for IPCC reports, the Millennium Assessment, and other studies).

-
- Is enough research going on with respect to human behavior (e.g. recreation, transport, households, ...)?
 - What does the integration of research by the international programs mean for IGFA members' institutional structures?
 - Studies of e.g. food and water may need researchers from different science quarters – what kind of funding implications might more applied research therefore bring?
 - Can measures for improving the communication between scientists and policy makers be understood as a 'new instrument'?
 - Taking into account the lead question posed on this subject regarding the need for new funding instruments, it was said another instrument to be applied more widely could be to actually fund the process of problem definition and stakeholder involvement during the initial phases of research projects.

The programs concluded that, while they still will keep carrying out the individual core projects with unchanged enthusiasm, moving towards regionalization, towards integrated joint programs, and towards tackling policy implications will take increasing time, effort, and resources. However, integration will take place where it leads to an advanced understanding of earth system processes, not for its own sake.

▷ Many of the points referred to in this session were addressed in later sessions.

SESSION 3: CAPACITY BUILDING AS AN ISSUE FOR IGFA

Participation of developing countries in global change research, in particular the issue of capacity building, has always been high on IGFA's agenda. The future challenges for global change research, including the emerging concept of sustainability science, have made the issue more important than ever. At the Zürich meeting in 2000 the topic was discussed in several sessions, and it was concluded that reviewing and improving mechanisms and strategies for capacity building in developing countries should be considered among future priority issues for IGFA.

Discussions within IGFA have generally focused around the roles of three main groups with different but related objectives:

- i) Networks dealing with regional co-operation in Global Change Research – START, APN and IAI,
- ii) IGFA member agencies, and
- iii) development aid agencies;

and in particular the interactions and collaboration between them.

Particularly much attention has been paid to promoting better collaboration between IGFA agencies and aid agencies, and IGFA had a special working group on this task from 1994 to 1999. Despite the fact that capacity building is important for both kinds of agencies, collaboration and joint efforts have been very difficult to achieve in practice. Consultations by the working group in a range of countries have shown that real and effective collaboration between IGFA agencies and development aid agencies only exists in very few countries. There have also been efforts to establish contact with multilateral aid agencies (OECD DAC etc.), but unfortunately without much success. The main reason why this kind of collaboration has proven to be so difficult in practice is probably that the rationale for supporting capacity building is quite different for the two types of agencies.

The discussions in Zürich last year revealed that there is lack of a common overview of national capacity building activities, and that there might be a need for better international cooperation and coordination in this area. On this background this session was prepared with the following overriding questions: *What can IGFA and its member agencies learn from the experience in the individual countries? How can we strengthen existing mechanisms together? How can we achieve that science capacity building as a forerunner/driver to development is better accepted?*

National capacity building initiatives – survey results and best practice examples

To get an overview of the strategies and various mechanisms for capacity building in IGFA countries, the Staff Group had conducted a survey prior to the meeting. Carola Röser presented a summary of the results. Dimitri Sudan of the Swiss National Science Foundation (SNSF) and Hans de Boois from The Netherlands Organization for Scientific Research (NWO) gave best practice examples on collaboration between funding agencies and aid agencies.

The survey results show clearly that capacity building is considered a very important issue by IGFA agencies. In general there does not, however, seem to be any clear strategy among funding agencies addressing how to deal with the issue, and effective collaboration with aid agencies is only established in a very few countries.

Capacity building efforts are often not clearly visible because they are usually an inherent part of research projects funded by IGFA member agencies. Projects dedicated especially to capacity building are rare. Exceptions to this have been shown by DFG (Germany), by SNSF (Switzerland), and by NWO (Netherlands). DFG has established a cooperative funding mechanism with the German Ministry for Development and Cooperation, which has unfortunately not been used widely in the context of global change research. SNSF has a special funding scheme operated through a coordinating organ, the Swiss Commission for Research Partnership with Developing Countries (KFPE). This commission has representatives from various stakeholders such as the science community, ministries, SNSF and aid agencies and has the overall task of convincing the Swiss science community and Swiss authorities of the importance of building up and consolidating research capacity in developing countries. The NWO foundation for tropical research (WOTRO) administers development agency funds for research and supporting Ph.D. fellowships, and the development agency additionally funds two large international institutes dedicated to capacity building in the fields of earth sciences and hydrology.

In most countries, scientists from abroad can only apply for funds through a partner institute/researcher in the country of the agency.

Most agencies generally have some priority setting regarding the target region or countries. These special affiliations are often historically grown.

The Regional Networks are often financially supported by IGFA member agencies, but then there is little interaction between agencies and networks with regard to the implementation of projects.

In most countries, apart from the research funding agencies, capacity building is also dealt with in ministries (foreign affairs, development & cooperation etc.) or their respective agencies, in various research councils, or in universities and institutes themselves. Further, national agencies seldom coordinate their efforts with regard to capacity building (the same holds true for their coordination with international organizations). The Swiss KFPE is again an outstanding example.

Criteria or guidelines have been developed in a few cases in order to come to some sort of quality management in capacity building projects. These criteria can be voluntary like the 'Bremen Criteria' in Germany, or compulsory like the guidelines developed by the Swiss KFPE (please contact the IGFA Secretariat or Dimitri Sudan at dsudan@snf.ch for a copy of these guidelines). The principle that projects should include at least one partner also from the country of the agency is applied widely.

Presentations by other in the field

Michael Ståhl of the Swedish International Development Cooperation Agency (SIDA) gave a presentation on SIDA's approaches to research capacity building in developing countries. Like most aid agencies, SIDA concentrates on the poorest countries, and the need for scientific capacity in connection with international conventions is an important rationale for the organization's capacity building efforts. Michael Ståhl strongly emphasized the importance of avoiding brain-drain and maintaining capacity once it has been built up. For this reason, SIDA gives high priority to building up institutions and not only supporting training of individuals through Ph.D. grants etc.

START, the common capacity building instrument of the Programs, and the Regional Networks IAI and APN gave an update on their capacity building efforts. A major highlight is that START has developed a proposal for a decadal program for capacity building for global change science together with the International Foundation for Science (IFS) and the Third World Academy of Sciences (TWAS). Proposed program elements include doctoral fellowships, small research grants, short-term visiting fellowships/scientist awards, intensive workshops, young scientist conferences and overseas institutional affiliation.

Discussion and conclusions

There was a wide-ranging discussion on the challenges and the way forward with regard to capacity building. Main points raised in the discussion were:

- There is a general potential for better linkage between national initiatives and regional/international institutions.
- The collaboration and co-ordination among IGFA agencies and between funding agencies and national and multinational development aid agencies should be improved.
- Stronger attention should be paid to South-South co-operation.
- Developed countries should be encouraged to consider integrating capacity building for global change research in their national science policy and in their agenda with development aid agencies.
- It is especially important to focus more on maintaining built-up capacity and avoiding brain-drain, and to move away from just training individuals (Ph.D.s etc.) to building institutional capacity (universities etc.).
- Capacity building should be driven by the demands of the countries where capacity is being built.
- Co-operation with the private sector should be developed.
- It was suggested that a special partnership approach should be applied:
 - 1) Northern Scientists ↔ Southern Scientists: develop joint research agenda

2) Southern Scientists → Southern Governments: priority for (global change) research in development aid agencies' agenda

3a) Southern Governments → development aid agencies: global change priority in aid relation

3b) IGFA → development aid agencies: partnership in global change research

The Assessment on the Impacts of and Adaptation to Climate Change (AIACC) was suggested as a potential vehicle to bring developing countries and development aid agencies into the international programs.

- With regard to regional coverage, there is the need for advancing regional co-operation also for Africa. It was suggested that European countries should play a more active role in promoting and encouraging such co-operation in GCR in Africa.

▷ Some of the points raised were suggested to be taken up on later occasions.

SESSION 4: FUTURE ISSUES

International agenda setting

The discussions focused on the paper that John Lawton had prepared on 'priority setting in IGFA' and that had been distributed in advance of the meeting (see Appendix A). He recognized that IGFA has a valuable role to play in information exchange between partners involved in global change research, and that this role will remain important for the foreseeable future. He suggested that other fields of science often are able to come to consensus on their overall priorities and in some cases have been able to identify one or two top priorities. This enables these fields to attract major new funding for example for facilities such as the Hubble telescope or CERN.

It was suggested that physicists and astronomers have been successful in developing such support because they (a) are excellent scientists, (b) are well organized, (c) have developed partnerships with funding agencies, and (d) have focused on a small set of high priorities. Global change research has been effective at identifying problems of high scientific and political priority, but perhaps IGFA and the global change research that IGFA promotes would benefit more if global change research were now directed more towards development of solutions to these problems. However, global change research may well be more complex than physics or astronomy because it is multi-disciplinary and has a strong human dimension which these other disciplines lack.

It was recognized in the discussion that development of consensus on key global change research issues and on their priority is important. Berrien Moore in his presentation of the previous day had focused on the need for global change research (supported by IGFA member agencies) to narrow uncertainties in order to be able to deliver policy-relevant information to policy makers. The plenary pointed out that the priorities under consideration involve both priorities for science and priorities specifically for IGFA and its activities. It is important that IGFA member agencies can forcefully make the case to governmental financial authorities and policy makers for the importance of global change research relative to other fields of research it is competing for funds with.

Before engaging in dialogue with policy-makers and our funding sources, it is important to carefully assess and prioritize what can be done. This assessment and priori-

tization process should be responsive to national as well as regional and global needs. Another factor that should be taken into account in prioritization is the need to develop associated capacity building.

The Research Programs pointed to the fact that Programs and funders should work together to move science forward. They suggested to bring together a small group of experts over the next twelve to eighteen months to develop a concept for such a procedure.

In summary, prioritization is important for the future of global change research. It is critical to adopt processes that allow individual agencies to develop priorities and, at the same time, enable IGFA to draw consensus from these priorities where it exists and to develop an appropriate balance between national, bilateral, regional and global pressures for science, funding or policy reasons.

Ⓓ The Staff Group was asked to incorporate the issue of different national priority setting processes in the preparation of next year's National Updates.

IGFA can play a very important role in this prioritization process. It provides a forum for exchange of information and views on priorities, for learning and for discussion, and it can encourage consensus on regional and global priorities when appropriate to do so. It can fulfill such a role in the context of what the scientific community or IGFA member agencies bring to the table, and – in the ideal case – of what both see as a matter of concern. IGFA can identify where priorities exist or are emerging in common and can promote collaboration among funding agencies and scientists to implement these priorities on the appropriate geographical scale.

It was suggested that concerted IGFA action could also assist individual member agencies to leverage their national funding into regional and/or global funding. The prioritization process will be a constantly evolving effort that reflects scientific discoveries and the development of new capabilities.

Ⓓ The Staff Group was asked to facilitate the discussion in IGFA on this subject for the next meeting.

Infrastructural issues

Unfortunately, only limited time was available for a discussion on infrastructural issues. John Marks on behalf of Tom Spence presented the need for a decision by IGFA concerning IGOS matters: Among others, there was the request for supporting a staff person in the IGOS Secretariat shared among the partners. IGFA decided that it was not appropriate to share funding for that post at this point in time.

Ⓓ It was agreed that infrastructural issues should be a prominent topic at the next plenary meeting.

Hansvolker Ziegler suggested that a joint task force might be established together with the Programs to assist IGFA in addressing infrastructural questions.

Ⓓ The Chair will send a letter to IGFA members with a detailed proposal.

SESSION 5: FINANCIAL CONTINUITY

The discussions were focused on the needs of the programs for continuity in funding. The session was initiated by an update on the 'Mode of Operation'. It was reported that the IGFA 'Statement on the Mode of Operation' had been signed by 11 funding

agencies, 3 GCR-programs and ICSU. A reminder will be sent to agencies not having responded yet.

The discussion of the financial situation of the international secretariats was focused on IHDP and DIVERSITAS. Concerning IHDP, it was made clear that progress has been achieved towards a prolongation of the basic funding contracts. There is the very promising outlook that the IHDP Secretariat will continue its successful work after the end of the current funding period. However, there are problems with the smaller financial contributions which some countries make on an *ad hoc*-basis year by year.

To put those contributions on a more reliable and longer term basis, the executive director of IHDP proposed a restructuring of the IHDP funding scheme with the objective to base financial contributions to the Secretariat on a formal framework comparable to the mechanism applied for IGFB.

▷ She was asked to prepare a target budget containing a prioritized list of expenditures felt necessary for fulfilling the Secretariat's tasks and a potential list of contributions by different funding agencies based on some form of contribution scale. It should indicate clearly which measures could not be realized if insufficient funding was provided.

This budget should be the central element of a new initiative aiming at a restructuring of the IHDP funding scheme based on a fair burden sharing. The Chair will be in the lead for such an initiative.

Concerning DIVERSITAS, it was reported that considerable progress has been made towards a successful re-launch of the program. This progress was made possible by the financial contributions of several IGFA members. It became clear, however, that the next steps of the implementation process could soon be limited by financial constraints.

▷ DIVERSITAS was asked to prepare a target budget similar to the one discussed for IHDP. This budget should include all financial contributions dedicated to DIVERSITAS.

▷ IGFA members that up to now have not contributed to the funding of the DIVERSITAS Secretariat were urged to do so. A fair burden sharing should be achieved, based on a formal framework.

▷ The Chair was asked to contact France as a potential host of the central Secretariat, ICSU, UNESCO and the IGFA members, encouraging consultations for stabilizing the long-term operation of the DIVERSITAS Secretariat.

The discussion then broadened and centered around the further development of the overall GCR-funding system. The Chair presented a proposal consisting of five consecutive steps (see Appendix B). The IGFA Plenary considered that the first three steps of this 'ladder' are already in place and are common to all members. The further development should be an important topic during the coming year.

▷ The Staff Group was asked to prepare appropriate material on that topic for input to the Steering Committee with the objective of providing a set of options for a discussion in IGFA.

HOST PROGRAM

One afternoon of the meeting was dedicated to presentations by the host institutions. Representatives from the Swedish Research Council for Environment, Agricultural

Sciences and Spatial Planning (FORMAS) and the Swedish Research Council (Vetenskapsrådet) informed the plenary about latest developments since the restructuring of the Swedish research councils and about special programs of interest to IGFA.

CLOSING SESSION

Election of Vice Chair

Following a proposal from the Steering Committee, Kazuhiko Takemoto (Japan) was elected Vice Chair of IGFA.

Next meeting

NERC offered to host the next plenary meeting from October 23rd – 25th, 2002, in the United Kingdom.

Closing

The Chair concluded the meeting by giving a brief summary of major conclusions and expressing his thanks to the participants, the hosts, and everyone who had played a role in organizing the meeting.

A) PRIORITY SETTING IN IGFA

A Discussion Document (John Lawton, NERC, 4 September 2001)

IGFA has a valuable role to play in information exchange between partners involved in global change research. This role will remain important for the foreseeable future. The question is whether IGFA could do more than this? Could IGFA, for example, play a part in setting international research priorities on global change issues? That is, could IGFA, or perhaps *should* IGFA, be more pro-active in defining the issues it believes are important, rather than simply responding to the priorities of member nations, funding bodies, and the international programmes (DIVERSITAS, GCTE, IHDP, WCRP) that together make up IGFA?

A more pro-active approach could take two forms:

1. Agreement on a small number of high-level, *research questions* that would significantly advance understanding of global change issues. These would be focussed questions, rather than broad research areas (albeit to answer them, research would have to be broken down into specific components). Questions could be of high priority for policy makers, as well as seeking answers to more fundamental issues. An obvious example is: What will happen to the terrestrial carbon sink as the world warms? We might seek to identify not more than ten such questions, fewer if possible.
2. Agreement on broad, *interdisciplinary research areas* that will significantly advance progress in understanding, responding to, and ultimately finding solutions for, global change problems. Global Environmental Change and Food Systems (GECAFS) is exactly what I have in mind, except that it is my understanding that this was brought to IGFA, not developed within, or by, IGFA. Could we develop similar initiatives in other areas of global change science?

A more pro-active approach could have at least two potential advantages:

- (i) Global Change Research is expensive and must compete for funds within national and international programmes with other areas of 'big science'. Physicists and astronomers, for example, routinely define their international priorities for 'big science', and then use this rigorous system of priority setting to attract very substantial levels of funding. If we do not know what our priorities are, how can we expect funding agencies to take us seriously?
- (ii) If IGFA as a body can agree on some high-level priorities, we may find it easier as individual partners to fund those priorities. Very simply, if we can agree what we want, we may be more willing to pay for it.

There are layers of complexity to resolve if there is a willingness to consider this route, not least how we use existing mechanisms and organisations within IGFA to deliver a more integrated, pro-active approach, or whether we need new mechanisms and organisations. Before we delve into these complexities, I would like to advocate an exploration of the principles. Delivery mechanisms are a second-order problem if we see advantages in using IGFA to help define international priorities in global change research.

B) FINANCIAL CONTINUITY – WHICH STEPS ARE POSSIBLE?

by Hansvolker Ziegler

- 1) Some member agencies in every country 'care more' and behave as lead agency.
- 2) We should – together with eminent scientists who are already 'convinced' – help bringing together those science communities which are or should be integral parts of the new direction of GCR. This would foster a new perception of everybody belonging to a now broader global change research community.
- 3) Talking informally (with the aim of coordination) with other agencies that are the traditional funders of the different communities now being part of the four Programs (human dimensions & socio-economists, biodiversity & agriculture) would
 - help to come to a common understanding between the relevant agencies,
 - lead to a discussion of the formal requirements (for invoices, science plans, etc.) with the aim of making procedures easier and unifying time schedules.
- 4) There are further steps towards a more formalized framework which could be considered 'further up the ladder', e.g. drawing up a list of expected contributions according to the wealth of member states (e.g. UN key or level of activity by the concerned community) on the basis of a virtual = desirable budget above the 'real'.
- 5) Discussing whether a common process of negotiations and 'funneling' the money through an institution could help streamlining the process regarding time schedule and duration of commitments.

C) MEETING AGENDA

IGFA PLENARY MEETING 2001

Date: October 21st – 24th, 2001

Venue: Wenner-Gren Center, Stockholm

Sunday, Oct 21

Host program – excursion

9³⁰ – 17⁰⁰

Reception

17⁰⁰

Monday, Oct 22

Opening

9⁰⁰ – 9³⁰

(Chair: Hansvolker Ziegler; Rapporteur: Carola Röser)

- Welcome by the hosts
 - Introduction
 - Adoption of agenda
-

Session 1: National Updates

9³⁰ – 10³⁰

Are there new tendencies?

(Chair: Christian Patermann; Rapporteur: Hans de Boois)

- Summary of members' survey
 - Presentation of national updates
-

Coffee break

10³⁰ – 11⁰⁰

- Presentation of national updates (continued)
 - Summary
-

Lunch break

13⁰⁰ – 14³⁰

Session 2: New Direction in Global Change Science and Implications for IGFA <i>Does it require new instruments for funding?</i> (Chair: Uno Svedin; Rapporteur: Helmut Kühr)	$14^{30} - 16^{00}$
<ul style="list-style-type: none"> • Stage setting talk by Berrien Moore • Presentation by the Programs 	
<i>Coffee break</i>	$16^{00} - 16^{30}$
<ul style="list-style-type: none"> • Strategic discussion on presentations 	$16^{30} - 18^{00}$

Tuesday, Oct 23

Session 3: Capacity Building as an Issue for IGFA	$9^{00} - 10^{30}$
<i>What can we learn from national experience? How can we achieve that science capacity building as a forerunner/driver to development is better accepted?</i> (Chair: Kazuhiko Takemoto; Rapporteur: Terje Mørland)	
<ul style="list-style-type: none"> • Presentation of questionnaire results • Presentation of best practice examples • View of representative of developing country 	
<i>Coffee break</i>	$10^{30} - 11^{00}$
<ul style="list-style-type: none"> • Experiences of the Regional Networks • Discussion 	$11^{00} - 12^{30}$
<i>Lunch break</i>	$12^{30} - 14^{30}$

Session 4: Future Issues (1)	$14^{30} - 16^{30}$
<i>What are the next steps for IGFA?</i> (Chair: Margaret Leinen; Rapporteur: Lou Brown)	
<ul style="list-style-type: none"> • New research areas/projects • Infrastructural issues 	

Host program and dinner

16³⁰

Wednesday, Oct 24

Session 5: Financial Continuity

9⁰⁰ – 11⁰⁰

(Chair: John Marks; Rapporteur: Gerhard Hahn)

- Overview of current funding periods
 - Imminent cases according to our “Statement on the Mode of Operation”: IHDP, DIVERSITAS
 - Tour de Table on funding issues
-

Coffee break

11⁰⁰ – 11³⁰

Session 4: Future Issues (2)

11³⁰ – 13⁰⁰

- Continued discussion
-

Closing Session

13⁰⁰ – 13³⁰

(Chair: Hansvolker Ziegler; Rapporteur: Carola Röser)

- Organizational matters
 - Next date and venue
 - Miscellaneous
 - Tour de Table
 - Closing
-

Lunch

13³⁰

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