OECD Global Science Forum
Study on International Scientific Co-operation

Report of the Workshop on Best Practices in International Scientific Co-operation

12-14 February 2003
Tokyo, Japan

1 OVERVIEW

This report is concerned with issues involved in the establishment and operation of large international research collaborations, in particular those which have some level of government input, whether direct or indirect. It is primarily based on the deliberations of a Workshop held in Tokyo on 12-14 February 2003 and is an outcome of the Global Science Forum's 3-year Study on International Scientific Co-Operation. Workshop participants considered collaborative activities in three categories:

- the initiation and management of coordinated programmes based in more than one country;
- the design, construction and operation of large-scale centralised facilities;
- the creation, linking and maintenance of large databases.

The objective of the Workshop was to uncover evidence of best practice in these activities through the consideration of case studies in each category, with the aim of providing guidelines for policymakers and others concerned with the development of large-scale international projects in the future.

The report is structured as follows:

Although it is deemed inappropriate that a prescriptive, generalised, code of best practice should be drawn up and promulgated, there is clear consensus that many common issues should always be taken into consideration when undertaking international joint activities, and these are highlighted in the report.

2 INTRODUCTION

2.1 Background

Forging a large international research collaboration is very seldom a straightforward task. The process is often a long drawn-out procedure, involving individual scientists, universities, research institutes, funding bodies, government agencies, legal advisors, high level government officials, intergovernmental agencies and the public. Likewise, once an international collaboration has been launched, it will be subject to a wider range of considerations, and effort, than a purely national enterprise. The factors involved can be quite complex, requiring close interaction between the various stakeholders. Yet there are no recognised guidelines on how to proceed, no simple template or roadmap that can be universally applied in deciding how to set up a collaboration and see it through to fruition. Indeed experience shows that all collaborations are uniquely different, and a prescriptive formula would be inappropriate and generally unwelcome.

Nevertheless policymakers and governments need practical information and recommendations for planning and implementing new multinational scientific research projects. A real problem exists since experience has shown that lessons learned by people involved in setting up or analysing such projects are rarely shared, which can leads to unnecessary repetition of effort. In response to this need, several studies were undertaken in recent years aimed at investigating international collaboration programmes with the goal of extracting lessons and best practice guidelines for the benefit of those (both scientists and government officials) who seek to optimise future initiatives[1].

It was in this context that the OECD Global Science Forum (GSF) and the Japanese ministry of Education, Culture, Sports, Science and Technology (MEXT) convened a workshop - *Best Practices in International Scientific Co-operation* - to review these studies, and to enrich their results through examination of additional examples of international scientific co-operation. The workshop was chaired by Dr Marshall Moffat (Canada) and Dr Yoichiro Murakami (Japan) and, was held in Tokyo on 12-14 February 2003. A total of 75 persons attended, from 18 countries and 4 international agencies; both OECD and non-OECD countries were represented. The workshop programme is provided at Annex A.

2.2 Objectives of the Workshop

International research collaborations can take a number of different forms. Some examples, in increasing order of complexity, are:

1) Research collaborations between individual scientists. These can be relatively informal, for example by exchange of letter, with little or no exchange of funds.
2) Similar, but bigger, agreements between research institutions. Usually a more formal approach is required, particularly if funding for the participants comes ultimately from government itself, or from associated agencies.
3) Collaborations requiring significant injection of capital or operational funding. Even if funds do not cross national boundaries, a more formal approach is usually inevitable, with correspondingly more complex arrangements. Such collaborations can be based on an existing facility or facilities, or may require the establishment of a new structure.
4) Collaborations designed to provide a new capital facility, for example a facility that would not be within the capability of a single partner country.

[1] These studies have been carried out by teams in the EU (the GLOSPERA programme), Japan, Korea, and the United States (by RAND). A further study, an analysis of the establishment of GBIF – the Global Biodiversity Information Facility – has been prepared for the Global Science Forum by E James (Australia).

The involvement of policymakers and governments will vary depending on circumstances. At the simplest level (1) no involvement is usually required. At the other extreme, for example the provision of a new large-scale facility at considerable cost (4) government involvement is inevitable.

The Workshop was concerned with the latter - collaborations that require government interaction to a greater or lesser extent. To this end a number of examples were considered, grouped in three categories:

- the initiation and management of coordinated programmes based in more than one country;
- the design, construction and operation of large-scale centralised facilities;
- the creation, linking and maintenance of large databases.

Two Panel discussions were held, one to consider the findings of the Workshop, the second to open the debate to the public.

The primary objective of the Workshop was to uncover evidence of best practice in these activities through detailed consideration of case studies in each category, concentrating on larger collaborations, with the aim of providing guidelines for policymakers and others concerned with the development of large-scale international projects in the future. The report is structured according to findings in areas of commonality across the three categories: the project definition phase, project design and initiation, organisation and management, and political and social issues. The discussion and conclusions touch on some related generic issues.

3 FINDINGS

3.1 Project definition phase

3.1.1 Project objectives

In most cases, initial thoughts on establishing a collaboration will come from a group of motivated scientists. (Although this might not always be the case; however it is generally believed – perhaps with some historic justification - that collaborations conceived from above are less likely to be successful, or even viable). It is widely accepted that a common feature of successful collaborative research projects (indeed whether they be international or not) is an early recognition and acceptance of the scientific objectives of the collaboration. These should be clearly understood by the potential participants before wider consultation, for example with government agencies, is initiated.

3.1.2 Internationalisation

There can be arguments for and against establishing a collaboration on an international basis, depending on the circumstances. Advantages include the stimulation and synergy that international networking can bring to the benefit of the research undertaken; the reduced financial burden to individual partners through the sharing of resources (though the overall costs will almost certainly be greater); the additional cultural input at both the scientific and the personal level; and the capability to provide and share facilities, or information, that would be beyond the reach of participants individually. On the other hand one must balance the loss of national sovereignty and control; the loss of 'home team advantage'; added administrative complexity; and the potential difficulties for scientists (and their families) of working abroad. These factors will vary from project to project, and the views of practising scientists may be different from, say, their sponsoring governments. In some cases the international nature of the project will be an inherent feature, rendering internationalisation inevitable; examples can range from the linking of a world-wide series of databases or studying problems at a global scale (e.g. climate change), to the single-site location of a large facility determined by a uniquely geographical characteristic. The various issues can have profound scientific, financial and political implications, and for this reason it is important that early consideration be given as to whether the proposed collaboration should be international, with an early alert to governments as appropriate. These issues are touched on in further detail in later sections.

3.1.3 Government interactions

When governments are to be involved - for example for project approval, for provision of funding, or ultimately as formal partners - it is crucial that they are brought into consultations at an appropriate level at an early stage, before binding commitments are entered into. There should be 'no surprises' when project negotiations reach an advanced level. Scientists must be aware that government officials themselves might have a political and administrative view on whether a projected programme should be international or not, and it will be necessary for the proponents to ensure that the proposed programme is consistent with government policy.

Consideration has to be given to the nature of the collaborative agreement, especially if a new organisation is to be created. At the highest level, if partnership is formally between countries, the collaboration agreement effectively constitutes an intergovernmental treaty. This can provide benefits, not least in the perceived leverage which is built in, with a corresponding sense of permanence and stability. However such treaties usually involve more than one department of government, often each with its own agenda and juridical team, which can be frustratingly time-consuming. Subsequent amendments to the terms of the agreement during the lifetime of the project can be correspondingly complex.

On the other hand, contracts between government agencies can often more closely involve practising scientists in negotiations, and usually are found to require a lighter touch; this frequently turns out to be the preferred mechanism.

3.1.4 Leadership

A common feature of successful collaborations is the emergence at an early stage of a champion, or champions - motivated individuals who act to ensure that the proposal is steered through the scientific, administrative and political processes. Usually these will be scientists with a background in the discipline, but it is more important that they are resilient individuals who have the time, drive, tenacity, credibility, contacts, breadth of vision, and the ability to interact with the various stakeholders, to see the project through. Especially in the early stages, they will need to be backed by their home institutions. A major function will be to ensure that there is adequate consultation with potential stakeholders, not least with the scientists who will eventually take part in the collaboration (and, also, those who will not).

The proponents may or may not continue to be involved once the project is launched, though a degree of continuity is usually found to be beneficial.

Usually, in due course, it will be necessary to decide on a lead country, concerned with the establishment of a formal secretariat, the siting of the headquarters of the organisation, or the site of a facility or facilities. (Although this is not mandatory; collaborations are known with a rotating administrative infrastructure, or a network of regional secretariats). If a centralised structure is the preferred solution, it is better that this evolve sooner rather than later, so that characteristics of the host country can be incorporated in the constitution of the organisation.

3.1.5 Time frames

The time required to complete the preliminary planning phase, comprising scene-setting, consultation and initial selection of options, can comprise a substantial fraction of the overall period leading up to full operation, and should not be undertaken lightly if success is to be assured. To facilitate the process, separate components can be undertaken in parallel, since frequently there is no obvious sequential roadmap that can be reliably drawn up from the outset. There is little doubt that decisions can be reached more quickly with a smaller number of partners, but ultimately all have to be brought on board. However there can sometimes be scope for involving fewer players in the early stages, which might be beneficial.

But it must be recognised that the process of consultation, negotiation, agreement and approval, particularly when interacting with governments, can often take many years. Indeed some of the project originators - in particular the practising scientists - may be unable to see the process through, to which due attention must be given.

3.2 Project design and initiation

3.2.1 Funding and finance

Indicative project costs are required at an early stage to enable realistic negotiations to be undertaken, both with potential partners, and with funding agencies. It should be recognised that the more realistic the preliminary costings, the lower the probability of subsequent revisions which, experience shows, can threaten the viability of a project. It should be considered whether or not the cost is compatible with the availability of public funds, and accordingly it will be necessary to identify the sources of funding, the extent to which these can be guaranteed during the lifetime of the collaboration, and the extent to which they will be controlled by government. Partners will need to consider how contributions will be apportioned. There are many models, including: flat rate contributions; contributions based on GDP, with or without thresholds or caps; contributions calculated according to usage. Or hybrids of these. Frequently a host country will pay an enhanced contribution - the so-called

'host premium' – to offset the perceived advantage of having the facility on its own territory. There may be scope for trading cash against in-kind contributions, though these can be difficult to negotiate. An example might be the provision of local infrastructure in lieu of paying a host premium; such deals can often be crucial for enabling a wider involvement of less wealthy countries. Consideration should be given to whether there should be provision for '*juste retour, a mechanism w*hereby contracts placed by the organisation are awarded to participating countries according to their contribution.

In due course, before final project approval can be sought, full costs will have to be detailed, including long-term operating costs, and a 'business plan' drawn up. (This process in itself will require funding at a certain level). It will have to be decided whether, or how, contingency finance provisions are included to allow for cost over-runs; frequently this will be subject to individual government accounting practices. Such elaboration of business plans and related management issues are of major importance for international science projects and could benefit from further attention from the OECD Global Science Forum.

Finance provision for eventual closedown, and particularly for the eventual decommissioning of large-scale facilities, must be recognised.

3.2.2 Programme governance

Consideration of project governance – the statutes, rules and procedures by which the collaboration will be established and operated – should be initiated at an early stage, with the various stakeholders being consulted as appropriate. In due course, an agreed set of statutes for the organisation will need to be drawn up to establish a sound managerial framework with clear decision-making procedures. This will create the legal identity of the organisation (if this is appropriate or necessary), determine its structure, and outline its relationship to external stakeholders. Drawing up this documentation can be a prolonged process involving detailed consultation between partners, with advice from external experts, for example legal advisors, as appropriate.

The documentation might include reference to evaluation and review procedures, and include exit criteria for individual partners, and closure 'sunset' clauses.

A crucial position is that of Director, for which the job description, appointment procedures, and terms of reference, should be clearly defined.

3.2.3 Participation policy and access

Consideration must be given to participation policy, for example on whether participation is allowed only to members of the collaboration, or whether free open access is to be accepted, or whether access may be gained by payment. How is participation to be regulated? This can apply at the national, institutional, or individual scientist level. A typical example is how scientists from a non-participating country might be allowed access to a centralised facility or to databases. It is crucial that consideration be given to such matters at an early stage, to avoid subsequent misunderstanding, or even conflict.

3.2.4 Intellectual property

Procedures for dealing with intellectual property issues should be recognised from the outset. Different countries have different guidelines and regulations for the ownership of research results, and for the access to, and exploitation of, the data. It is important that collaborative agreements take cognisance of these as appropriate.

3.2.5 Site selection

The selection of the site for the headquarters of an international organisation, or the location of a single large facility, can be a long drawn-out process fraught with political pitfalls, a fact that

should be recognised from the outset. Although in some cases the site is determined uniquely by, for example, geographical imperatives, usually financial and political trade-offs come into play. Although these might be outside the purview of the originating scientists, it is important that the scientific objectives of the project are not compromised. This is an area where charges of bad faith and mistrust can prevail, and there are benefits if well-defined and transparent criteria can be set down so that sites are seen to compete on a fair basis.

3.2.6 Relations with industry and business

Large international programmes provide a valuable mechanism for industry and business to interact with science, and vice versa. Apart from substantial contracts which may be placed, particularly in the construction of large-scale facilities, industry may itself have an interest in taking part in the collaboration, either as a formal partner or as an external user. Attention should be given to uncovering such possibilities.

3.3 Organisation and management

3.3.1 Structure of the organisation

The structure of the organisation will follow from the statutes set down as part of the collaboration agreement. It will depend on the nature of the collaboration – for example whether it is a distributed programme spread across national boundaries, or whether it is a single large-scale facility – and on the preferences and style of the participants and stakeholders (not least governments). Crucial components include the governing body and its links to the partners, to the director and management team, and to the practising scientists.

Particular attention must be given to staffing policy: whether staff will be seconded, or employed centrally; whether they will be on permanent or fixed-term contracts; whether they will be appointed according to the partner countries' stake in the collaboration.

A particular problem can be the creation of a brain-drain situation, whereby scientists tend to move to centres of excellence within the collaboration and stay on, to the disadvantage of less favoured countries. It may be desirable to introduce management stratagems to encourage the mobility of scientists, for example by the provision of an extra year's contract for a scientist to return to place of origin.

3.3.2 Management

Wise organisations continually interact with their stakeholders, which can include governments and government agencies, staff, the external scientific community, and the public. Appropriate forums should be established to facilitate these interactions. Transparency and accountability should be promoted to avoid complications.

It is important that due allowance be made for the cultural differences which can become more evident within an international research environment; these can be manifested at the government, societal and personal level. It is a challenge for management to capitalise on the undoubted benefits that multinational diversity can offer.

The international nature of the collaboration, particularly if it based in a single country, will require special consideration, for example the provision of specialist services to deal with matters concerning expatriate staff – accommodation, and multinational libraries, restaurants, travel services, etc. Consideration should be given to employment and other support for staff partners and families, including where appropriate specialist schooling.

3.4 Political and social issues

3.4.1 Training and education

It is widely recognised that large-scale research programmes, particularly those set in the international context, have a valuable role in education and training, not only by the provision of facilities that can be made available to undergraduate and postgraduate research staff, but for the interest in science that can be generated in society in general, not least for the inspirational effect at schools level.

3.4.2 Developing countries

International collaborative research can offer opportunities to those countries with less well-developed scientific infrastructures. This might be manifested by the possibility of participating at a level commensurate with available resources, when a standalone national project might not be feasible. Sometimes a physical resource can be traded, for example a unique site for a geo-sensitive facility, as an in-kind contribution. In all cases there can be great opportunities for the development of science in the country at a world-class level. There is scope for further study of how such collaborations can be engendered.

3.4.3 The role of external bodies

There is scope, particularly in the early stages of a project, to utilise the expertise, resources and contacts of existing bodies, such as international unions, academies, and specialist groupings. There are examples of such bodies taking a formal sponsoring role in the approval process. They can subsequently provide valuable links in the operational phase.

4 DISCUSSION AND CONCLUSIONS

4.1 Best practice in international science programmes

The main aim of the Workshop was to identify principles of best practice in the creation and operation of large international research collaborations, particularly as they relate to the interaction between scientific communities and government, with the intention of providing future guidance to scientists, policymakers and government. The case studies considered by the Workshop, allied with the results of other studies carried out by the GSF study on international scientific co-operation, have identified numerous instances of best practice, in particular issues which are common across collaborative programmes of all types. Typical examples are the need to have clear scientific objectives from the outset; the need for a champion or champions to drive the early stages of the collaboration, in particular in interactions with government; and the need to establish sound managerial and organisational structures. (A corollary is that failure to meet such criteria is likely to undermine the success of a collaboration, indeed to lead to its demise). A crucial issue relates to the funding of large projects, and whether there might be scope for an overarching body, or bodies, to facilitate this, discussed in more detail below.

A summary list of specific items has been compiled, and is given in the Annex B.

4.2 Guidelines for international collaboration

It has been suggested that a possible outcome of the Workshop might be the formulation of a set of guidelines – or a Code of Practice – which could be universally applied when future international programmes are being established. However there is widespread recognition that such an outcome would not be practicable owing to the range and diversity of projects that might be envisaged, let alone the different circumstances that will pertain in each case. Indeed experience has shown that there can be positive resistance to the imposition of a list of prescriptive instructions, from both the scientific side on one hand, and government on the other.

Nonetheless, the workshop identified a series of themes and issues that are relatively common to all projects, and from which a checklist might be compiled for future reference; the summary given in Annex B might provide the basis for such an outcome.

4.3 A new mechanism for facilitating international co-operation programmes?

In addition to reviewing past and near-term prospects for international co-operation, workshop participants briefly considered possible innovative arrangements for the long-term future, in particular, the pros and cons of some day establishing a general-purpose world-wide funding system for international science. Already there are many organisations that fund or sponsor transnational research, but not on a truly global scale. In addition, there are numerous specialised institutions which act as umbrella organisations for specific disciplines. Would there be merit in having an international mechanism, with a remit to encompass science in the broadest sense, across all countries? At the European level, discussions are under way to examine the feasibility of setting up a so-called European Research Council, although even these very preliminary discussions have revealed many challenging questions that need to be addressed. Extending these considerations to the global scale (including, notably, the inclusion of developing countries) would involve additional complex considerations.

ANNEX A

MEXT/OECD Global Science Workshop

Workshop on Best Practices in International Scientific Co-operation

12-14 February 2003

Tokyo, Japan

PROGRAMME

Day 1		**Feb 12 (Wed)**	
Morning		09:30 – 10:00	**Registration**
1	**Opening**	10:00 – 10:10	**Opening remarks by Director-General of the Ministry of Education, Culture, Sports, Science and Technology (MEXT)**
2	**Introduce**	10:10 – 10:30	**Introduction by workshop Co-Chairpersons (Dr. Marshall Moffat and Dr. Yoichiro Murakami)**
3	**Keynote Speech**	10:30 – 11:00	**Keynote Speech by Dr. Torsten Wiesel (Director-General, Human Frontier Science Program (HFSP))**
Coffee Break		11:00 – 11:30	
Morning		11:30 – 12:30	
Session 1			**Review and Comparison of Existing Studies That Have Focussed on the Sharing of Major Scientific Tasks**
4	[0:30]		***Managerial Implications for Multinational RTD Program: Lessons from IMS, HSFP and Other Case Studies*** Dr. Ryo Hirasawa (National Graduate Institute for Policy Studies, Japan)
5	[0:30]		***Catching Up Through International Linkages: Korean Experiences*** Dr. Sung-Chul Chung (Science and Technology Policy Institute, Korea)
Lunch		12:30 – 14:00	
Afternoon		14:00 – 14:50	
Session 1			**Review and Comparison of Existing Studies That Have Focussed on the Sharing of Major Scientific Tasks** (Continued)
6	[0:25]		***Globalisation, Science, Technology and Policy*** Dr. Josephine Anne Stein (University of East London, UK)
7	[0:25]		***Networking as a Strategy in Intra-European Scientific Collaboration Activities*** Dr. Yoshiko Okubo (Institut Supérieur de Technologie et Management, France)
Coffee break		14:50 – 15:20	

Afternoon 15:20 – 17:20

Session 2 **Designing, Building and Operating a Large-Scale Facility**

8 [0:30] ***Large Scale Facilities for High-Energy Physics***
Dr Kenzo Nakamura (High Energy Accelerator Research Organisation, Japan)

9 [0:30] ***International Co-operation in Case of Large-Scale Synchrotron Radiation Facility (SPring-8) Project in Japan***
Dr. Hiromichi Kamitsubo (Japan Synchrotron Radiation Research Institute, Japan)

10 [0:30] ***Model for International Scientific Collaboration between Developed and Developing Countries***
Dr. Khotso Mokhele (National Research Foundation, South Africa)

11 [0:30] ***The ITER Project - International Fusion Development***
Dr. Hiroshi Kishimoto (Japan Atomic Energy Research Institute, Japan)

Reception at the Toranomon Pastoral Hotel 18:00 – 20:00

Day 2 **Feb 13 (Thu)**

Morning 09:00 – 11:00

Session 3 **Creating, Linking and Maintaining Large Databases**

12 [0:30] ***Neuroinformatics, Going Globally: The Good, The Bad and The Ugly***
Dr. Stephen H. Koslow (National Institute of Mental Health, NIH, USA)

13 [0:30] ***GBIF – For Biodiversity Bioinformatics***
Dr. Kunio Iwatsuki (University of the Air, Japan)

14 [0:30] ***Social Science Databases Systems Collaboration in Canada: Developing the Infrastructure for High Quality Research***
Dr. David Moorman (Social Science and Humanities Research Council of Canada)

15 [0:30] ***Digital Research Data from Public Funding as the Floating Capital of International Scientific Co-operation***
Dr. Peter Schröder (Ministry of Education, Culture and Science, The Netherlands)

Coffee Break 11:00 – 11:30

Morning 11:30 – 12:30

Session 4 **Other Important Issues in International Scientific Co-Operation**

16 [0:30] ***Square Kilometre Array (SKA): A New Generation Facility for Radio Astronomy***
Dr. Richard Schilizzi (Joint Institute for VLBI in Europe, The Netherlands)

17 [0:30] ***Issues about IPCC ~ IPCC & Its Third Assessment Report (TAR) ~***
Dr. Hideo Harasawa (National Institution for Environmental Studies, Japan)

Lunch 12:30 – 14:00

Day 2		**Feb 13 (Thu)**
Afternoon		14:00 – 15:00
Session 4		**Other Important Issues in International Scientific Co-Operation** (Continued)
18	[0:30]	***Benchmarking National Public Policies to Exploit International Science and Industrial Research: A Synopsis of Current Developments*** Dr. Jakob Elder (Fraunhofer Institute for Systems and Innovation Research, Germany)
19	[0:30]	***Science as Generator and User of Intellectual Property Rights*** Dr. Josef Straus (Max Plank Institute, Germany)
Coffee Break		15:00 – 16:00
Afternoon		16:00 – 18:00
20		***General Discussion*** The Chairs of the individual case study sessions will open the programme by summarizing the results of the discussions to date. A general debate will follow, during which all workshop participants will have an opportunity to present their views and experiences, and to introduce new information from projects other than those presented during the case study sessions. At the conclusion of the discussion, the Co-Chairs will propose a set of final findings and conclusions, presented in the form of a structured list or framework chart.
Day 3		**Feb 14 (Fri)**
Morning		9:30 – 12:00
21		***Panel Discussion*** This session will be open to the public. Dr. Hiroyuki Yoshikawa (Chair of the Japan Science Council, past President and current board member ICSU) will make a presentation about the importance of efforts by the scientific community to address issues of global concern. He will focus on the benefits of international scientific co-operation for promoting sustainable development worldwide. Following this presentation, the Co-Chairs will introduce the findings of the workshop and a selection of topics that emerge from the concluded sessions. These will be addressed by a panel of experts as the final point on the agenda. **Participants: Workshop Co-Chairs, Session Chairs, Dr. Torsten Wiesel, Dr. Hiroyuki Yoshikawa and Dr. Michael Oborne**
22	**Closing**	12:00 – 12:10 **Closing remarks by an official of MEXT**

ANNEX B

Checklist of Best Practice principles

The following table provides a checklist of issues distilled from the report, issues that should be considered in setting up and maintaining an international research collaboration.

- Are the scientific objectives of the project clearly defined and agreed?
- Has consideration been given to the reasons why the project should be international (or not)?
- Have intergovernmental consultations taken place well before any commitments are made?
- Is the proposed project consistent with government policy?
- Should the project be set up as an intergovernmental agreement (treaty), or on an interagency basis, or between individuals?
- Have full costs been detailed, including long-term operating costs, and a 'business plan' drawn up? Is the cost realistic and compatible with the availability of public funding?
- Can long-term funding requirements be guaranteed by the participants from the outset?
- In drawing up an agreement, have opportunities for trading cash and in-kind contributions been considered?
- Are there contingency finance provisions to allow for cost over-runs?
- Have closedown procedures been defined? Including finance provisions for decommissioning, etc?
- Have statutes been drawn up for establishing a sound managerial framework and decision-making processes? Including the appointment of a director with defined terms of reference?
- Has agreement been reached on participation policy? Will there be free open access? Or access by payment? How is participation regulated?
- How will IPR issues be dealt with?
- Is due reference being made to recognising intra-national cultural differences?
- Has consideration been given to 'knock-on' implications, for example a potential brain-drain situation?