

Manuscript of the Speech by Prof Dr Frieder Meyer-Krahmer, State Secretary,
German Federal Ministry of Education and Research
at the OECD-Workshop “International Co-operation to address Global Challenges –
New Approaches and Governance Mechanisms for Multinational Science and
Technology Co-operation” (Paris, 25 March 09)

The written text provided the basis of Dr Meyer Krahmer’s speech, but it was not strictly followed by him when delivering the speech.

Mr. Padoan,
Mr. Chairman,
Ladies and Gentlemen,

Today we are more aware of global challenges than ever before: Decisions taken thousands of miles away concern us all as we are all affected by them.

The current crisis was only predicted by a few members of the scientific community. But researchers have been warning the global community for years not to ignore such serious challenges as

- climate change,
- the increasing depletion of fossil energy sources,
- the spreading of new infectious diseases that are difficult to treat,
- and rising prices for increasingly scarce food supplies, which is a serious problem for people in developing countries in particular.

Only where warnings are issued early can sufficient measures be taken to combat the crisis. Meeting the challenges usually requires coordinated action by the international community. For that purpose, various intergovernmental agreements have been concluded, international organizations established and relevant programmes implemented.

For example, the International Energy Agency was established in response to the first energy crisis. Within the IEA Framework, the Member States concluded more than 40 agreements for the implementation of multinational research and development collaborations.

Another example is public health: The Constitution of the World Health Organization provides that the mission of the Organization shall include both encouraging and conducting health-related research.

These examples show that governments have indeed realized that international cooperation in the field of science and technology can contribute to meeting global challenges.

What then is the problem? What are we still lacking today?

In my view, both the scientific community and the governments must increase their efforts. As regards the scientific community, the designated Assistant to the US President for

Science and Technology, John P. Holdren, pointed out in January 2008 in an article published in *Science* that interdisciplinary and integrated research could contribute substantially to mastering various global challenges. But, he added, this would require the academic and engineering communities to value such research to a much greater extent. In Germany we say: "Society has problems, universities have disciplines." If we want to find scientific solutions to real, everyday problems, we must learn to overcome disciplinary borders and motivate natural and social scientists in particular to engage in joint activities. As regards the governments, they must first of all meet the national challenge of horizontal political networking between the government departments concerned, as the problems to be solved are highly complex. And still more difficulties have to be overcome at international level, where the structures and coordinating bodies required are often not available. This especially applies to the area of multinational research and technology cooperation. Without systematic evaluation, we are often not even able to answer the question of where to find models of successful multinational science and technology cooperation. Owing to their complexity and urgency, global challenges seem to question not only the prevailing approaches to research but also, and in particular, the existing instruments of multinational research and technology cooperation. I am convinced that multinational research cooperation must be developed further considerably before it can be used successfully for addressing global challenges.

Ladies and Gentlemen,

In February 2008, the German Federal Government adopted a strategy for the internationalization of science and research. This Internationalization Strategy pursues the following objectives:

- Strengthening research cooperation with global leaders
- International exploitation of innovation potentials
- Intensifying the cooperation with developing countries
- Assuming international responsibility and mastering global challenges.

With a view to effectively mastering global challenges, it will be particularly important to address the **issue** of the governance of multinational research cooperation in an international context. Let me briefly deal with some of the questions arising in this connection:

Obviously, multinational research and technology cooperation offers a clear advantage: it can mobilize more resources than is possible at national or binational level. Multinational research cooperation can intensify global consensus-building on central issues of our time by providing a scientific basis for this process. That is why Germany addressed the topic of an

"International Research Agenda" at the G8 summit in Heiligendamm in 2007. In view of the global challenges facing us, we may indeed argue that participation in research by more countries can help avoid the problem of free riders who benefit from the results of research activities conducted by only a few industrial nations traditionally interested in scientific activities.

But what about the models for organizing and funding future multinational research cooperation for the solution of global challenges? This includes the framework that is needed for encouraging and supporting research into global challenges – both at national level and for multinational cooperation. How can different private stakeholders (companies, NGOs, foundations) be involved? How can we provide access to research infrastructures and data? What about the commercialization of research results? Do we need any special regulations for addressing global challenges?

When answering these questions, we must keep in mind that research to address global challenges should not merely focus on a **single** challenge and leave the other problems aside. This would mean that, while avoiding **one** potential crisis, we risk deterioration in other fields.

This was clearly shown by last year's development: The rising prices of fossil energy sources led to an increase in the cultivation of plants for biofuel production. But this supposed solution apparently contributed to food price increases, at least in some critical regions. This indicates that multinational research and technology cooperation to address global challenges must also consider more complex contexts and offer more complex solutions. I am convinced that we must improve the existing structures for multilateral cooperation.

Another factor we must bear in mind is that research to address global challenges must take account of local conditions. A specific global challenge may be experienced quite differently in different places: In Siberia, climate change entails other problems than it does on a small island in the Pacific Ocean.

But the local context also affects our possibilities to reduce critical impacts and implement solutions. A new medical product developed for treating a new infectious disease is not always of direct benefit to the countries affected if patients cannot afford it or the local health system is not sufficiently developed.

Similarly, it is not enough to develop technologies for mastering global challenges when they cannot be used in the countries concerned.

Multinational research and technology cooperation **could** be a particularly suitable means for ensuring that different local conditions are considered from the outset in the study of effects and the development of strategies for addressing global challenges. Multinational

cooperation **could** help to multiply the learning effects. It seems desirable in this connection that multinational research and technology cooperation in future includes social and cultural science approaches to a greater extent.

This brings me to a central aspect, namely the interface between science and politics.

Policy-makers have traditionally enjoyed a degree of freedom in dealing with scientific findings. This ranges from the active organization of science counselling to contesting research results. With a view to global challenges, however, the political community and the general public urgently need more scientific findings as a basis for responsible decision-making. The best-known example of a scientific advisory body at multilateral level is the Intergovernmental Panel on Climate Change (IPCC). Its report currently provides the main basis for political and scientific discussion on global warming.

Speaking about the organization of multinational research and technology cooperation, we must focus on its interfaces with the political community and the general public. Not only with regard to climate change but also for other global challenges, we need mechanisms which promote scientific consensus-building on controversial issues and which communicate the achieved consensus to policy-makers and the public.

However, multilateral cooperation must not be limited to industrialized countries. Global crises cannot be solved in a sustainable manner without the involvement of the developing countries. That is why we should invite affected and interested developing countries to participate in scientific collaborations and not only when it comes to implementing the required measures. I think we should also intensify such cooperation at the level of multilateral organizations. In my view, close cooperation between the OECD and UN agencies is not only highly desirable but may indeed be necessary for developing common principles for the establishment of conditions that promote cooperation in science and research.

Ladies and Gentlemen,

Germany had good reason to initiate a workshop on "International cooperation to address global challenges – new approaches and governance mechanisms for multinational science and technology cooperation" within the framework of the OECD Committee of Science and Technology (CSTP). The activities conducted by the OECD Secretariat and its bodies with regard to science and technology policy are well-known and appreciated worldwide.

Delegates from countries with the world's largest research and technology potential meet within the CSTP. The accession process and intensification of cooperation could be suitable

tools for enabling more countries with large research potential to become increasingly involved in the OECD's work.

The aim of this workshop is to provide an initial overview of current governance in multinational research and technology cooperation to address specific global challenges, namely climate change, energy shortage, global health, and food security. Experts are expected to critically evaluate the existing governance mechanisms and present proposals for reform.

But I am also convinced that this initial workshop is not sufficient to address the diverse and complex issues, of which I could only mention a few very briefly here. What we need is fundamental knowledge and research – science for science policy, as it were. I am therefore pleased to note that the OECD Secretariat has included a relevant project in its work programme. This project starts with the present two-day workshop and aims to establish a network of think tanks which is able to address selected problems over a period of two years and issue recommendations for a reform of the governance mechanisms of multinational research and technology cooperation. All countries participating today are invited to contribute to this effort by supporting suitable research institutions.

I am convinced that this project will trigger further major developments which enable us to solve the global problems we are jointly facing.

I wish you every success in your endeavours.

Thank you.