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## **Contribution to the Consultation of the EU Green Paper:**

### **From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation Funding**

#### **Executive Summary**

This contribution to the consultation of the Green Paper relates to the points made on societal challenges and international cooperation.

It deals with the growing concerns about the spread of sensitive knowledge worldwide due to the process of globalization exacerbated by the rapid dissemination of information through cyber space.

This contribution makes a plea to develop a special program-worldwide called Responsible Science Management under the new Framework Program to reduce the risks of misuse of science. The responsible Science Management program covers many areas of science and technology.

At the same time it calls for a scientist engagement program under the new program aimed at redirecting of sensitive scientific knowledge worldwide towards civilian purposes.

#### **1. Introduction**

The G8 in a set of recommendations of July 2009 drew attention to the spread of sensitive knowledge worldwide. It asked for: “engaging scientists and raising awareness and responsibility among them, to prevent their knowledge in legitimate scientific disciplines to be diverted to unintended malicious purposes”.

Indeed, various recent experts’ studies show that due to the growth in scientific knowledge and the easy access to this knowledge, there is an additional need - besides the implementation of relevant national laws and international treaties - to adequately manage the flow of scientific knowledge as a contribution to prevent, for example, that various non-state actors obtain access to dual-use know-how.

The nuclear renaissance is posing new proliferation challenges as a result of the worldwide expansion of nuclear power and while there are great benefits to be had, a relaxed approach to safety and security of such a worldwide expansion of nuclear power cannot be allowed.

Furthermore, the breakthrough of biotechnology and rapid spread of applications worldwide poses serious challenges for the threat reduction capacities. Moreover, dangerous pathogens need to be locked away in secure facilities globally including in the poorer regions of the world.

Chemical know-how is spread worldwide and could rather easily be used for ill-intended purposes. Specific actions in this field are necessary also.

Therefore, more attention should be paid in any new EU program for the support of activities to increase awareness of individual scientists and engineers at the origin of new technologies and materials, of the potential dual- use of their work. Support to a number of specific safety measures is also part of such a program. In conclusion, a “culture of responsibility” among scientists, especially young scientists and among institutions dealing with high risk and sensitive materials is to be promoted more actively.

It is likely that during the program period of the new strategic framework for research and innovation funding, a number of nuclear, biological and chemical weapons programs- worldwide - will be terminated. It is important to have the possibility to immediately redirect relevant scientists and engineers towards other – civilian – research activities including financing of the decommissioning of the relevant research installations.

The primary objectives of such a program under the new strategic framework is to provide relevant scientists the opportunity to redirect their talents to peaceful activities; support basic and applied research and technology development; foster the integration of relevant scientists and engineers into the international scientific community without the creation of new proliferation risks; and contribute to solving national and international scientific and technological problems.

## 2. Proposals

The G8 noted: “Education and training are becoming increasingly important to increase awareness of the multiple uses of high risk materials and sensitive know-how and technologies.” So far, initiatives related to the promotion of (a) responsible science management and (b) scientists redirection were taken by a limited number of international organizations such as the International Science and Technology Center (ISTC). During the past years more than 2750 projects were supported involving 50.000 scientists. The total investment in the Center is around 750 Million Euro including the purchase of equipment and implementation of commercialization and training programs. The activities of ISTC were recognized in the 7<sup>th</sup> Framework Program (L 400, 30.12.2006, p.355) but were **not** financed under this program.

Education and training undertaken by ISTC relate to supporting a number of specific courses during university and post-graduate studies to make students aware of the potential dual-use of their scientific work. The establishment of a specific faculty at a university to deal with such matters was financed. Under these programs a number of specific training initiatives for practitioners were developed as well as a systematic introduction of standards of oversight including peer reviews and code of conducts. Specific measures to ensure the safe storage of dangerous pathogen collections are also part of this work. **It is recommended that the new Strategic Framework for EU Research and Innovation Funding build on these activities and is extended to include a specific program to support grassroots activities promoting responsible science management.**

A number of scientists’ redirection programs exist. For example, ISTC has supported more than 2750 projects with a total value of 800 million Euros during 17 years in the former Soviet Union. A

broad range of expertise has been acquired in carrying out such programs inter alia aimed at integrating the relevant scientists into the worldwide scientific community. Obsolete research installations have been closed. **It is recommended that the new strategic framework program foresees new finance initiatives related to specific redirection programs for scientists and engineers - worldwide.**

### **3. Remark**

In the EU previously the above described activities were financed under the EU's TACIS –program and under the financial perspectives under the EU's Instrument for Stability (IfS). However, concerns related to the rapid dissemination of sensitive knowledge and materials and the need for redirection of scientists have significantly increased in light of rapid developments that have been both scientific and geographical. It is, therefore, recommended that the financing of such activities becomes integral part of a future EU research and development policy under the new EU financial perspectives.

Moscow, 2 March 2011.

For further details, please consult the ISTC website [www.istc.ru](http://www.istc.ru) or contact the ISTC –secretariat +7 495 982 32 36