

***IV International Working Group Meeting***  
**“Economic Sustainability, Employment and Exploitation  
of S&T Results in Russian Closed Cities”**

EC, Brussels, Belgium, 13-14 September 2004

**REPORT**

**Preamble**

The IV International Working Group (IWG) meeting was convened in Brussels, under the Chair of the European Commission (EC) and of the Federal Agency for Atomic Energy (FAAE) – former MINATOM – of the Russian Federation, in association with the IWG Secretariat, on September 13-14, 2004.

The Agenda (**See Annex 1**) of the meeting covered a general assessment of the international cooperative programs, both multilateral (as the International Science and Technology Centre – ISTC, the G8 Global Partnership – G8 GP, and the EU Joint Action towards Russia) and bilateral initiatives (as the US Nuclear Cities Initiative – NCI, the European Nuclear Cities Initiative – ENCI, the US Initiatives for Proliferation Prevention – IPP, the UK-RF Closed Nuclear Cities Partnership), as well as large European scientific projects (as those endorsed by the CERN) supporting the Russian Nuclear Cities (RNCs); the discussion of challenges/obstacles to progress; the scope and restrictions of the European Nuclear Cities Initiative (ENCI); the conversion experiences of governmental and non-governmental entities; the best RNC-tailored strategies and methodologies for the improvement of the international cooperation and coordination with the RF-FAAE; the presentation of concrete nuclear cities experiences and technological projects; the exploitation of suitable IT platforms to facilitate the joint ventures/e-commerce between the FAAE atomic and western enterprises; the role of open scientific and technological parks in the ZATOs of the RNCs; the re-orientation of the IWG-ENCI process to a G8-IWG for nuclear proliferation expertise to meet the G8 GP objective for the civilian re-addressing of the former weapon scientists and production workers; the discussion of the main action lines, priorities and place/date of the next 2005 IWG Meeting.

The meeting had a broad international attendance by experts, officials, private sectors and non-governmental organizations representatives (**see Annex 2**), confirming again the IWG as a unique international non-official Forum on nuclear proliferation expertise. A list of participant contributions is in the Annexes (**see Annex 3**).

## IWG Secretariat Executive Summary

### *The first day*

During the first day of the IWG meeting several general comments and specific remarks have been made – see below the meeting minutes with the speakers contributions in brief with the nature of their speech (presentation, intervention, question, reply) – and they would consider the following points:

- The IWG target is up to now focused on the RNCs and the problem of civilian re-employment of its former weapon scientists and production workers, but this target may be expanded – if agreed and requested by the transition to new international disarmament and non-proliferation initiatives – to include all the Russian closed cities which need conversion, economic diversification and downsizing.
- There exists a compelling necessity to have a better understanding and definition of job creation in the RNCs so that it be irreversible, self-sustainable and not threatening the social stability of the RNCs. It has been observed that there exists a different comprehension of re-employment in the Russian authorities and in the international cooperative programs, which must address this issue. A case study on this topic has been strongly requested in the meeting.
- The main lessons learnt are the following:
  - The necessity to encourage western and Russian companies to locate production lines in the “open cities” and to have a better coordination for job creation between the laboratories of the RNCs and their ZATOs. This also means to better enforce the integration between the RNCs and the ZATOs surrounding regions, which offer an effective local marketplace for the RNCs products and services
  - The demand of more networking projects with the international community, both in the fundamental or in the applied sciences, is essential to boost and diversify the opportunities for new jobs within the RNCs. Equally important is the rise of cooperative networks with the large-size European research laboratories like CERN, EURATOM Centres, etc.
  - The realization of a few hundred long-term civilian working places in the RNCs signals that a better coordination between the international cooperative programs and the Federal Agency for Atomic Energy (FAAE) – former MINATOM – of the Russian Federation is mandatory. In this respect, the recent “UK-RF Closed Nuclear Cities Initiative” would become a model for other similar bilateral initiatives between the EU countries and the Russian Federation.
  - There exists the requirement to adapt the RNCs scientists re-direction to the new real-world challenges. In the case of the re-direction of excess weapon scientists, it is important to create effective career changing opportunities. The focus on the two bookends – science research and technology commercialization – has made clear that there is a large and untapped span of opportunities that could gainfully re-direct this excess scientific workforce and reduce the risk of expertise proliferation.
  - The need to prioritize nuclear cities, projects and actions plans. A list of priorities has been requested for the next IWG meeting.

- Instruments and centres like ZATO technological councils, techno-parks, business-incubators and advanced dedicated IT-platform links/tools to facilitate the business-matching between the western and the FAAE enterprises need more investigations. Furthermore, the Russian party has expressed reasonable concern on the exploitation of the IPRs, which also requires a further analysis. A paper on the analysis of alternative mechanisms/sources of finance to support technological projects in the RNCs has been demanded in the meeting.
- NTI has pointed out the need to re-focus the brain-drain programs to address the larger threat posed by the potential terrorist acquisition of a nuclear capability through theft or purchase of weapons or fissile materials. This turns out: i) to broaden and diversify the coverage of the current assistance programs to include additional categories of nuclear-related personnel with the aim to reduce the total number of potential “insiders” with information of interest to terrorists seeking to acquire nuclear weapons or materials; ii) to link the existing programs with other cooperative efforts, like the G8 GP, to improve weapons and materials security. In particular this latter task should allow to use part of the G8 GP financial support for the physical protection of weapons and nuclear materials, which is up to date a priority of the G8 GP agenda, for these refocused brain-drain programs in the RNCs. A paper to launch a debate within the IWG on the nature of the new proliferation threats and how to refocus the existing programs towards the RNCs to meet these new risks, has been requested in the meeting.
- All participants have agreed that, being the IWG for ENCI de facto an *international NCI-working group* since its starting, and in consideration of the success of the ISTC/STCU in creating long-term civilian jobs for RNCs scientists, also through the drive provided by the ISTC Partner Program, ISTC must be at present the key framework of reference to the IWG. Indeed the IWG has provided, and will provide in the next future, consultancy services to the ISTC Programmatic Approach, acting as a sort of Expert Contact Group on the nuclear proliferation expertise. Last, but not least, ISTC has created today about 300 civilian long-term working places and plans to create 500 additional civilian jobs within the 2004. For this aim, the IWG may provide useful methodologies and criteria to accelerate the ISTC/STCU job creation and commercialization tasks. Furthermore, the IWG might offer its analyses and recommendations to the ISTC Parties in order to try to raise their interest and support to the multilateral brain-drain programs to accelerate the re-employment of Russia/CIS former WMD experts to avoid the risks of WMD proliferation towards rogue states and terrorist organizations.
- A general consensus has been achieved on the pivotal role of the European Commission (EC) to support the IWG process, not only because the EC is already strongly committed to the IWG objectives via TACIS, the EU Joint Action and its participation to the ISTC/STCU, but also on the ground that the IWG may provide a Forum for critical discussions and dissemination of information to the interested EU Agencies and Ministries of Foreign Affairs concerning their cooperative programs towards the Russian nuclear weapons complex. In a longer-term perspective, the IWG might provide consultancy for the threat reduction programs addressed to Russia/CIS, which EU plans to launch in the post-2007 in the frame of its WMD non-proliferation strategy. Instead, in a short-time scale, the IWG might try to promote the signature of MOUs, between the competent Agencies/Ministries of EU countries and the FAAE of the Russian Federation, following the model of the “UK-RF Closed Nuclear Cities Initiative”, which is to date the unique case in Europe. Notice that this aim has been stressed several times by the Rosatom party in the meeting (see also Annex 4).

- The transition underpinning the commitment taken in the June 2002 Kananaskis G8 Summit of a “Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (G8 GP)”, in particular its fourth objective regarding the “conversion of WMD experts”, and the December 2003 EU Action Plan to develop a “Strategy Against the Proliferation of WMD”, demand to the IWG to adapt itself to these new opportunities and challenges. All the IWG meeting participants have agreed to re-orient the already international IWG to a G8-IWG of nuclear proliferation expertise in the current track-2 multilateral participation guise. Of course, decisions need to be taken on the structure, chairmanship, secretariat duties, objectives and financing of this re-oriented IWG, and a preliminary discussion has already taken place in the second day of this IV IWG meeting; a final decision should be expected before the next IWG meeting.
- The future 2005 IWG meetings. The participants have welcomed the offer to hold the next IWG meeting at the LNCV site, Como, Italy – which is operating as IWG Secretariat – next April 2005; the second and final IWG meeting for year 2005 might occur before the 2005 fall at the EC, Brussels, Belgium, if all the interested parties agree.

### *The second day*

During the second day of the IWG meeting, the participants have re-discussed the scope and nature of the IWG and of the ENCI, and have evaluated the IWG Secretariat proposal to re-orientate the IWG in order to meet the new realities and objectives associated with the 2002 G8 GP initiative and the 2003 EU WMD non-proliferation strategy. Before these conceivable challenges, participants recognized that at present the IWG is an essential unique informal NCI-International Working Group constituted by both governmental and non-governmental experts, which acts as a sort of Expert Contact Group for the ISTC to analyse – not in competition with the ISTC-SAC – the general aspects related to the re-orientation of the RNCs excess personnel and the conversion of the nuclear cities themselves. Participants have agreed on a re-organization of the Chair structure of the IWG, starting from the next meeting, as required by the IWG Secretariat, in order to meet some new duties of its members, as well as to be more involved on focused, concrete assistance projects for the RNCs and initiatives for the promotion of new “EU countries-RF closed nuclear cities partnerships” on the UK-RF model. In the following we report only the principal considerations come out in the second day, which may be categorized in three main stances:

- *The Rosatom stance*
- *The ISTC stance*
- *The IWG Secretariat stance*

The above Rosatom and ISTC positions are based also on e-mail exchanges between these entities and the IWG Secretariat.

### *The Rosatom stance*

- Rosatom has pointed out many times that:
  - The IWG could become a “broker” to facilitate the signature of several MOUs between the EU countries and the Russian Federation, by using the UK-RF closed nuclear cities partnership as a key model;

- The IWG should concentrate its focus on concrete projects, for example providing for the needs of specialists thrown out of work by the closure of Seversk and Zheleznogorsk plutonium reactors. To this aim, an IWG meeting could be mainly dedicated to the presentation and discussion of feasibility studies on alternative conventional energy power-plants and energy efficiency/saving measures to be realized in Seversk and Zheleznogorsk after the shut down of their nuclear reactors, which supply heat and electricity to these cities.
- The ENCI, as a funded independent EU program, does not really exist. The Russian FAAE has stated in its presentation that “ENCI, since its incipient [as an idea in 1999], has not resulted in emergence of new business partners or new projects of interest for ‘atomic cities’. Therefore, the issue of determining and assessing ENCI activities from the viewpoint of objectives, facts, directions, forms and methods of collaboration must be considered currently on the agenda to be, therefore, suitably addressed as appropriate”. Furthermore, FAAE is interested that ENCI should become an effective funded EU program, with some legal basis and “Memorandum of mutual understanding (with FAAE)”, since only in this way FAAE may fully develop its “cooperation potential” and, for instance, allow the access to the RNCs for ENCI representatives participating in activities under the above Memorandum and facilitate the creation of all the conditions which are necessary in order to realize joint (i.e. ENCI-FAAE) implementation of technological projects in the RNCs.
- Some concrete ideas of Rosatom concerning the basic goals and structures of ENCI, the IWG role, and a possible agenda for the next IWG meeting are presented in the Annexes (see **Annex 4** – English translation of a Russian document).

#### *The ISTC stance*

- With reference to the IWG meeting, the ISTC has expressed the following considerations on the IWG today and on its possible future:
  - The IWG is a competent tool of information exchange on the matter and provides a proper forum for related discussions.
  - The IWG's open composition provides chances for "fresh" inputs and it should be kept.
  - De facto the IWG is an International NCI - Working group.
  - ISTC is in favour of continuation of the IWG.
- Concerning the outcome of the IV IWG meeting and the practicable follow up to be planned soon, some suggestions, according to the ISTC point of view, for the possible future development of the IWG process, are the following:
  - The IWG is collecting and providing information on the topic, which means, it may have some coordination effects.
  - The IWG is representing increasing competence.
  - Representatives of ISTC funding Parties are members of IWG, either directly, like EU, Canada and Russia, or, like the US, through programs (NCI etc.).
  - The ISTC offers proven tools to work with institutes in nuclear closed cities a.o. The funding Parties may use the competence of the IWG and they might be attracted for

NC conversion projects developed and/or recommended by the group. (IWG is *not* and *should not be* in competition to the ISTC - SAC)

- The IWG Secretary could consider to address such future task of the group to the ISTC Parties and try to raise their interest.
- In a 2nd step, a similar task of a future IWG focused and limited on "Kananaskis, Topic 4 (Conversion of WMD Experts)", could attract the donors of G8-GP.
- This IWG, or individual members, could provide consultancy in the frame of ISTC Programmatic Approach, to be used as an Expert Contact Group on this issue whenever appropriate.

#### *The IWG Secretariat stance*

- The IWG for ENCI has been established in November 2001 as an unofficial, international, track-2 Forum structure and NCI-Working Group for nuclear proliferation expertise with the main tasks to provide consultancy to all the interested parties and to try to create the conditions for the establishment of ENCI, an analogous of the US NCI, or for the setting up of bilateral MOUs between the relevant EU Agencies/Ministries and the RF Minatom/FAAE, as the 2004 MOU between the UK DTI and the RF FAAE on the "UK-RF Closed Nuclear Cities Partnership". Notice that the DTI has been a proactive member of all the IWG meetings since the beginning. The IWG is at the basis of any past attempt to found an ENCI, and not the reverse, and does not contemplate among its tasks the duty of raising economic support for the activities of conversion in the RNCs, since there exist other initiatives devoted to this aim. The IWG is the unique informal nuclear Forum on the brain drain problem.
- The new multilateral cooperative threat reduction initiatives in Russia/CIS, as the already mentioned G8 GP, suggest to re-orient the IWG to a G8-IWG for nuclear proliferation expertise to be focused and limited, in a foreseeable future, on the fourth Kananaskis objective concerning the conversion of the WMD experts.
- Such a re-orientation process puts to the IWG members the following key questions to be decided:
  - a) The scope and geographical coverage of the IWG – European or wider international?
  - b) Covering only the nuclear field, or the chemical and biotechnology sectors as well?
  - c) Operating only in closed cities or aiming to stem potential proliferation more widely – say beyond Russia/CIS?
  - d) Which is the link with existing formal mechanisms – with the ISTC/STCU? With the G8 GP, acting as a consultative forum providing information on threat reduction? With various bodies in the EU – in supporting its WMD non-proliferation program?
  - e) Which is the structure, say the chairmanship and secretariat duties?
- The position of the IWG Secretariat to the above key questions is as follows:
  - a) By its incipient, the IWG is de facto an international NCI-Working group
  - b) & c) The experience accumulated by the IWG suggests that it must continue to cover

the nuclear proliferation field, but this fact does not preclude the possibility to develop, in a second step, a parallel track to the nuclear cities/IWG devoted to the bio and chem proliferation expertise, if the main reference entities for the IWG, namely the ISTC/STCU and the EC, demand such a functional expansion of the IWG. Again, the past experience of the IWG implies that it is more effective if it operates only in Russia/CIS nuclear closed cities.

- d) The IWG, as a consequence of its international nature and history, requires a formal link with the ISTC/STCU, at least with their European contribution. Again, this fact does not exclude the possibility, in a next future, to seek new donors from the G8 for funding its activities. As it has been stated several times, the IWG should not compete with the Scientific Advisory Committee of the ISTC, but its broader expertise is very useful to provide consultancy to the ISTC and to the EC.
  - e) In the IV IWG meeting it has been agreed that for the year 2005 the IWG chairmanship will be covered by Didier Gambier, EC, as President and by David Vincent, UK DTI, as Executive Chairman on the Western side, and by Vladimir Sterekhov, RF FAAE, as co-President and co-Executive Chairman on the Russian side. The IWG (and its re-orientation) Secretariat duties will continue according to the past “terms of reference”, and hence will be covered for the year 2005 by the Landau Network-Centro Volta (LNCV) General Secretariat in the person of Maurizio Martellini.
  - f) The IWG Secretariat will have the duties to organize the next two 2005 IWG meetings, the first of which is scheduled to be in Como, Italy, on next April 2005. The present IWG (and its re-orientation) structure is the best minimal one to preserve the continuity of the process and to guarantee the organization of the meetings and the development of a minimal activity of consultancy/research along the traditional areas of IWG activities. Because of all the above considerations, the IWG Secretariat does not think that a change of name for the IWG is necessary at present.
- A provisional Agenda for next April 2005 IWG meeting, proposed by the IWG Secretariat, might include – according to the suggestions gathered in the IV IWG meeting – the following generic items:
    - A presentation on the Russian conversion program and its activities;
    - A paper to launch a debate on the nature of the proliferation threat;
    - A paper on what job creation means and various routes to achieve it;
    - A consideration of alternative sources of finance for projects;
    - A framework for identifying priority nuclear cities, projects, etc;
    - A technical paper on the options to compensate the shutdown of the plutonium reactors in Seversk and Zheleznogorsk;
    - The ratification of the final proposal on the future nature and scope of the IWG presented by the IWG Secretariat according to the above procedure.

Last, but not least, it is evident that the proposed agenda by Rosatom in the Annex 4, is a particular, specific case of the above generic agenda.

## *IV- IWG Meeting Minutes\**

Session 1 (Moderator – Maurizio Martellini, Landau Network Centro Volta Como)

(Gambier, presentation)

The speaker introduced the presentation by announcing that he would be moving to a different job within the Commission's DG Science, but hoped to keep in touch with developments in the ENCI/IWG process as it is an important forum for generating ideas and networking ISTC, IPP, NCI, etc., representatives.

(Stereckhov, presentation)

Rosatom acknowledged the efforts of the Commission, the Landau Network and those involved in cooperation with the closed nuclear cities. After four years the key issues are understood much better. The main problem is the lack of concrete projects such as the UK-Russia initiative. Rosatom is ready to consider proposals for concrete cooperation.

(Jousten, presentation)

The ISTC has co-managed this working group via EU funding and considers it a useful forum for exchange of views; indeed its aims are close to those of the ISTC itself. ISTC programmes in the closed cities need to be expanded, and developments such as the launch of the Global Partnership could have an impact on its activities. We need to look at alternative means to strengthen science and technology (S & T) of Russian institutes, the provision of commercial support to the closed cities and issues of sustainability.

(Martellini, presentation)

In 1999 the Italian Ministry of Foreign Affairs tried to promote the idea of the ENCI as an analogous initiative to that of the US NCI. It tried to create a 'bottom-up' or 'track 2' process, bringing to gather representatives of governments, NGOs and other entities, making use of the support and expertise of the ISTC and informing EU member state governments in their bilateral threat reduction efforts. The ISTC is the only international organization addressing the complex political, scientific and economic issues of 'brain drain' and reemployment of former weapons scientists. The advent of the GP and also the important development of the European Security Strategy suggest the need for some kind of scientific secretariat as a consulting body to underpin threat reduction efforts, particularly of European states, with intellectual support. We should consider developing the IWG along these lines.

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\* Based on the notes of Derek Averre and Maurizio Martellini

Session 2 (Moderator – David Vincent, UK Department of Trade and Industry)

(D. Vincent, presentation from chair)

The UK-Russia Closed Nuclear Cities Partnership is a relatively new and recent project, with £3 m. having been spent hitherto. The UK is the only European country with a bilateral programme in this area. The IWG is a much needed nonproliferation initiative and we need to consider how to develop and run it in the future. The aims of this meeting should be to take stock of where we are now, hear about what the Russian government and Russian facilities are planning in the future and discuss what kind of ‘tool kit’ of activities are needed to deal with outstanding problems, particularly the provision of finance for specific projects and scientist retraining. Practical recommendations for priority projects should be suggested. Also, we should debate how the IWG should develop and how it could support the GP – ENCI is clearly a misnomer when we take into account the scope of its activities.

(Sterekhov, presentation)

ENCI was understood in Russia as the European counterpart or supplement to the NCI. An organizational committee and working groups were established; the Russian government requested an intergovernmental agreement to regulate access to nuclear cities and a legal framework. No agreement has yet been signed, however, due to difficulties in securing an agreement with all EU member states. The IWG is an important contribution to WMD nonproliferation but as the previous speaker emphasized we need to define its aims more clearly. Defining ‘(re)employment’ in particular is difficult since Russian and European interpretations are different: are we talking about temporary employment on ISTC projects or new working places linked with innovative, sustainable projects? Issues of monitoring former weapons personnel and providing proper employment should be key. There are a number of federal programmes in Russia, with Rosatom providing funding from the state budget, albeit limited: conversion of Russian nuclear complex; development of closed cities; and funding redirection of nuclear scientists to sustainable employment. Heads of facilities have their own demands and priorities which sometimes differ from those of Rosatom, particularly in the sphere of education and social needs. This group needs to define what it is attempting to build, aims and structures of assistance programmes, and how the EU’s GP pledge will be delivered. Rosatom is working towards what it considers key – creation of civilian-relation jobs. At the moment priorities identified by the Putin administration are nuclear submarines dismantlement and destruction of chemical weapons stockpiles, but they do not exclude other important threat reduction needs. The UK-Russia Partnership with its concrete projects can be taken as a model for cooperation.

(D. Vincent, intervention)

From the UK DTI’s viewpoint a comprehensive presentation on Russian programmes would be welcome, with an assessment of how they are progressing and levels of funding; some information is naturally sensitive but as much detail as possible would be most useful.

(Sterekhov, reply)

An estimated \$30-50 m. [annually] is being invested in development and restructuring of the nuclear complex, reequipping it and cleaning it up, as well as reorientation to civilian work

with overseas assistance [the above sum includes only the FAAE/ex-MINATOM funding].

(Martellini, intervention)

The main task of the IWG is to address the ‘brain drain’ problem but the possibility of redirecting scientists from one sector to another is obviously important.

(Kroupine, presentation)

A presentation of new technologies at Federal State Unitary Enterprise Siberian Chemical Combine Seversk was given.

(Martellini, presentation)

The recent period has seen a change from the concept of arms control treaties to Cooperative Threat Reduction, especially with the Global Partnership (GP) initiative, with a paradigm shift from less flexible government to government agreements to cooperative S & T initiatives which are demand-driven and often involve the private sector to ensure sustainability. For real sustainability we need to lobby for more integration between closed cities and open entities, creating ‘open cities’ on the Sarov model with mixed firms involving local administrations, ZATO facilities and business. The idea of business incubators, technoparks and such structures is also worth pursuing. Rosatom should perhaps consider promoting negotiations on a regional basis. We should also recommend establishing a ZATO consultative council.

We should consider case studies on the following issues:

Government-government or lab-lab arrangements are often too inflexible to meet challenge of sustainable support, our aims are better served by opening channels of cooperation between closed facilities and medium sized (international) entities or promoting local integration, linking closed cities to local SMEs to serve local/Russian markets.

We need to rethink what we mean by job creation; we need to prepare a case study, taking into account the new international environment, on what kind of mechanisms should be put in place for job creation. Networking is important in this respect – we should provide information about facilities on a web-based database in order to link ZATOs with potential Western customers in a virtual market place. We should also recommend to Rosatom to think about boosting cooperation between ZATOs and other organizations to create a better business environment.

We need to consider how to create different kinds of scientists and also technicians to ensure social stability. Training is very important in this respect – we need to rethink programmes like INTAS and direct them to training in business practice, IT, and other aspects of contemporary commercial activity.

(Holgate, presentation)

The presentation focused on new approaches to managing nuclear expertise in the light of the changing nature of nuclear threats, from ‘rogue’ state programmes requiring more sophisticated weapons systems to substate groups pursuing smaller weapons as a means of sowing terror. In the former case expertise in weapons design and manufacturing was sought by state proliferators, but now design information needs to be less sophisticated. Materials,

rather than expertise, thus become more important together with lower level technical or production personnel who might aid theft of materials. Current threat reduction models neglect this aspect of nuclear security. We should emphasize permanent reduction in the number of personnel with access to fissile material and diversify programmes to include lower level workers. NTI's project aimed at developing conversion and capacity building at the Sarov facility was described.

(Sterekhov, intervention)

With due deference to previous speaker, we spend a great deal of time theorizing about threats and challenges but the Russian side calls for practical and concrete proposals from Western partners.

(Mallin, presentation)

The US Nuclear Cities Initiative has 6 years experience working with Rosatom in closed cities, particularly with the Initiatives for Proliferation Prevention under the Russian Transitions Initiative, to try to create commercially-viable sustainable employment. The model of business incubators may be a good one and should be looked at more closely. The presentation described current NCI projects in Sarov, Snezhinsk and Zheleznogorsk and plans to move into Seversk, and the experience gained from them. Cooperation with Russia as an equal partner, including with regional and local administrations and organizations, in developing technologies is important. Business specialists need to be part of the threat reduction team. We should seek to achieve the right mix of large and small projects and be sensitive to local needs, but within an overall strategy. Sustainability is important; we do not want to be in closed cities indefinitely, and should keep an exit strategy in mind.

(Meyer, presentation)

The ISTC's commercialization support programme was described in detail. In its first year it has resulted in the creation so far of 258 long-term jobs, with the Siberian Chemical Combine and the chemical VOCCO enterprise in Volgograd notable successes. The number of jobs created is growing faster than expected, with an additional 500 civilian working places planned by the end of 2004. A number of projects are in the development phase. The ISTC has used less than \$10,000 to create each working place, which is well within international benchmarking of using not more than \$20,000. Difficulties in commercialization nevertheless remain.

(D. Vincent, intervention)

It was pointed out that it is not always easy to define criteria for and evaluate success in commercializing technologies.

(Mladineo, presentation)

The presentation described the NCI-funded project managed by Pacific Northwest National Laboratory in Washington which invited Zheleznogorsk officials to study planning principles applied during the downsizing of the Hanford complex. Zheleznogorsk became one of the first Russian cities to use a strategic economic diversification planning process involving participation by businesses and the public.

### Session 3 (Moderator - Uwe Meyer, ISTC)

(Deffrennes, presentation)

Kananaskis priorities were defined as nuclear subs dismantlement, chemical weapons stockpiles destruction, fissile material handling and disposition and redirection of scientists. Russia has hitherto targeted the first two as its priorities but the other two remain key issues. So far the GP launched at Kananaskis has focused on Russia, with another 14 countries joining (though with the exception of Norway their financial contributions are limited); talks are going on to widen the focus to other NIS, and 9 of them are stating their case for GP support. Experience of implementing GP proposals are recorded in the GP implementation working group.

Information on EU financial inputs into threat reduction programmes via the Commission was presented via a handout. The ISTC/STCU are still the primary channel for funding for EU support, as well as for Canadian and Japanese contributions.

The EU Strategy against WMD has become an important document for the Commission, Council and Parliament alike and has alerted the EU to nonproliferation issues. The Strategy reinforces the EU's strong support for multilateral regimes; and as with antiterrorist clauses, there is now a WMD nonproliferation clause in EU assistance programmes with overseas governments. Hitherto there has been limited financial inputs via the EU Joint Action on Nonproliferation and Disarmament but this may change. €40 m. per year is now being spent on disarmament and nonproliferation. This is still some way short of the GP commitment of €1 bn. over 10 years. The new budget cycle 2007-2013 is preparing the ground for a possible financial instrument, the prospects for which look positive; the Commission needs to get the Europarliament involved and to this end is considering launching a study (an EU-UK initiative) to establish a basis for GP funding.

(Stereckhov and D. Vincent, interventions)

Clarification was requested on where and how the EU will commit funding under the GP commitment.

(Deffrennes, reply)

The Commission is currently looking at new ideas for nuclear threat reduction but it is too early to present firm conclusions. Re EU funding, a lot of discussion is going on in the Council with the member states and decisions are still some way off, although as mentioned the prospects are positive. EU support has hitherto been channeled via the ISTC and STCU and the Commission is considering whether this should continue, taking into account scientific developments in the NBC field.

(Averre, presentation)

The presentation focused on global threat reduction initiatives in Russia and the NIS in the biotechnology sector. Although experts are calling for increased attention to bio nonproliferation efforts it is unclear at this stage to what extent the GP will prioritize bio threat reduction and what levels of funding are likely to be forthcoming. Bio threat reduction tasks include infrastructure elimination, biosafety/biosecurity upgrades, civilian-related

research projects, threat assessment/disease response, redirecting former weapons scientists and support for commercialization at former weapons facilities; the precise extent of needs in Russia/NIS are unknown. Apart from US funding, financial provision has hitherto been small scale, although biotechnology/life sciences has become the main ISTC field of activity. Europe has important capacities in bio nonproliferation, and there is a need for a strategic American/European approach. There remains a need to engage with Russian concerns and try to change high-level attitudes in the Russian government, obtain access to closed biodefence facilities, redress implementation problems and provide support for commercialization which, as in the nuclear sphere, is a complex and daunting task but which may be eased by commercial opportunities arising from projected rapid growth in the Russian/NIS biotech market. A number of provisional recommendations were made. Networking international support to address what are international challenges is key.

(Netesov, intervention)

It was pointed out that Vector has allowed extensive access; a US scientist is currently working in its labs full time on a joint project. A major problem is that projects and biosafety/biosecurity upgrades have been held up by inadequate or delayed funding.

(Della Ratta, presentation)

The presentation described the lessons learned from a decade of weapons scientist redirection and the economic, security and cultural engagement it has fostered. Important contributions have been made. However, the lack of strong political support in and modest levels of funding from donor countries relative to Russian/NIS needs has limited the impact of threat reduction programmes. Western investment remains tentative; obstacles to establishing successful commercial ventures were outlined. Meanwhile the number of nuclear-related projects through the ISTC is decreasing while the number of nuclear sector workers requiring retraining and reemployment remains considerable; there is a new emphasis on engagement in the chemical and biotechnology sectors; much is still to be done to create an environment for entrepreneurship and seek diverse commercial solutions, with a greater emphasis on the service sector; and ways need to be found to overcome political hurdles to project implementation in Russia.

Session 4 (Moderator - Vladimir Sterekhov, Rosatom)

(Noble, presentation)

IPP's experiences in Russia's nuclear cities were described. Its activities include the Department of Energy nonproliferation programme, applied R & D projects with commercial potential, linking US firms with facilities in Russia and certain NIS to create business partnerships. 25% of IPP projects are in the nuclear cities, with ongoing projects in Sarov, Snezhinsk, Seversk, Zheleznogorsk and Ozersk. Difficulties with commercialization of technologies in the nuclear cities were outlined – only 2 out of 23 IPP commercial projects have involved the latter. There are problems with remoteness of facilities, lack of commercial experience and lack of access at some facilities which have resulted in delays or lost opportunities. Several factors are crucial to success: a degree of industry partner involvement; motivation of Russian project managers; support of local institutions, tailoring projects to the nuclear city environment; and adequate access to nuclear city and facility.

(Organ, presentation)

The UK-Russia Closed Nuclear Cities Partnership was described. The UK is targeting not just former weapons scientists but lower level personnel, although this causes problems from some senior officials who think this should not be a priority. A range of projects from hi-through medium-low tech have been initiated – the latter can help with sustainable businesses employing lower-level personnel.

The UK expects to sustain its current levels of funding of nuclear programmes (\$7.6 m. forecast for financial year 2004-5, including estimated \$3 m. spend on external projects) or possibly increase them slightly to the end of the 10 year GP period, i.e. to 2013. Expected total job creation is 500, with 57% of this number in the target group. The Partnership mainly works via the ISTC legal framework though in some cases it is not suitable as there are delays in getting approval and project funding does not provide for purchase of buildings or equipment; in some cases UK entities have had to contract directly with the host facility, despite the taxation problems this can bring. A memorandum of understanding is being negotiated with Rosatom (with possible signing in November 2004) but this is unlikely to solve all problems of taxation and lack of access. Also the Russian Ministry of Foreign Affairs has not been willing to conclude an intergovernmental agreement; reluctance to sign an agreement on closed cities has harmed UK-Russia programmes. Securing high-level Russian commitment is vital to future efforts. There is also a need to review best practices and improve monitoring and evaluation to try to improve delivery of projects. Better international coordination to ensure bilateral activities complement each other is also required.

The UK has been expanding its focus to the NIS, especially Ukraine, Uzbekistan and Kazakhstan, with Georgia and Azerbaijan possible partners in the future.

(Martellini, intervention)

Product or service commercialization is an important issue. Rosatom was invited to make available on a web site information technologies to facilitate job creation, also to give some idea of the ratio of scientists to lower level support staff at facilities. There needs to be a more positive exchange between Rosatom and Western entities.

(Stereckov, reply)

It was reiterated on the Russian side that we need to define tasks and know what we are aiming to build, and put in place concrete projects rather than endlessly studying the situation. Experts are convinced of the merits of threat reduction programmes but governments need presenting with concrete achievements in order to maintain their interest. Federal and regional authorities are trying to achieve stability in the closed cities but lack funding to do so.

(Jousten, intervention)

An ISTC representative agreed that though the organization is sticking with existing legal framework it is discussing new ideas on commercialization and how to implement projects; also that we need to think more about what job creation means. Proliferation of materials, technologies and expertise need to be considered together.

(Sterekhov, intervention)

A Russian delegate stated that 70% of funding in the UK-Russia programme had been spent in the UK and 30% in Russia, which they consider a good figure.

(Gray, reply)

The proportion of funding spent in Russia should increase as start-up costs are covered and the programme proceeds, reaching perhaps 60% by the end of 2004. Money spent on technical assistance is less tangible but can pay dividends in the long run – effectiveness of spend is the key factor.

(Sterekhov, intervention)

A Russian delegate pointed out that start-up costs in projects are often returned, although there are always projects which will fail. The financial discipline it enforces is a great benefit and makes recipients think responsibly about commercial aspects.

(Holgate, intervention)

Agreed with previous speaker, citing example of successful \$1 m. NTI project which has created 3 sustainable firms with 70 new jobs, making use of Russian consulting group management.

(Mladineo intervention)

Alternative sources of project finance such as a ‘revolving fund’, rather than just direct grants, is something which should be investigated.

(Dillon, presentation)

Disposal of nuclear waste presents two challenges: risks to the environment and human health, which brings with it political problems, and the potential for proliferation. It also provides an opportunity to engage the expertise of Russian scientists to research approaches to nuclear waste disposal. Potential programmes and funding routes should be investigated.

(Williams, presentation)

CERN has a history of successful collaboration with the USSR/Russia stretching back to 1967, and a 1993 agreement signed with the Russian Ministry of Sciences is still in force. CERN is not involved with weapons scientists but there is potential to do more in converting Russian nuclear experts into particle accelerator physicists. It has worked through the ISTC (around 20 projects each typically in the range of \$400,000 - €1 m.) and via INTAS grants, mostly CERN-INTAS joint calls (around 40 projects each worth approximately €100,000), to preserve Russian expertise. Some of these projects were described. CERN cooperation with Russian closed cities has fostered real conversion in the sense of forcing closed cities to face market practices and has helped the latter secure follow-on projects. Future prospects are promising.

(Garoby, presentation)

The speaker followed the previous presentation by describing plans for new linear proton accelerators at CERN and ISTC projects which are contributing to what should be an ongoing project.

(Martellini, question)

CERN is a good model for high skills conversion; the question was asked, might it not be applied to national research programmes? Has it done a feasibility study for ISTC support for cooperation on software development or equipment for particle accelerators, which might help to expand collaboration?

(Williams, reply)

The CERN model may be relevant to national research labs but it has developed over many years and would be hard to replicate quickly. Software projects with Russia have been investigated but did not work out due to problems with access to facilities.

(Garoby, reply)

If joint projects on the linear proton accelerator could be initiated there could be a commercial outlet for technology for environmental processing of nuclear waste.

(Sterekhov, intervention)

Rosatom welcomes involvement in international programmes but does not consider it as more than a temporary solution as scientists remain in the nuclear complex after projects are completed. Its preference is for programmes which provide sustainable employment outside the nuclear complex – this is its understanding of reemployment of nuclear specialists.

(Gray, presentation)

Nonproliferation through employment creation can usefully be seen as part of overall economic development in recipient countries. The situation has changed in closed cities due to the impact of ISTC and other organizations' activity. A level of business experience now exists in Russia with the emergence of good entrepreneurs. Regional and local partners are important actors in technical assistance programmes.

Only around a third of assistance from the DTI, mostly involving UK firms but also some from other countries, has gone into hi-tech projects, with the remainder creating employment in lower-tech sectors. The DTI's approach is to link the four 'instruments' of finance, training, partnership building and economic development and to encourage setting up businesses so that recipients of assistance can learn 'on the job'. It is prepared to apply its project experience to other cities if the opportunity arises.

Collaboration with Rosatom and other Russian entities has been positive, as well as with the ISTC, through which around a third of spend has been channeled. There have been few problems with access to closed facilities. There are resource constraints and the DTI is therefore looking at alternative financial mechanisms to fund projects.

(Mercalli, presentation)

The ENCI web engine established at the Landau Network, which attempts to match the demands of European smaller and medium sized enterprises (SMEs) with the technologies available in Russia nuclear cities, was described. Its demand driven approach was emphasized, as was the potential of matching technologies with the needs of SMEs rather than large companies. Several successful matches were highlighted.

(Jousten/Meyer, reply to Sterekhov)

In response to a question asked by the Russian side about intellectual property rights, ISTC representatives emphasized that IPR generated under regular projects remain with the recipient institute, but that the funding government or the EU can take out a licence, while under partner funded projects this depends on an agreement between the partner firm and the Russian/NIS recipient. There are no real difficulties surrounding IPR but the ISTC is stepping up efforts to apply this framework better.

(Sterekhov, intervention)

The concern was expressed on the Russian side that IPR regulation remains a weak point in Russia and that a lack of understanding among some entities may make them reluctant to release technologies.

(Mladineo, presentation)

The presentation focused on partnerships on fuel cell development between the US Department of Energy/fuel cell companies and Rosatom/Russian facilities and the prospects for creating businesses to exploit these technologies.

(Vorontsova, presentation)

Sarov can be considered a success story, with benefits accruing from all programme routes the complex is involved in. However, there are still problems, mainly in the area of IPR and linking customers, investors and industrial partners to establish companies in conditions of restricted access in the ZATOs. The Sarov technoparks models were described, including the 'open' technopark which has the advantage that foreign juridical entities can acquire property and tax preferences. NTI has supported the technoparks project. There is interest from INTEL and other major companies, and the target is to create 500 jobs. There is definitely the need for the kind of web site developed by the Landau Network to keep partners informed on-line about available technologies.

(Martellini, intervention)

Three conclusions can be drawn to summarize discussion on the first day of the conference:

1. It is wrong to think that there is only one route to conversion; in a developing market economy commercial projects can not be controlled by governments.
2. Regional and local markets around the ZATOs can be important to the success of strategies for conversion and job creation.
3. The Sarov success story can be taken as a template for scientific diversification, service conversion and technological incubators.

Session 5 (Moderator – Marc Deffrennes, European Commission)

(Martellini, presentation)

The GP and developments in European approaches to WMD nonproliferation raise the prospect of greater EU-Russia cooperation in threat reduction. The adaptation of the IWG for the ENCI thus becomes a matter for consideration. It was developed as a way of assisting Minatom, now Rosatom, and donor states to boost conversion and economic diversification of the nuclear closed cities, facilitate the integration of their labs in ZATOs and develop a dedicated IT platform to match European companies' needs with closed city institutes and labs. It might be used in future to help reestablish Russia as an indispensable partner in global disarmament and nonproliferation and by the EU as a channel for open, transparent dialogue on key security concerns, becoming an independent advisory body – G8-IWG - with the threat reduction expertise to manage new opportunities presented by the GP and European policies. Discussion on this was invited.

(Deffrennes, intervention from chair)

The previous presentations give rise to the following questions which we need to consider:

1. ENCI incorporates, among other things, the concepts European, nuclear and (closed) cities – should the IWG broaden the geographical, technological and organizational focus? Since the IWG for ENCI has been de facto an international Forum since its beginning, hence should the IWG address the conversion of all categories of WMD scientists who are in excess and expand beyond Russia/CIS?.
2. ENCI has until now been closely related to the ISTC, in particular the European contribution; should it remain so or embrace other actors and donors, especially in the US and Canada?
3. How would the IWG initiative work with the GP – an umbrella scheme for bilateral threat reduction efforts - which involves another set of major actors?
4. Can the IWG support the EU WMD nonproliferation strategy, bearing in mind uncertainty about a nonproliferation budget line and how much funding it would provide?
5. The Commission has financial instruments which channels assistance via TACIS, with its wider brief of assisting economic and social projects. Are we looking more at job creation and economic development, or more towards the non proliferation goals of assisting redirection of former weapons scientists?

(Stereckhov, intervention)

The IWG mechanism has produced plenty of analysis but practical suggestions for alternative sources of funding are needed. Rosatom's opinion is that the best way forward is to put in place concrete projects via bilateral agreements between Russia and partner countries - it has proved difficult to negotiate an EU-Russia agreement. Rosatom's view is that there should be an EU-Russia memorandum outlining mutual obligations prior to the establishment of a management mechanism and a political and technical executive group and the cooption of a professional organization with experience in business and job creation. Agreements need to be

in accordance with Russian legislation and underpinned juridically. Instead of widening the IWG it should concentrate its focus on concrete projects, for example providing for the needs of specialists thrown out of work by the closure of the Seversk and Zheleznogorsk weapons grade plutonium reactors. The difficult process of retraining and finding employment for former weapons specialists is still in its infancy.

(Vorontsova, intervention)

The fact that there is no such thing as a European MCP&A programme shows that Europeans are mainly interested in promoting job creation. The flexibility of ENCI allows views and exchange of experience between numerous countries and entities and rapid adaptation to changing circumstances. Two levels should exist within the overall threat reduction initiative: first, an umbrella initiative, since people in closed cities operate under restrictions; second, contacts on concrete bilateral projects between governments, as in the UK-Russia Partnership, and organizations.

(D. Vincent, presentation)

The speaker agreed that ENCI as a program does not exist and that the IWG has already evolved into something different from an ENCI-Working Group, becoming an international nuclear proliferation expertise Working Group. The following international arrangements are currently in place. The GP has a senior officials and various other groups but these are purely political fora, staffed by diplomats. A specialist level group is needed below that to manage concrete programmes, as in other organizations, for example the Shchuch'e coordination group to underpin chemical demilitarization and the incipient *ad hoc* nuclear security group. Bilateral links are in place and experts meet at international conference but ENCI is the only international coordinating group meeting regularly and involving key participants. The speaker does not envisage a formal link between the GP and the IWG but some channel needs to be opened so that the latter's findings can be transmitted to the former.

The IWG should enhance the effectiveness of international efforts to stem the proliferation of expertise and materials from Russia and the FSU (as mentioned earlier the UK is already turning its attention to other NIS). The question is how; we need better understanding of the nonproliferation threat, as this has practical implications of what kind of programmes we are aiming to establish, and of Russian priorities and concerns and the hurdles, including political ones, that must be overcome. We also need to define what job creation means and the tools needed to effect it. The speaker was sympathetic to Rosatom's calls for decisions on concrete projects but doubted whether the IWG could take on direct management of programmes; it should still involve programme managers and international experts and meet more regularly as it is a very useful forum for discussion of these issues and for putting over a clear and practical message to governments.

***IV International Working Group Meeting***  
**“Economic Sustainability, Employment and Exploitation  
of S&T Results in Russian Closed Cities”**

EC, Brussels, Belgium, 13-14 September 2004

*Organized by LNCV with the support and the auspices of the ISTC, the EC  
and the Foundation “Opera Campana dei Caduti”, Rovereto, Italy*

Since 2001 the ISTC and the EC have agreed to convey meetings of an International Working Group (IWG) – open to governmental, non-governmental and private sector entities – to analyse and to discuss the cooperative efforts by the Federal Agency for Atomic Energy (ex Minatom) and by the international community in favour of the civilian conversion, the economic diversification and the downsizing of the Russian Nuclear Cities.

The Landau Network-Centro Volta (LNCV) Secretariat was charged to arrange the IWG-ENCI meetings and to collect/disseminate the relative documents and reports. Three meetings and dedicated specific panels were held since 2001.

However, during the past years important aspects have emerged: (i) a broadening of international cooperation towards Russia, culminated in June 2002 with the formulation of the G8 Global Partnership against the spread of WMD; (ii) the growing of the ISTC Governor Board, with the inclusion of Canada, with respect to the founding members; (iii) the enhancement of the ISTC commitment to engage Russian Closed Cities scientists within the ISTC framework and its established tools.

For all these reasons, the European Commission, ISTC and LNCV, in agreement with the indication of the March 2004 NDCI Conference, will invite all interested parties to attend the IV IWG Meeting, scheduled for 13-14 September 2004 at the EC, Centre Brochette, Brussels, Belgium.

One of the aims of this event is to benefit from experiences of the parties involved in addressing the issue of economic diversification and consolidation of the Russian Closed Cities, in particular as concern administrative, access and tax arrangements, and as concern the process of innovation, valorisation and commercialisation, and to provide guidance on ways and means to efficiently structure the actions conducted by all the parties, cooperatively or otherwise.

This event might achieve the following main results:

- (i) to identify structural issues slowing down the process of economic diversification and to formulate practical strategies to address these issues;
- (ii) to take stock of specific S&T work conducted by the parties and map the areas where the Closed cities have been successful in attracting foreign investment;

- (iii) to establish the forum as a mechanism among the parties to address threat reduction mechanisms pertaining to re-employment of weapon scientists, hence serving the G8 Global Partnership initiative.

## **Possible Issues, Items and Questions**

Possible topical issues, items and questions for the IWG meeting discussion:

- The status of new security challenges and instabilities facing the international community, in particular with respect to the Russia/NIS case
- The analysis of the current CTR programs (e.g. the G8 Global Partnership and the Global Threat Reduction Initiatives) and their ability to meet the challenges of all categories of WMD, both in terms of materials, equipments, assets and knowledge (e.g. by the brain drain).
- The discussion of non-proliferation tasks as “good will or policy clauses” of economic and S&T agreements (e.g. the 2004 EU security and non-proliferation strategy envisages this principle), and the exploitation of the scientific results of Russian closed cities within the frame of a broader S&T dialogue between the US/EU and the RF.
- The problem (on the Russian side): what is the current situation in each of the ten cities concerning the Russian conversion and economic transition programs. Which of the cities will be facing substantial job losses, how many, when? Which do not require assistance and why? What are the implications of other CTR initiatives (e.g. the US's Elimination of weapons Grade Plutonium Production Programme in Seversk and Zheleznogorsk).
- The Russian strategy for dealing with the problem: What is the strategy, what does it involve, how much is Russia spending and on what? Which are the future actions that Russia will take regarding the conversion, downsizing and economic diversification of the cities?
- Challenges/obstacles to progress: identification of obstacles to progress and solutions thereto, including legal framework/access/liability issues, apparent lack of high-level Russian commitment, commercialization issues etc.; identification of different methods adopted to meet the challenges and to implement the best practices.
- Any other business: including outreach to other potential donors, implications of recent Russian structure of government changes, expansion of non-proliferation programmes beyond Russia/NIS etc.
- The problem (on the international community side): an update from the international participants concerning the progress of their programs and future plans; a discussion on how to improve the coordination between the Russians and the international partners in dealing with the economic diversification, the conversion and the proliferation challenges posed by the restructuring of the atomic industries of the Russian complex.
- Re-orientation of the IWG for ENCI to a permanent G8 IWG for non-proliferation and threat reduction issues: discussion on the scope and nature of the new IWG – including where it will meet, how often, who will provide the secretariat, who will chair, etc. – and selection of the international experts who might be regular members of this arrangement. Identification of future IWG “action plans” and date, place and possible topics of the next IWG meeting.

# Agenda

**Monday, September 13, 2004** (h. 9.00 a.m. – 6.30 p.m.)

(EC, Centre Borchette, Brussels)

9.00 – 9.40 am **Session 1** – Opening and welcome addresses by the International Working Group-IWG for ENCI Chairman (**Didier Gambier**), the Federal Agency for Atomic Energy-FAAE (**Vladimir Sterekhov**), the International Science and Technology Centre-ISTC (**Norbert Josten**) and the International Working Group-IWG for ENCI Executive Secretary and Landau Network Centro Volta-LNCV (**Maurizio Martellini**).

*Moderator:* **Maurizio Martellini**, IWG-ENCI and LNCV, Como, Italy.

9.40 - 11.40 am **Session 2** – Status and presentation of the conversion and economic diversification programs (both on the Russian and on the international community side) in the Russian nuclear cities (RNCs); discussion of challenges/obstacles to progress; identification of the best solutions, practices and methodologies to enhance the transition in the RNCs; strategies for the improvement of the international cooperation and coordination with FAAE. Specific cities experiences and their strategies. Analysis of the UK-Russia cooperation on nuclear cities as a reference model for the EU.

*Moderator:* **David Vincent**, DTI, London, UK

*Presentations by:* **Laura Holgate**, NTI, Washington, USA; **Alexandre Kroupine/Marina Chernova**, Technical Development and Reconstruction Division, Federal State Unitary Enterprise "Siberian Chemical Combine", Russia; **Maurizio Martellini**, IWG-ENCI and LNCV, Como, Italy; **Uwe Meyer**, ISTC, Moscow, Russia; **Steven Mladineo**, PNNL, Washington, US; **Monte Mallin**, NCI – National Nuclear Security Administration, DOE, Washington, USA; **James Noble**, IPP, Department of Energy, Washington DC, USA; **Nicholas Organ**, DTI, London, UK; **Vladimir Sterekhov**, Federal Agency for Atomic Energy, Moscow, Russia.

11.40 – 12.00 am *Coffe Break*

12.00 – 1.00 pm **Session 3** – Analysis of the current multilateral Cooperative Threat Reduction (CTR) programs towards Russia and NIS – including the G8 Global Partnership and the Global Threat Reduction initiatives – and their expansion; the EU weapons of mass destruction (WMD) strategy

*Moderator:* **Uwe Meyer**, ISTC, Moscow, Russia

*Presentations by:* **Derek Averre**, Center for Russian and East European Studies, European Research Institute, University of Birmingham, UK; **Marc Deffrennes**, EC, Brussels, Belgium; **Raphael Della Ratta**, RANSAC, Washington, DC, USA

- 1.00- 2.30 pm *Lunch Break*
- 2.30 – 4.30 pm **Session 4** – Particular case studies: a new challenge for CERN (and large European projects); role of Open Scientific and Technological Parks in the Special Administrative Zones of the RNCs; exploitation of IT platforms to help e-commerce between atomic industries of FAAE and western enterprises; special technological projects with the RNCs; examples of sustainable civil employment opportunities for RNCs former weapons scientists and engineers.
- Moderator: Vladimir Sterekhov*, Federal Agency for Atomic Energy, Moscow, Russia
- Presentations by: Kenneth Dillon*, Spectrum Bioscience Inc., Washington, DC, USA; **Roland Garoby/David Williams**, CERN, Geneva, Switzerland; **Patrick Gray**, DTI Oxford Research, UK; **Alexandre Kroupine/ Marina Chernova**, Technical Development and Reconstruction Division, Federal State Unitary Enterprise "Siberian Chemical Combine", Russia; **Franco Mercalli**, Centro Volta, Como, Italy; **Steven Mladineo**, PNNL, Washington, US; **Olga Vorontsova**, RFNC-VNIIEF, Sarov, Russia.
- 4.30 – 5.00 pm *Coffe Break*
- 5.00 – 6.30 pm **Session 5** – Re-orientation of the IWG-ENCI process to a long-term G8-IWG for nuclear proliferation expertise. Final general discussion and conclusions.
- Moderator: Marc Deffrennes*, EC, Brussels, Belgium;
- Presentations by: Didier Gambier*, IWG-ENCI, Brussels, Belgium; **Maurizio Martellini**, IWG-ENCI and LNCV, Como, Italy; **Vladimir Sterekhov**, Federal Agency for Atomic Energy, Moscow, Russia; **David Vincent**, DTI, London, UK
- Evening *Social Dinner*

**Tuesday, September 14, 2004** (*h. 10.00 a.m. – 12.00 a.m.*)  
(*EC, DG-Research, Brussels*)

**“IV IWG Meeting: Spin Off and Debate on a G8-IWG”**

Discussion on the scope and nature of a G8-IWG, future action plans and participation.

*The meeting, organized as a Round Table, will be arranged according to the following draft agenda. Each Session is coordinated by a moderator. Ample time is allowed to discussion.*

*Attendance is only on invitation and is limited to experts belonging to international think-tanks, governmental agencies and institutions, and to the private sectors.*

*Presentations are no longer than 10 minutes.*

*The official language is English and Russian-English-Russian translation is provided.*

*The Organizing Committee is covering travel and accommodation costs only for Russian participants.*

***IV International Working Group Meeting***  
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EC, Centre Borchette, Brussels, Belgium, 13-14 September 2004

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- 7) **Dillon Kenneth**, Spectrum Bioscience Inc., Washington, DC, USA
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**CONTRIBUTIONS LIST**

<b>Name</b>	<i>Contribution Titles</i>
1) <b>Averre Derek</b> , Center for Russian and East European Studies, European Research Institute, University of Birmingham, Birmingham, UK	<i>The Challenges in the Bio-Field and BIO-CTR Initiatives</i>
2) <b>Deffrennes Marc</b> , EC, Brussels, Belgium	<i>The G8 (Sea Island and Global Partnership) and on the EU WMD Strategy</i>
3) <b>Della Ratta Raphael</b> , RANSAC, Washington, DC, USA	<i>Threat Reduction Expansion: Evaluating New Opportunities</i>
4) <b>Dillon Kenneth</b> , Spectrum Bioscience Inc., Washington, DC, USA ,	<i>Researching and Testing Innovative Nuclear Waste Solutions in Collaboration with RNCs Scientists</i>
5) <b>Garoby Roland</b> , CERN, Geneva, Switzerland,	<i>Plans for new linear accelerators of protons at CERN with the support of ISTC</i>
6) <b>Holgate Laura</b> , NTI, Washington, USA	<i>Presentation of NTI activities</i>
7) <b>Kroupine Alexandre and Chernova Marina</b> , Technical Development and Reconstruction Division, Federal State Unitary Enterprise "Siberian Chemical Combine", Russia	<i>Presentation of the activities and strategies of the “Siberian Chemical Combine”</i>
8) <b>Mallin Monte</b> , NCI – National Nuclear Security Administration, DOE, Washington, USA	<i>The Nuclear Cities Initiative: Lessons Learned and a Path Forward</i>
9) <b>Martellini Maurizio</b> , LNCV, Como, Italy	<i>Presentation of IWG for ENCI and its expansion to meet new challenges and opportunities</i>
10) <b>Meyer Uwe</b> , ISTC, Moscow, Russia	<i>ISTC: Creating Civilian Job Opportunities for Former Weapons Scientists in Russia</i>

11) <b>Mercalli Franco</b> , Centro Volta, Como, Italy	<i>On the technology exchange between the RNCs and the small-medium/size enterprises</i>
12) <b>Mladineo Steven</b> , PNNL, Washington, US	<i>Zheleznogorsk City Strategic Planning: A Russian Exercise in Citizen Participation</i>
13) <b>Noble James</b> , IPP – National Nuclear Security Administration, DOE, Washington, USA	<i>DOE/IPP Program Projects in the Russian Closed Nuclear Cities</i>
14) <b>Organ Nicholas</b> , DTI, London, UK	<i>UK- Russia Closed Nuclear Cities Partnership: the UK response to a global security threat</i>
15) <b>Sterekhov Vladimir</b> , Federal Agency for Atomic Energy, Moscow, Russia,	<i>Presentation of FAAE and Status of the conversion programs in the RNCs</i>
16) <b>Vincent David</b> , DTI, London, UK	<i>The UK-Russia Cooperation Model and Re-orientation of IWG</i>
17) <b>Vorontsova Olga</b> , RFNC-VNIIEF, Sarov, Russia	<i>Problems with commercialization of the technologies from nuclear research centers (reference to VNIIEF projects as an example) Innovative Development and Open Science Park in the ZATO of Sarov</i>
18) <b>Williams David</b> , CERN, Geneva, Switzerland,	<i>Cooperation between CERN and Russia in various frameworks</i>

## **Some Rosatom Ideas**

### *Basic principles of the activity of ENCI*

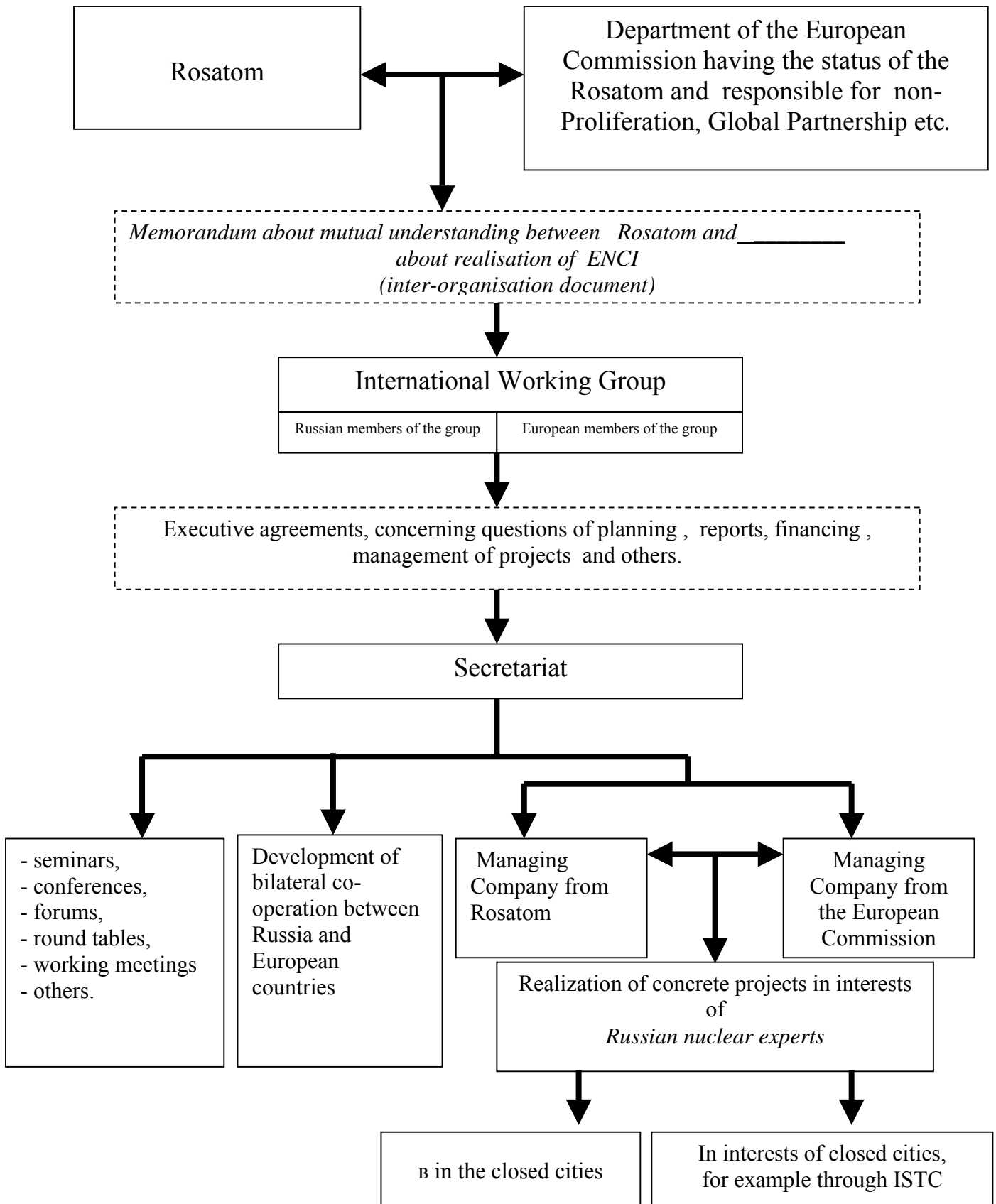
- Correspondence to the aims of the non-proliferation;
- Openness and reciprocal trust in relation;
- Concreteness in aims and tasks of ENCI;
- Free of charge help to the Rosatom in realisation of concrete projects, directed for the creation of jobs in closed cities
- Mutually profitable co-operation in commercialization of innovative projects
- Promotion of the scientific and technological progress of Russia and European countries
- Promotion of the economical development of Russia and European countries

### *Basic goals of ENCI:*

- Aid to the Rosatom in solution of social and economical problems of closed cities, for creation of new production activities providing stable job position for the Russian experts, losing their jobs in nuclear arms complex as a result of reformation and conversion;
- help in the development of business mutually profitable co-operation between enterprises of the Rosatom and state and private companies of European countries for common realisation of innovative and other projects
- explanation to wide circles of business and political establishment of European countries of the importance and necessity of international participation in the processes of conversion of enterprises of the nuclear complex of Russia in aspects connected with creation of job position for Russian nuclear experts;
- promotion of development of bilateral relations between European countries and Russia in the solution of the problem of creation of new job positions for Russian nuclear experts;
- promotion of processes of the improvement of understanding between peoples of Russia and Europe.

*Rosatom suggests to discuss in the next 2005 IWG Meeting the following:*

*NEW STRUCTURE of ENCI*



About the Agenda of the next International Working Group meeting  
(April 2005, Como, Italy)

Possible theme of the session

Review of international programs and international mechanisms directed to help to Russia in the solution of the problem of creation of job positions for Russian nuclear experts in closed nuclear cities.

ENCI as a possible mechanism of help to the Rosatom in the solution of problems of creation of jobs for Russian nuclear experts.

Possible presentations.

1. A brief report concerning the work done after the IWG session in September of 2004.
2. The Rosatom experience in the creation of jobs for Russian nuclear experts.
3. The Russian-American Initiative “Nuclear Cities”.
4. The Russian-British Partnership “Nuclear Cities”.
5. The results and experience of work of ISTC.
6. ENCI. Suggestions about goals, tasks, organizational structure of ENCI.  
Questions of financing of ENCI and projects.
7. Problems of international co-operation for the solution of problem of occupation for Russian nuclear experts:
  - Activity of ENCI in the solution of the problem of occupation for Russian nuclear scientists and possible reaction of the population in the European countries. Ways of overcoming of possible problems.
  - What is occupation in the framework of ENCI?
  - Criteria of estimation of the ENCI work.
8. Types and forms of projects, aimed at the creation of jobs in closed nuclear cities. Particularities of their financing. Complex approach to realization of projects (joint work of different participants of ENCI in the frame of the same project: managing companies, ISTC, private business etc.).

It would be beautiful if only session would have been accomplished by acceptance of some concrete (or even one) decisions to be fulfilled to the time of the next meeting, and a new meeting would have been begun with the estimation of the decision accepted at the preceding one.