

# **DRAFT**

**Report on the Second Meeting of the Steering Committee for the  
International Action Plan on Occupational Radiation Protection  
25-27 January 2006  
TM-29071  
IAEA Headquarters, Vienna**

## **Background**

The first International Conference on Occupational Radiation Protection was held in Geneva from 26 to 30 August 2002. It was organized by the IAEA, which convened the Conference jointly with the International Labour Office (ILO). It was co-sponsored by the European Commission (EC) and held in cooperation with the World Health Organization (WHO) and OECD Nuclear Energy Agency (NEA) and a number of other international organizations. The Conference produced a number of important findings and recommendations. These were considered in September 2002 by the IAEA General Conference, which requested the IAEA's Director General, in cooperation with the ILO and other relevant bodies, to formulate and implement an action plan.

The IAEA and ILO prepared a draft that was reviewed by the organizations and key participants involved in the Geneva Conference as well as by the International Confederation of Free Trade Unions (ICFTU) and the International Organisation of Employers (IOE). The Action Plan was approved by the IAEA Board of Governors on 8 September 2003. In order to ensure the successful implementation of the Action Plan, the IAEA and ILO agreed to establish a Steering Committee (SC) with the overall remit to advise on, monitor and assist in the practical implementation of the International Action Plan (IAP). The First Meeting of the Steering Committee was held in Vienna, 4-6 February 2004.

## **Summary**

The Second Meeting of the Steering Committee was held in Vienna, 25-27 January 2006. Twenty-five participants attended the meeting (see Appendix 1). Material for discussions (see Appendix 2) was made available earlier on the Agency's website or distributed during the meeting. The first day consisted of oral presentations on the status of actions 1 up to 13 of the IAP. Time was allowed for discussions on each of them. In the morning session of the second day, action 14 was addressed. A presentation of the status, as of May 2004, of the draft Safety Report on "Attributing radiation-linked disease to Occupational Exposure: Background and Status as of May 2004" was provided. Open discussions then took place. Following a request by the SC members, all the actions debated to date were reviewed in the afternoon of the second day, which session ended with the presentation of the BSS review process undertaken by the Agency. The first morning session of the third day allowed the SC members to come back on actions 12, 13 and 14. The main findings and the provisional conclusions of the meeting were presented and discussed during the last session of the meeting which ended at noon.

## Report

### Opening address

On behalf of the Agency, P. Deboodt welcomed the participants and expressed his thanks, in particular to the international organisations attending the meeting. He apologised for Mrs E. Amaral, DIR-NSRW, and Mr. K. Mrabit, NSRW/PPSS, and described briefly the proposed agenda (Appendix 3).

### **Action 1: ILO, supported by the IAEA, to take steps to further promote the ratification and implementation of ILO Convention 115. (S.Niu)**

After his welcome address, S. Niu restated the main objectives of the meeting and invited the participants to introduce themselves and to present their personal expectations from the second meeting. As new members have joined the SC, S. Niu provided a short explanation on the ILO Convention No. 115 and the Code of Practice on Radiation Protection of Workers (ionising radiation) in the context of the overall remit and activities of the ILO. He also reminded the meeting that the ILO differs from the IAEA in that it is concerned with protection against all hazards in the workplace. The ILO is a co-sponsor of many IAEA standards but its own main mechanism is based on Conventions which are, in the IAP context, Convention No. 115 and Recommendation No. 114. Convention No. 115 has been ratified by 47 countries so far. Practical guidance is provided through the Code of Practice or Guidelines. The Code of Practice was prepared in the 1980's and its updating is the subject of the action 4. Other broader actions are important in promoting the Convention itself.

Concerning the implementation of this action, S. Niu indicated that the process for ratification of Convention 115 was a long one. Further, this process consisted of three steps: the first one based on direct contact with the country (for political commitment), the second one on technical cooperation with the Member States (for promotion) and the third one on interagency cooperation (for coherence and harmonisation).

He stressed that beyond the ratification of the Conventions which could be quite easily assessed (considering the number of countries which have ratified them), their implementation would not be so straightforward to assess. If one were to consider that the ratification process is in progress – Luxemburg being the last country to start the process – more effort should be expended on implementation.

### DISCUSSION

D. Owen wished to know whether the ILO had produced official comments on the draft ICRP Recommendations. S. Niu indicated that, due to the draft status of the ICRP document, there was no official document published by the ILO on this issue. He also added that the ILO is really concerned by issues such as the concepts of exclusion, exemption and clearance, dose limits and dose constraints and, last but not least, by the definition of Occupationally Exposed Workers whose political relevancy is very important for the ILO. He also stressed the need for avoiding conflicts between the ICRP Recommendations and Convention 115 and that the ILO were expecting input from the IOE and ICFTU on these issues.

R. Cruz-Suarez mentioned that, based on his experience with the Agency's MSs, Convention 115 seemed not to be very well known by them and also that the Convention needed to be reviewed as it was produced in 1960. He pointed out that the reasons for non ratification by the MS should also be addressed.

Regarding the review of the ILO Conventions, S. Niu indicated that the process due to, among other factors, the required involvement of the International Labour Conference was a very long one and that no review was being planned for the time being.

### SC recommendation

Concerning the **ratification** of Convention 115, the members of the SC recognized that the process was in progress and that no specific recommendation was required. As far as the **promotion** of this convention was concerned, the task was progressing as indicated in the work plan but the level of its implementation in the MS had to be checked. K. Mrabit indicated that such information could be provided in the framework of the Thematic Safety Area 2 (TSA 2) using the **O**ccupational **R**adiation **P**rotection **A**ppraisal **S**ervice (ORPAS); this proposal considered by S. Niu as a very positive one, was encouraged by the SC members. *The responsibility for this action belongs to ILO.*

**Action 2: ILO to consider whether there is a need to review the procedures for requesting information on the implementation of ILO Convention 115 from Member States and the types of information being requested, so that peer reviews of occupational radiation protection programmes become more effective. Lessons learned from the application of the reporting criteria applied under the Convention on Nuclear Safety (IAEA document INFCIRC/449) may be a useful input (S. Niu).**

Although the procedure has been reviewed, nothing has been done as far as regards the implementation of ILO Convention 115 and the type of information concerned. S. Niu acknowledges this and would appreciate advice from the Steering Committee on how to improve the degree of completion of this action.

### SC recommendation

The collaboration between ILO and the Agency has to be maintained and improved. Use of the ORPAS reports and the RaWaSIPs (**R**adiation and **W**aste **S**afety **I**nfrastructure **P**rofile) should be promoted. The involvement of the stakeholders should be increased and the ORPAS results should be made available to the SC members. *ILO is responsible for this action.*

**Action 3: The IAEA and ILO to continue to cooperate in the development of guidance and informatory material that will assist in the interpretation of requirements set out in conventions and standards, and in the conduct of further IAEA intercomparisons of monitoring methods for assessing occupational exposure (R. Cruz-Suarez).**

R. Cruz-Suarez provided a summary of the degree of completion of this action. Documents published in 2004 are “Occupational Radiation Protection in the Mining and Processing of Raw Materials”, Safety Guide, Safety Standards Series No. RS-G-1.6, “Workplace Monitoring for Radiation and Contamination”, IAEA-PRTM<sup>(1)</sup>-1 (Rev.1), “Individual Monitoring”, IAEA-PRTM-2 (Rev.1), “Health Effects and Medical Surveillance”, IAEA-PRTM-3 (Rev.1) and “Personal Protective Equipment”, IAEA-PRTM-5; four other publications are in progress dealing with itinerant workers, workplace monitoring, dosimetry for individual monitoring and neutron monitoring.

Regarding the intercomparison exercises, R. Cruz-Suarez described all the exercises completed up to now as well as the exercises still planned for the coming months such as those on the Whole Body Counter,  $\beta$ -monitoring and urine analysis.

He also indicated that emphasis would be put on workplace monitoring and that stronger support from the regional centres would be considered in these exercises.

<sup>(1)</sup> Practical Radiation Technical Manual

## DISCUSSION

V. Holahan expressed his interest in the results of the intercomparison exercises which should be made available as hard copies or on the Agency's website. On the comment of R. Cruz-Suarez explaining that the documents were published in English, M. Gustafsson stressed that the meeting report should strongly recommend that translations of the Agency's publications should be made to a greater extent than is currently the case. This request was clearly supported by T. Zodiates. She indicated that the reluctance, at a certain level in the Agency, for publishing Safety Reports still remains a question mark. The need for producing and publishing Safety Reports was also pointed out by C. Lefaire. Coordination between the EU and IAEA was highly desirable in his opinion, for example on issues such as the monitoring of itinerant workers. The European Commission held a workshop on this issue in November 2005 with the aim of integrating this area in the next version of the EU-BSS. Answering a question from J. Van der Steen, R. Cruz-Suarez indicated that the natural sources are already partially taken into account for the intercomparison (intercomparison exercise on breath), D. Wymer came back to this issue in his presentation on action 11.

### SC recommendation

The ILO and the Agency should still provide guidance and material. The intercomparison exercises should be maintained but could be organized in close cooperation with the regional centres. Exercises related to workplace monitoring will be promoted. The SC also stressed the need for pursuing the publication of Safety Reports and for translating the material produced by the Agency. *The Agency is responsible for this action*

**Action 4: ILO, in consultation with the IAEA, to consider the concerns over the terminology used in the Code of Practice and to determine the most appropriate means of addressing them (S. Niu).**

S. Niu indicated that the Code of Practice (CoP) was recently reviewed but that the process was not yet fully completed. A re-evaluation has not been excluded but, due to the uncertainties about the future ICRP Recommendations, the ILO has not yet planned a new review. The ILO remains strongly involved with the works of RASSC (Radiation Safety Standards Committee) and of the ICRP and is associated with the review of the Agency's BSS. Input from international organisations such as the IOE and ICFTU in order to review some specific items would be welcomed.

## DISCUSSION

M. Gustafsson pointed out there were still some conflicting issues (or "discrepancies") between the CoP and the BSS and, that as a review of the CoP could take many years, she suggested that use of the CoP be discontinued until it has been fully reviewed. This might reduce problems in the practices. S. Niu answered that the CoP consists of many elements; some of which do not appear in the other Standards. As a consequence, the CoP may not be cancelled.

On the other hand, he recognized that the review/revision of the ICRP and IAEA documents could provide a strong support for a future review of the ILO-CoP.

### SC recommendation

The Steering Committee stressed the need for achieving the objective of this action, and as D. Wymer recommended, to clearly identify these inconsistencies as an initial step. *ILO is in charge of this action.*

**Action 5: ILO to make the list of contact points in its Member States and field structure available to the IAEA, which organization should inform the contact points about the latest available standards, guidance and advice developed at the international level and invite their representatives to relevant workshops, seminars and conferences (P. Deboodt).**

It was confirmed that the file with the contact points had been transmitted to the Agency. There was still a need to check the validity of the information and to update it. It was also indicated that a more formalised collaboration between the ILO-country representative and the Agency's counter part should be implemented.

#### DISCUSSION

M. Repacholi indicated that WHO is represented in each country and that he could provide information on these contact points. (This information was provided during the meeting). He also stressed the need for developing a more formal cooperation between the representatives of the international organisations in MSs.

#### SC recommendation

The validity of the data concerning the counterparts in the MSs should be checked and the contacts in the MSs between ILO, WHO and Agency representatives formalized. The Agency will manage this action.

**Action 6: The IAEA, in consultation with the ILO, to develop publicity materials in the form of posters and leaflets for target groups of workers identified as likely to benefit directly from the information provided - for example, workplace material designed to reduce the number of near misses and the risk of serious accidents (G. Sadagopan).**

G. Sadagopan indicated that a work plan had been defined and that a Consultancy Meeting (CM) had been organised in May 2005. This CM produced 7 posters and also advised on the pursuit of the work. Advice was demanded from the Steering Committee concerning, in particular, the need to develop material for Nuclear Power Plants.

#### DISCUSSION

D. Wymer clearly reminded the meeting that the scope of this action was to provide information to "non-nuclear workers" on radiological risk and on basic radiation protection measures. Support from the ILO, as well as from WHO should be provided, in particular concerning hospitals and the medical sector. WHO indicated the need to extend this scope to make sure that all the workers correctly understood what was required by the employers.

#### SC recommendation

It was strongly recommended that the material produced be translated, and that a decision be made as to where and how to disseminate this material. No material should be produced for the NPPs but the deterministic effects should be presented on the posters.

Posters should be developed for the activities involving NORM however some participants proposed not making use of the acronym "NORM". Priority should be provided, respectively, to radon, then to exposure of airline crews and thirdly to activities involving other natural radiation sources.

The available material should be distributed as soon as possible to the MSs and also transmitted to the trade unions and to the employers. Regarding the need for developing similar material for the NPPs, the members of the SC expressed their disagreement arguing that the NPP industry had, generally, already developed such material. The Agency is to take the leadership for this action.

**Action 7: The IAEA to provide a website focal point, where networks may be established for information exchange, experience gained and lessons learned between interested parties. (P. Deboodt).**

P. Deboodt stated that details of the planning activities for the website would be provided together with the report of the meeting

With respect to networking, however, the Agency has launched the Regional East European and Central Asian Country ALARA Network (RECAN). A consultancy meeting held in July 2005 prepared the first workshop of RECAN which was organised in November 2005 in Vilnius, Lithuania. A RECAN Steering Committee has been set up and its first meeting was organized in February 2006 in Vienna. The second workshop of RECAN is planned for October 2006 in Croatia and will focus on “Optimisation in Medical Applications of Ionizing Radiation”.

## DISCUSSION

The discussions concentrated on the need for good coordination and for a clear definition of the scope of the networks (B. Ahier). C. Lefaire made comments on the conditions for ensuring the efficiency as well as the sustainability of the networks. The principal condition is that one has to rely on people really wishing **to act** and **to produce** material to be published. A second condition would be that a “Bottom-Up” instead of a “Top-Down” approach has to be encouraged. Concerning sustainability, the European ALARA Network (EAN) has now a new status as it is officially registered as a private association which is fully financially supported by its members. This led C. Lefaire to stress the need for Agency support to the new networks from two to four years.

Many discussions focused on the need for examining the future relation between the networks (EAN, RECAN, the one initiated in Latin America?). C. Lefaire recognized that, as agreed by the Agency and the EAN, if a strong relationship between the EAN and the new networks is to be fostered, this would have to be built on common problems, as each network has specific topics to be addressed and repetition and/or overlapping must be avoided. In his view, harmonization between or integration of the networks should not be the final objectives. J. Van der Steen supported the idea that the word “coordination” would be more appropriate and that this coordination should be undertaken by the Agency

### SC recommendation

It is recommended that planning for the practical implementation of the website be initiated. As far as sustainability of the networks is concerned, Agency support should be extended to more than 2 years. A “bottom-up” approach should be promoted and the right persons identified and involved in “daily” management to ensure the efficiency of the networks. The Agency is responsible for this action.

**Action 8: The IAEA, in consultation with the ILO and drawing on the experience of trade unions and other stakeholder organizations, to prepare and disseminate suitable information materials to workers’ representatives and labour educators in order to promote a better informed workforce and better understanding generally among those concerned with exposure to radiation( G. Sadagopan).**

G. Sadagopan requested some clarification on the respective scopes of Action 6 and 8. She indicated that progress had been made regarding e-learning for developing interactive training material and she commented on the work already undertaken in order to provide materials for “training the trainers”.

## DISCUSSION

C. Lefaire asked whether the material produced would be translated into the other Agency official languages and whether it could be made available, free of charge, on the Agency's website. G. Sadagopan answered that the current versions are in English but translations could be provided by the Agency. Regarding dissemination at no cost, the policy of the Agency has to be applied and no decision has been taken up to now.

Many comments were made on the importance of such material reaching the regulatory bodies, on reducing the "distance" between the material and the workers (G. Massera), and on the means of disseminating the material (T. Zodiates).

M. Repacholi raised the issue of the involvement of the ILO in the production and the dissemination of the material. S. Niu said that some publications had been co-sponsored in the past, that that ICFTU had also been involved and that the ILO had had contact with the Ministries of Labour in the MSs on this issue. He recognized that while the commitment of the ILO is quite evident at the level of the Standards, its involvement at a lower level is not straightforward and has not been yet discussed. M. Repacholi stated that this was a mandate of the ILO and that support of the ILO (an ILO logo on the posters for example) could promote the dissemination and the use of such material. S. Niu agreed.

V. Holahan suggested some improvements for the actual posters and stressed the need for checking some quantitative data used. It was decided to send these posters to the SC members for advice and comments. (These are joined to this report and the milestone for providing reactions is fixed for the end of October 2006).

### SC recommendation

The scope of this action has been clarified: this action has to focus informing the workers and their representatives. The final objective is to increase worker awareness and the word "information" is more pertinent than "training" in this case. The SC members mentioned the existence of training packages for specific categories of workers (firemen, police, volunteers,...) and declared that this material could be used as a basis for developing the information as required. The ICFTU should be involved and workers in areas such as industrial radiography, hospitals, oil extraction should also be included in the target group. Posters for each area in which NORM is involved should be developed. *The Agency will lead the implementation of this action.*

***Action 9: The IAEA, in consultation with professional medical bodies such as the International Society of Radiology, to critically examine existing postgraduate education and awareness-raising packages for medical professionals, including those now being produced by the ICRP, to establish the need for the development of further material, to develop further material as necessary and to disseminate the material developed (P. Ortiz-Lopez)***

P. Ortiz-Lopez noted that there were 28 actions in the International Action Plan for Radiation Protection for Patients and that not all were relevant.

Many materials have already been developed for example in the diagnostic, radiotherapy and nuclear medicine areas which have been approved by the Steering Committee on Education and Training. As the known material for X-ray fluoroscopy (cardiology area) with high delivered doses delivered is spread amongst different documents, new dedicated materials are being developed. As shown in a meeting for cardiologists in 2004, there is a clear need for disseminating the information. The availability of a website is highly recommended in order to address day-to-day practices but such approach has to be dynamic as a consequence of the fast evolution of the techniques. A positive evolution is confirmed by the demand introduced by the International Organisation of Medical Physicists to the Agency for making the Agency training material available on their website.

### SC recommendation

This action is almost completed. *The Agency leads this action.*

**Action 10: *The IAEA, together with other co-sponsoring organizations, to engage with WHO in establishing the status of the draft Manual, and to encourage its finalization, publication and use as soon as possible. (P. Ortiz-Lopez)***

P. Ortiz-Lopez explained that five manuals on radiation protection in hospitals have been updated and will be published jointly with ILO before the end of 2006 (except the one on Radiotherapy for which comments still have to be received from international organisations).

### DISCUSSION

C. Martin mentioned that in the manual on Radiology, there was no mention of the skin damage observed among the radiologists but that the other manuals were really good. Some topics are missing and the references should be updated. P. Ortiz-Lopez responded that all comments and proposals would be appreciated and C. Martin said that he would provide examples of situations such as radiological incidents which could be added to the documents. P. Ortiz-Lopez observed that such incidents were dealt with in the training courses. C. Lefauve asked whether the radiographers had been covered by activities already undertaken. P. Ortiz-Lopez answered that 40% of the participants of the training courses were radiographers. C. Lefauve stressed the need for advertising the existence of the material developed and mentioned the relations established, for example, between the EAN and the European Federation of Organisations of Medical Physics (EFOMP).

### SC recommendation

Material has almost reached its final state but the main question now is the need for distributing the information to a larger spectrum of targeted people. Occupational exposure also has to be considered as a priority and more practical examples have to be integrated in the material. A further review was proposed which will be done by M. Martin who kindly made the offer. Professional societies as well as the ALARA networks should be made aware about the existence of such material. *The leadership will be done by the Agency.*

**Action 11: *In support of this programme, the IAEA to assist authorities in identifying activities involving exposure to natural radiation that may need to be controlled, and to generate and disseminate additional sector-specific information on radioactivity levels, exposure conditions, and chemical and physical characteristics of airborne pollutants in workplaces involving naturally occurring radioactive material. (D. Wymer)***

D. Wymer mainly used the paper he presented during the last European ALARA Network workshop in Augsburg (October 2005). He summarized his conclusions as follows.

In the Geneva Conference, the questions to be addressed were clearly focused on what to regulate and how to implement a graded approach.

If clear requirements and guidance are provided for Radon and NORM (use of T-NORM should be avoided), they deal mainly with the formal level. Also it is worthwhile to note that the graded approach to regulation is quite similar to optimisation of control. In this sense, the impact of a holistic approach is quite evident, some measures taken for conventional safety being sufficient to warrant an adequate level of radiation protection.

As the existing Standards provide adequate requirements and guidance, there is no additional requirement at the formal level. But support is needed at the level of the Safety Reports for practical situations. Optimisation and a graded approach are clearly described. The importance of individual



and workplace monitoring must be borne in mind as along with the fact that overestimation is generally made when modelling such situations.

Concerning the review/revision of the BSS, there are some topics to be addressed such as: clarification and consolidation of some concepts, definition of the exemption level (which are, up to now, defined for artificial sources), and radon action level (not applicable for Uranium mines).

Support material has to be developed: Safety Reports (as already mentioned) but also training material. Currently a training package is available for the Oil and Gas Industry and one chapter in the Agency's Post Graduated Education Course is dedicated to natural sources.

## DISCUSSION

H. Landfermann asked whether the case of the water workers in Germany had been considered. D. Wymer answered that they were taken into account in the mining area. J. Van der Steen recognized the pragmatic approach of the Agency in the issue of natural radiation sources. He also wanted to know whether the Occupational Health Safety (OHS) measures would have priority. As an example, D. Wymer answered that if there were a good dust monitoring in the facility, the regulatory authorities of the country would have to decide whether further actions needed to be undertaken or not. OHS does not axiomatically prevail and cases would have to be checked on an individual basis.

J. van der Steen returned to the issue of the posters and he recommended one

### SC recommendation

As recognized by many members of the SC, the work plan is very well structured and clear. Many documents have been produced and the training package is already integrated in action 8. The issue of organizing intercomparison exercise for radon, for example, gave rise to detailed information on the unavailability of funds at the time being and that actions in this field would, in the context of the Agency's model project, be part of the Thematic Safety Area 4 (TSA 4) on environment. *The Agency remains responsible for this action.*

**Action 12: *The IAEA and ILO to collaborate in devising strategies for achieving a better understanding between radiation protection practitioners on one hand and occupational health and safety practitioners on the other and for developing coherent approaches to safety in the workplace.***  
(P. Deboodt)

The Technical Meeting planned in May 2006 has been postponed and there is a real need for defining the Terms of Reference for a future meeting addressing the issue of a holistic approach. Advice was strongly required from the SC.

## DISCUSSION

Concerning action 12, P. Deboodt indicated that this action should not focus on the risks themselves but on the management of different risks present at the same time in the same workplace. J. van der Steen noted that in the NORM area, this approach was also relevant as some measures for the protection of the workers against radiological risk and non radiological risk are quite similar. S. Niu mentioned that the ILO has already worked on this issue and proposed the adoption of a specific approach depending upon the industry and/or on the workplace.

A first observation is that the ILO has already initiated the work as this organization has to deal with all kinds of risks. The terms of reference seem not to be clearly defined and one should focus on the identification of practical situations and try to develop a strategy for managing them. Examples of such "Safety Cases" (an expression used by the NEA in a previous working group on the decommissioning of NPPs) have been proposed: mines, oil industry, and, more generally, reference

has been made to the 4th Workshop of the EAN which was devoted to a holistic approach and during which many sectors provided examples of the possible ways to manage these situations. There was also a general agreement to attribute responsibility for this action to the ILO with the strong support of the Agency which should provide specific situations to be dealt with. At the level of the NEA, a working group has been created whose aim is to examine radiation protection in relation to public health. It was stressed that the participants of the technical meeting planned for this action should belong to different sectors and not only to the nuclear one. Moreover, for some participants, “optimization” and “holistic optimization” seem to be governed by political issues; on the other hand, it had to be recognized that the question of knowing one could compare the chemical risk with the radiological risk is not a simple question. Some other participants stressed that we may have the impression that in some circumstances, the means devoted to reduce the radiological risk are exceeding the efforts made for reducing other risks, that the impact on the environment must not be forgotten and that the issue of comparing the “short term” dose with the “longer term” dose (as in decommissioning projects) is also a relevant one. For the Agency, it was clearly stated that this action must be managed by the ILO as Agency missions are dedicated to radiation protection. A very important point was clarified by M. Gustafsson who recalled that the optimization process is directly related to the available resources in a country and that this issue was one of the background issues which led to the definition of action 12.

P. Deboodt said that there were seemed to be very good reasons for putting this action in the International Action Plan and that it would be very difficult to decide to terminate this action as nothing has been done up to now. As in other areas, research on the holistic approach could deliver unexpected results and while it is quite clear that the Agency should not lead the action, something had to be done. The EC, represented by A. Janssens in Madrid (during the IRPA Congress 2004), has recognized the importance of this issue and could be associated with this action.

C. Lefaire commented that as radiation protection specialists, we were not authorized to work without taking into account other hazards and risks. Care should also be taken to avoid spending excessive resources with respect to other risks. Examples of such areas where a better “balance” could be found are in the medical and NORM sectors. Action on the holistic approach has to cover quite different situations and the first step should be to contact experts in the management of non-radiological risks. He also confirmed that the IAEA was not sanctioned to lead this action but was ready to provide assistance to the ILO.

S. Niu then raised the question of how to determine the best way to go forward. In his opinion, there was no reason to stop but there were reasons for pursuing the work as the concept of the Safety Culture, which was originally developed by the Agency following the Chernobyl accident, is not limited to the radiological risk. The ILO plans to provide a definition of the Safety Culture in 2006, encompassing more fields than the radiation protection one. The question addressed to the SC is how to deal with action 12 in a manageable way.

M. Repacholi indicated that there was a clear need to review the original arguments which led to the definition of action 12. Concerning the Safety Culture, he stressed the need for developing strategies and, regarding the tasks of the SC, he considered that the SC should indicate the actions to be undertaken.

H. Landfermann emphasized the need to harmonize the regulations such as in the airline companies (the situation of pregnant workers) or in the NORM sector. J. Van der Steen proposed that a draft document should be produced on the topic which could clarify the objectives of a technical meeting to be organized later. D. Owen then observed that in the UK, there was a complete mismatch between the resources allocated to the radiation protection programmes compared with the provisions for conventional safety. There was, in his opinion, a real interest for going forward with action 12 as

shown in the Antwerp workshop (4th EAN WS), as also pointed out by A. Janssens in Madrid, and for making available some clearing material on the discrepancies between resources devoted to RP and other risks. V. Holahan suggested that the ILO and the Agency revert to the Geneva discussions in order to identify the background issues and the desired outcomes. He also indicated that the question on the education issue should be addressed. This should be put in the action plan for next year. J. Van der Steen returned to the particular situation of the developing countries for which the resources to be allocated to RP is of crucial importance. M. Gustafsson expressed her strong support for the need to fix the objectives of the technical meeting. Prof. Joshi confirmed that in many developing countries, more resources are spent on RP issues than on the other risks. He supported the idea that an action plan should be developed jointly by the ILO and the Agency.

#### SC recommendation

The ILO and IAEA should prepare a working document whose main objectives should be to indicate the terms of reference as based on the review of the “Findings and Recommendations” of the Geneva Conference, to define the next steps to be undertaken and to establish an action plan for their implementation. Two of these steps could be a consultancy meeting and a technical meeting. *This action will be managed by ILO.*

***Action 13: The IAEA to review current information on the formulation and application of standards for the protection of pregnant workers and their embryos and foetuses in order to determine whether the issue warrants action at the international level. In addition to the work described in the presentations made at the Geneva Conference, relevant work has been done in a number of countries and by a number of bodies (such as ICRP). (R. Cruz-Suarez)***

R. Cruz-Suarez provided an overview of the status of this action. After having recalled the objectives of action 13, he summarized the main findings and recommendations from the consultancy meeting held in November 2005. Many documents such as the IAEA Safety Report 88, the ICRP-90 and -95 Publications, the ICRP-2005 (draft), the BSS, the EU Directives and some other have been compared. The ILO Conventions have also been considered. There is a general agreement on the next conclusions: same level of protection of the foetus as of the public and on the need for early notification of the pregnancy.

Nevertheless, R. Cruz-Suarez indicated that further guidance is still required on how to apply the standards on the followings topics: dose before the pregnancy, dose to the foetus due to intake by the mother, dose to the new born, time scale for applying the dose limit.

Work done by UNSCEAR (year 2000 and draft in progress) identifies four scenarios to be taken into account: external exposure, in uterus incorporation, new born exposure and external exposure from mother’s tissues.

The proposal is to develop a questionnaire for the MSs in order to collect information on the dose received by the workers in different workplaces. A Technical Meeting is planned for 2006 and the publication of a Safety Guide could take place in 2007.

#### DISCUSSION

H. Landfermann noted that the calculations are mainly based on the last ICRP model but that for the newborn, some coefficient factors are quite different. R. Cruz-Suarez answered that the work he referred to was focusing on the requirements and on the areas where there was a need for more guidance, as the calculations still remain a problem. C. Martin then indicated that, in UK, the nuclear medicine area is more relevant than the radiological area as far as the protection of pregnant women is concerned. He also mentioned that the risk assessment from the notification of the pregnancy was known and that guidance existed on this issue. But he also noted that the value of 1 mSv could be, in

some circumstances, not practicable. R. Cruz-Suarez answered that there was a lack of information on the practices and this supported his proposal to develop a questionnaire.

The issue of defining different dose limits for men and for women was also raised (C. Martin, D. Owen). For D. Owen, it was appropriate that not only radiobiologists were involved in the discussions but that more stakeholders should take part in this issue as it was also related to human rights. Invitations to participate in future work will be transmitted to ICFTU and to IOE.

J. Van der Steen wanted to know whether data was available from UNSCEAR on high doses for the unborn. R. Cruz Suarez answered that there was no data. Prof. Joshi also asked whether there should be a difference between men and women in cases of emergency. R. Cruz-Suarez indicated that in such cases, the recommendation was to avoid any exposure of the pregnant woman. S. Niu stressed the importance of the equality principle as stated in art.14 of Convention 115. Discrimination could be sometimes justified.

The chairman reminded the meeting that there was still some time for discussing action 13 as presented by R. Cruz-Suarez. T. Zodiates mentioned that there should be more guidance on how to calculate the limit of 1 mSv for the fetus as required by the BSS. R. Cruz-Suarez answered that the 1 mSv could be considered as a quite “fair” limit but that there is no clear time frame as far as the calculation is concerned. Moreover, the calculations for getting the dose, the dosimetry issue and the specific guidance for employers, workers and health physicists still required more attention. M. Gustafsson noted that the questionnaire should focus on the nuclear incidents; care should be taken concerning the responsibilities of the employers and the workers (as pointed out by the EU WS on Itinerant Workers organized in Luxemburg, November 2005). V. Holahan stressed the importance of the interpretation of the BSS. S. Niu emphasized the importance of this issue by mentioning the question of what to do when a pregnancy is announced and that there seemed to be no way to limit the dose to 1 mSv for the remaining pregnancy duration. D. Owen clearly supported the future actions laid out by R. Cruz-Suarez and asked that more women be involved in the discussion.

#### SC recommendation

C. Lefaire summarized the discussions on action 13 by saying that there was a consensus for supporting the recommendations made by R. Cruz-Suarez, that the steering committee required to see the potential input to the revision of the BSS and that the consultation process should involve women. *The Agency is responsible for this action.*

***Action 14: The IAEA, in collaboration with ILO, WHO, NEA and other relevant bodies and drawing on the experience of other stakeholders, continue its work on developing international guidance for aiding decision-making on the attribution of cases of detrimental health effects to occupational exposure to ionizing radiation. ( H. Ladfermann, M. Gustafsson)***

As introduction to the session devoted to this action, H. Landfermann clearly stated that the conditions for providing a fair compensation were:

- that a careful analysis of the doses be performed;
- that a detailed medical examination of the claimant be made;
- that a calculation of probability of cancer be available and
- that the results of the calculation be put into perspective with compensation schemes for other risks.

He also re-formulated the main objective of action 14 as “to provide for a clear protocol for managing the compensation scheme where they have to be applied” and that WHO should be more involved

In order to introduce the discussions, M. Gustafsson provided a summary of the draft Safety Report on “*Attributing radiation-linked disease to Occupational Exposure: Background and Status as of May 2004*”. As each member of the Steering Committee had received a copy of this draft, this report would only provide the main facts as presented by M. Gustafsson. The handouts of the presentation are provided in Appendix 5.

The main conclusions as indicated in the draft and as stressed by M. Gustafsson’s presentation were that the compensation schemes should be scientifically based, that the assigned share was a good tool for defining the compensation level and that the uncertainties had to be properly incorporated in the compensation schemes.

## DISCUSSION

The discussion was initiated by H. Landfermann who proposed defining the terms of reference for the working groups planned in the afternoon session. The participants indicated that they had the feeling that the discussions should be mainly on technical issues and that the SC was not able to perform this task (T. Zodiates). They also mentioned that the next step to be undertaken should be to organize a Technical Meeting after having clearly defined the objectives of the document which were to provide scientific basis for building compensation schemes (D. Wymer). M. Gustafsson indicated that the document was intended to provide guidance to the MS.

P. Deboodt then summarized the latest evolution of the management of action 14.

Held in May 2005 at the ILO Headquarters in Geneva, the meeting was aimed at discussing the status of the action plan. During this meeting, an agreement was made between the ILO- and the Agency’s Secretariat to organize a Technical Meeting in February 2006. In the meantime, the new IARC study was published and ILO Secretariat proposed postponing the Technical Meeting and to let the Steering Committee of the International Action Plan decide on how to manage this action in the future.

The questions now were: “When, Where and Who is responsible for the organization of the Technical Meeting?” S. Niu added that, in his opinion, the next step was not to refine the draft but to develop guidance on how to improve it in such a way that this document, which was a very good step forward, would be useful for the countries that hadn’t taken part in the development of the draft. He also agreed with M. Repacholi who had previously indicated the three main factors for providing compensation (assessment of the health, assessment of the doses and definition of compensation schemes) and on the need for defining criteria for the decision makers: In this sense, the Technical Meeting should be based on the input of experts in these different fields. S. Niu also stressed that his expectations were to have, clear advice from the SC on how to move forward in order to make the document useful.

D. Owen commented that the actual draft was a good one and that it had a very good potential for complying with the objective of the action but that this committee was not in a position to do more at the time being. More time should be devoted to the discussions on the other actions. This comment was approved by J. van der Steen who also stated that experts should develop some topics presented in the draft.

C. Lefaire explained that work had already been done by the CEPN and the HPA (the former NRPB) and that software such as ASQRAD had been developed; they authorized the users to make use of different models for calculating the probability of causation, for example. He stressed that such material ought to be presented during the Technical Meeting (TM).

D. Wymer observed that these comments were quite similar to those made during the meeting last May in Geneva, for instance, that the draft should give rise to a reference document with the logos of the ILO, WHO and IAEA and based on an international consensus. As far as the publication of the document was concerned, one had to remember that the final objective of action 14 was beyond the scope of the IAEA.

Following the reminder made by H. Landfermann on the process leading from the worker's claim to compensation, M. Repacholi said that, in his opinion, action 14 dealt with a very important issue, that the draft was already well developed and that an offer made by Germany to organize an International Meeting on the issue should be considered with the clear objective of publishing a final document within 12-18 months following this event.

The participants then discussed action 14 further including the terms of reference for this international meeting. The need for taking into account other risks such as the chemical one (H. Landfermann), the use and the limit of the biological dosimetry as well as the care to be taken in the use of models and epidemiological data (V. Holahan), the availability of software authorizing the input from different epidemiological databases (C. Lefaure) are examples of such terms to be addressed by the technical meeting.

D. Wymer commented that, if an international consensus were required, one should refer to the peer review processes of UNSCEAR and ICRP for examples.

Other questions were raised concerning the radiosensitivity of the individual and its potential impact on the worker's appointment and how to account for other industries such as oil and gas (G. Massera).

Additional comments were made such as:

- the need for collecting epidemiological data in the different countries (Prof. Joshi);
- the fact that compensation was a part of the radiation protection management based on scientific knowledge and, as such, must be able to accommodate new developments, and that account had to be made of social and political issues which implied flexibility in providing guidance to MSs (C. Lefaure); and
- the TM should provide advice on the decision techniques (B. Ahier).

M. Repacholi indicated that *WHO was in a position to take over the leadership of this action* and to organize the conference with the aim of publishing the final document together with the ILO and the Agency. S. Niu indicated that this new contribution from WHO was really positive and that a joint venture could increase the acceptance of the document. The SC agreed to M. Repacholi's proposal. V. Holahan indicated that compensation for other hazards should also be looked at (as the existing monitoring practices in RP field seem to make the assessment easier). He added that the programmes on morbidity and mortality were quite important for defining the characteristics of the compensation schemes as well as the assumptions made and the evaluation of the advantages and disadvantages of these schemes. B. Ahier informed the SC that data was available at the NEA level for developed countries and that he would provide them but that a check would have to be made to ascertain whether the data was derived from 2000 onwards as the previous years had already been taken into account in the existing study (remark by M. Gustafsson).

D. Wymer acknowledged the particular scope of action 14 and he recommended having a more detailed look on the paper prepared by H. Landfermann who had presented, early in the discussion, a very short summary of it. C. Lefaire asked the Scientific Secretary to make this paper available to all the SC members.

G. Massera, as C. Lefaire had to leave, took over the chairmanship for the second part of session 4. He then gave the floor to H. Landfermann who commented on the paper he had prepared (see handouts in Appendix 4).

The main points covered by his paper were:

- the paper presented by M. Gustafsson was a very good basis for completing the work ; more information should be provided on the dosimetry issue, with a clear indication on the use and limits of physical and biological dosimetry ;
- that care had to be taken with the presence of other agents influencing health such as radon, smoking habits, and so on ...;
- that radiobiologists had to be alerted to the use of the tables of probability of causation as the individual data and history were of particular importance in these case; and
- that the desired outcome of the technical meeting should be a protocol on schemes to be used, having in mind that there should not be a fixed system but that several options should be proposed as along with a critical assessment of each.

The participants then indicated:

- that a full draft should be sent to the participants of the technical meeting (M. Gustafsson)
- that the word “protocol” should be modified and that “guidance document” should be preferred (J. Van der Steen);
- that some other illness than cancer should be considered by the technical meeting (V. Holahan); and
- that in the last point of H. Landfermann’s paper, a distinction be made between the document produced by the technical meeting and the final document on action 14.

#### SC recommendation

The SC-members agreed on the proposal made by WHO to organize a technical meeting which will be hosted by Germany. Terms of reference should be looked at and the main objective of the meeting would be to finalise the draft document in order to publish it within the next 12-18 months. WHO is in charge of this action.

#### **The BSS review process (C. Mason)**

As some participants had not clearly seen a reason for a presentation on the BSS review process being undertaken by the Agency, D. Wymer, as a member of the Internal Committee for the Review of the BSS, explained in depth the importance of one aspect of the review, namely, to explain why there was a need to review the BSS on occupational exposure and where the SC could provide fruitful input.

Based on the corresponding action plan distributed to all the members, C. Mason summarized the main issues as follows.

Because the Standards are now 10 years old, the question of reviewing them was addressed by the CSS (Committee on Safety Standards), the RASSC and the WASSC (Waste Safety Standards Committee) as well as by the IAEA General Conference in 2005. Some additional reasons also contributed to the undertaking of such review: the increased influence of the MSs during the last decade, inconsistencies between the EU directives and the BSS and, the IAEA’s desire to “re-fashion” the BSS. While the initial justification for the production of the BSS was provided by the works of UNSCEAR and the ICRP Recommendations, a closer collaboration with international organizations

seemed to be needed. A joint secretariat was set up as well as a web page for obtaining feedback from the MS and other parties.

Work really started in January 2006 and emphasis was put on the feedback received from the MS. Contributions were also encouraged on topics such as the scope of the regulations, the protection of the environment and the justification of practices. Papers have already been received on justification, on natural sources and a meeting planned for the week following the present SC meeting will examine the issue of the scope of the regulations. Later, the optimization principle will be dealt with as well as occupational exposure (D. Wymer being the consultant for this point).

C. Mason concluded his presentation by saying that, as H. Landfermann asked him, the publication of the new ICRP recommendations could be expected by the end of 2006 and that a real “revolution” was not to be anticipated.

C. Lefauve wanted to know if, with respect to regulatory control, attention would be paid to the role of the regulatory body in the self assessment process in nuclear facilities. C. Mason indicated that this had not been considered and that, up to now, attention had mainly been placed on the boundary of the regulatory field such as the concepts of exemption and exclusion. In response to the question put by J. Van der Steen on the integration of the natural sources and the education and training issues in the BSS, C. Mason indicated that these would be taken into account. K. Mrabit stressed the importance of any feedback and comment from the members of the SC and that one of the wishes of the Agency was to increase the input from the developing countries which had been quite limited up to now for evident reasons. C. Mason indicated that there was still no plan for a more formal cooperation between the ICRP and the Agency (question from H. Landfermann) and that the Agency was now waiting for another ICRP document.

The Chairman, H. Landfermann expressed his thanks to C. Mason and closed the afternoon session of the day 2 after having confirmed that the working group session planned for the day 3 would be cancelled (question from J. Van der Steen).

### **General findings and conclusions**

P. Deboodt reminded the missions of the SC which had to advise on, to monitor and to assist in the implementation of the International Action Plan on Occupational Radiation Protection.

General findings/recommendations from the meeting were indicated and can be summarized as follows:

- there is a general agreement to provide further **practical** guidance (by means of safety reports) for the actions A11 and A13;
- the Steering Committee has clearly identified the “**action holders**”;
- all the **stakeholders** have to be more deeply involved, mainly for actions A2, A4 and A8;
- the **translation** by the Agency of the produced material and documents is recognized as a priority for their dissemination; and
- **The Logos** of the international organizations have to be present on the produced material in order to promote diffusion.

Each of the 14 actions was then reviewed and the main findings and recommendations summarized. This information is provided in the Table 1 which also proposes the updated work plan.

The SC members agreed on the proposal to organize the next meeting in early 2008 and required from the joint ILO-IAEA secretariat to provide in the meantime a yearly report in January/February 2007.



Free exchanges between the participants on the meeting itself took then place. The strong involvement and the added value of the contributions of all the international organizations and participants have to be recognized. The flexibility of the meeting schedule could be considered as a sign of this involvement but one should set more precise limits to this kind of management. On the other hand, this second meeting was the first one having to assess the actions and not only to define them. The SC has to find its “optimized” way for complying with this objective. The question of addressing the actions in their chronology as well as the duration of the meeting of the Steering Committee needs also to be looked at. The participants recognized that the availability of the documents prior to the meeting as they were put on the Agency’s website is a positive approach. Nothing has been said about the performance indicators which could be useful for assessing the progress in each action. The idea for organizing working groups although generally fruitful didn’t fit with the expectations and the nature of the discussions. The idea was proposed to have such working groups between the SC meetings in order to, address specific actions and to report to the SC meetings. The update of the work plan was not performed during the meeting but will be provided in the meeting report.

Concerning the next meeting of the SC, the discussions concluded that a periodicity between 18 and 24 months is acceptable but as the decision on the third meeting led to fix it in early 2008 at IAEA Headquarters, it has been agreed on that a progress report will be produced by the end of January 2007.

K.Mrabit, on behalf of the Agency, expressed his thanks to all the organizations and participants. He recognized the work done during the meeting as the definition of the responsibilities and agreed on the need for providing a progress report. He also recognized that the lessons learnt regarding the methodology to be applied for such meetings will be useful for the followings.

He then officially closed the meeting



Table 1

Action N°	Description	Comments from the 2 <sup>nd</sup> Meeting of the Steering Committee	Owner	Milestones
1	Promote the ratification and implementation of ILO Convention 115	<ul style="list-style-type: none"> <li>- Promoting the ratification: OK</li> <li>- Implementation of the provisions of the Convention: process to be continued (checking required)</li> </ul>	ILO	Ongoing
2	Review of the procedures for getting information from MS on the ILO Convention 115 implementation	<ul style="list-style-type: none"> <li>- Still open</li> <li>- Collaboration ILO/IAEA to be maintained/improved Proposal : use of Country Profiles (getting information) use of ORPAS (Appraisal) (checking implementation)</li> <li>- Involvement of the stakeholders required</li> </ul>	ILO	Ongoing
3	Development of guidance/information material (about requirements, intercomparison of monitoring methods,)	<ul style="list-style-type: none"> <li>- Intercomparisons : approach will be based on “regional centres” with support of the IAEA</li> <li>- Need for intercomparison exercises on workplace monitoring</li> <li>- Concerning the publications : several in preparation or planned</li> </ul>	IAEA	Ongoing
4	Terminology used in ILO Code of Practice and means to addressing it	<ul style="list-style-type: none"> <li>- Contact ILO-IAEA required in order to check the terminology and the means for addressing it</li> <li>- ILO status : “Code of Practice still under review”</li> <li>- Question : statement required for indicating which document is relevant in case of incompatibilities</li> <li>- IOE : this is the task for ILO</li> </ul>	ILO	Next Steering Committee Meeting
5	Establishment of contacts-points in the Agency’s MS and information	<ul style="list-style-type: none"> <li>- Need to check that contact points are still valid</li> <li>- WHO has also such contact persons (names provided on the 26 of January)</li> <li>- Proposal : establish more formalized contact between the representatives of ILO, WHO and IAEA</li> </ul>	IAEA	Mid 2007

6	Develop publicity material/leaflets for the targeted groups of workers	<p>Scope clearly defined: “to avoid near misses/accidents”</p> <ul style="list-style-type: none"> <li>- Comments on the posters required in order to finalize the posters</li> <li>- Issue of the dissemination has to be solved</li> <li>- Further “products” to be developed (cartoon, “credit-card”, ...)</li> <li>- Visible support of ILO important (justification of the diffusion) (and also from other organizations/agencies)</li> <li>- Contents of some posters to be reviewed (DE,SE)<sup>(1)</sup></li> <li>- NPP and Natural sources: not to be considered</li> </ul> <p><sup>(1)</sup> DE : Deterministic Effect ; SE : Stochastic Effect</p>	IAEA	<p>End May 2007</p> <p>Next Steering Committee Meeting</p>
7	Provide a focal point for exchange of information through networking	<p>Web site : development to be improved (planning will be provided)</p> <ul style="list-style-type: none"> <li>- Networking: new network (RECAN) has been “launched” sustainability: can not be reached after 2 years integration, coordination, contact: how? what? need for a “bottom-up” approach (really motivated “expert”)</li> <li>- Take into account the “local needs/expectations/demands”</li> <li>- Global website: harmonization? Information provided? ...</li> </ul>	IAEA	Mid 2007
8	Prepare and disseminate information material to the workers representatives	<p>Scope clearly defined :</p> <p>This action aimed at raising general awareness of workers not formally handling radioactive sources but who work in workplaces involving such sources</p> <p>“Train the trainers” : Power Point presentations still to be developed and to be made available</p> <ul style="list-style-type: none"> <li>- Interactive modules : further development needed but it’s a slow process</li> </ul>	IAEA	January 2007
9	Postgraduate education for/with professional medical bodies	<ul style="list-style-type: none"> <li>- CD ROM has been prepared</li> <li>- Comments are expected on the Occupational Radiation Protection component</li> <li>- Material on the Web Site but there is a need to inform the societies on the availability of this material</li> </ul>	IAEA	Mid 2007

10	Draft Manual on RP in Hospitals and in General Practice : status and publication	<ul style="list-style-type: none"> <li>- Some manuals are in preparation</li> <li>- Some manuals need updating (evolution of the techniques, country characteristics to be taken into account)</li> </ul>	IAEA	Next Steering Committee Meeting
11	Activities involving exposure to natural radiation	<ul style="list-style-type: none"> <li>- Ongoing as planned</li> <li>- "Radon intercomparison exercises" performed already in other programmes dealing with environmental monitoring</li> <li>- No resources for such exercises at the time being</li> </ul>	IAEA	Ongoing
12	Holistic approach of ORP	<ul style="list-style-type: none"> <li>- Check of the background thinking in Geneva Conference</li> <li>- Meeting ILO, IAEA (and EC ?)</li> <li>- Organization of a TM</li> </ul>	ILO	Mid 2006 End 2006 Next Steering Committee Meeting
13	Protection of the pregnant women/fetus	<ul style="list-style-type: none"> <li>- Completing the work</li> <li>- Questionnaire to be produced, sent and analysed</li> <li>- Publication of a Safety Guide</li> </ul>	IAEA	End 2007 2008
14	Probability of causation of detrimental effects due to occupational exposure to ionizing radiation	<ul style="list-style-type: none"> <li>- Organizing a TM</li> <li>- Completing the draft</li> <li>- Publishing the final document</li> </ul>	WHO	Mid 2006 January 2007 2008

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## **Appendix 2: Documents and information provided**

- <http://www-ns.iaea.org/downloads/rw/ppss/iaporp/iaporp03.doc>
- Work plan for the Review and Revision of the Basic Safety Standards
- Draft as of May 2004 on “Probability of Causation of Detrimental Effects due to Ionizing Radiations”
- Existing network in contact with EAN
- ILO Convention 115, ILO Recommendation 114
- ILO Code of Practice (1987)
- Review of ILO Code of Practice (2005)

### Appendix 3

## Second Meeting of the Steering Committee for the International Action Plan for Occupational Radiation Protection

25-27 January 2006  
IAEA Headquarters, Vienna, Room C07V

### Agenda

#### Wednesday, 25 January

- 08.45 Registration
- 09.15 Welcome S. Niu (ILO), P. Deboodt (IAEA)
- 09.16 Introduction of the participants All
- Practical Issues P. Deboodt
- 10.00 Session One: the International Action Plan on Occupational Radiation Protection  
Chairman: S. Niu Co-Chair: P. Deboodt
- Approval of the agenda
- Approval of the report of the first meeting
- 10.30 Coffee/Tea
- 11.00 Actions 1, 2 and 4 S. Niu
- 11.45 Action 3 R. Cruz Suarez
- 12.15 Open discussion
- 12.30 Lunch Break
- 14.00 Actions 6 and 8 G. Sadagopan
- 14.40 Action 5, 7 and 12 P. Deboodt
- 15.20 Action 13 R. Cruz Suarez
- 15.45 Coffee/Tea
- 16.00 Action 11 D. Wymer
- 16.45 Action 9 and 10 P. Ortiz Lopez
- 17.15 End of the day
- 17.30 Cocktail

## **Thursday, 26 January**

09.00 Session Two: Action 14 of the IAPORP

Chairman: Mr. Landfermann      Co-Chair: M. Gustafsson

09.15 Key note lecture

“Draft Safety Report “Attributing radiation-linked disease to Occupational Exposure”: Background and Status as of May 2004”      M. Gustafsson

10.15 Open discussion

10.45 Coffee/Tea

11.15 Open discussion

12.30 Lunch Break

14.00 Session Four : Summary of the discussions

15.30 Coffee/Tea

15.50 Open discussion

16.15 BSS Review Process      C.Mason

17.30 End of the day

## **Friday, 27 January**

09.00 Session Five: Final discussion on actions 12, 13 and 14

Chairman: C. Lefaure      Co-Chair: G. Massera

10.30 Coffee/Tea

11.00 Findings and conclusions of the meeting      P.Deboodt

- Main findings of the meeting
- Venue of the next meeting of the SC

11.45 Farewell Address      K.Mrabit

12.00 End of the meeting