

## **Meeting of the Plenary Session, Tuesday, February 25.**

The plenary session meeting of all the Working Group (WG) members was convened at 09:00 and began with an informal discussion of the WHO draft document “Application of the Precautionary Principle to Electromagnetic Fields (EMF)”. Comments fell into 2 general categories: Precautionary Principle in general and the document itself.

Some WG members expressed opinions about the Precautionary Principle (PP). PP was viewed both as an overarching principle and as a procedural rule. Several government agencies could be involved in decisions based on PP and using it, like using any new measure, may question the adequacy of previous measures. PP should be applied broadly to all health matters and could protect a relatively small number of individuals (including workers) from relatively infrequent but high exposures as well as large numbers of people from frequent or chronic exposures to relatively low doses.

Some working group members expressed uncertainty regarding when PP should be used. Should social pressure, sound science or acknowledging our ignorance on what could cause an adverse health effect be the basis to apply PP? If we rely on science do we acknowledge that this may not alleviate public concern, that better evidence may never be available and that it may be impossible to demonstrate a successful remedy? In the extreme, can PP be applied when there is no evidence?

Procedural aspects of PP were also discussed. PP requires more extensive consultation with more diverse stakeholders than now experienced with science-based quantitative risk assessment. However, the role of dialog amongst diverse groups is a centerpiece of the risk process envisioned in the 1997 report of the US Presidential/Congressional Commission on Risk Assessment and Risk Management. While the process and its rationale must be made clear to stakeholders in some countries, informed decision making may not apply to all countries.

The nature of remedies resulting from application of PP was also mentioned. Some members expressed concern that application of PP will undermine existing exposure guidelines. New dosimetry and analysis tools will be required in order to demonstrate success. If a goal is to reduce exposures, some remedies such as moving power lines may come at the expense of other more worthwhile investments in health. On the other hand, limited resources and the availability of a low cost remedy may be precisely the reason to base a decision on PP and that one should look at all sources of budget.

Overall the WG members expressed a diversity of opinions about what PP was, how it should be implemented and what it could accomplish.

Many comments dealt with the document itself and met Mike Repacholi’s criterion that in order to help WHO staff craft an improved document; the comments had to be constructive. Since many of these comments as well as others not voiced by the participants would be the subjects of the WG sessions, the specific comments are not detailed but will be considered when the groups make their reports at the next Plenary Session. What is presented here is an attempt to record the general issues that were raised.

Several members found that the current document moved too freely between Philosophy to Framework to specific application of PP. Several took exception to the role of cost-benefit analysis as part of the decision-making process. Some found that the document lacked specific roles for policy makers and organizations including WHO. Several WG members cited what they took to be imprecise science and an inadequate definition of health and adverse health effects. There were concerns that this document re-writes existing rules, regulations, reports and recommendations of the EC and that there was a need to reconcile differences in text.

After lunch the members met in Working Groups. Each group was given two tasks: (1) evaluate and improve their assigned section of the draft document to develop a strong framework document and (2) using the newly strengthened section, apply it to the issue of 50-60 Hz power frequency fields from both power lines and appliances and to RF (900 – 1800 MHz) from both hand held units and base stations.

### **Meeting of the Plenary Session, Wednesday, February 26.**

The session began with general comments from the participants. Several speakers stated their preference for an explicit (detailed) document rather than an implicit (less well-defined) one. Much of the discussion concerned what constituted a trigger for invoking PP. Who is responsible for triggering? What is the level of authority? A structure for deciding when to trigger and decide what evidence should apply is needed and specifically whether an IARC 2B classification is sufficient. We also need to determine whether a lack of an IARC classification is a reason not to invoke PP. Scientific evidence, which could be introduced into the document by reference to various national and international documents could be any of several forms. Some members were of the opinion that one must identify the responsible agent within the exposure while others stated we must not rule out the possibility of outcomes reflecting something other than a thermal mechanism.

### **Reports from the Working Groups**

#### **Working Group 4**

The group discussed the PP process in its entirety. It was not comfortable in limiting its activity to its assignment of testing cost-benefit analysis. The experience of the Department of Health Services in California was presented and the need to include ethical positions of various stakeholders was described. The group was uncertain as to who the audience is and to what extent WHO should be concerned with cost-benefit issues that involve free trade.

Some of these themes were taken up by comment from the other Working Groups. Many dealt with the role of cost benefit analysis in a PP framework. Many were uncomfortable with cost benefit analysis in general and felt it should not be a central theme. It was suggested that the benefits analysis precede the cost analysis and that this is supported by statements from the EC. CBA requires diversified input from stakeholders. Cost needs to be viewed in the widest context and not the line cost for a specific agency.

In the interests of time Chairman Portier requested that the Working Group reports focus on the document itself and that there would be time for a more general discussion later.

### **Working Group 3**

The group was strongly of the opinion that the Framework be separate from the Case Studies. There should be 2 separate case studies taken through the whole process.

### **Working Group 1**

The document needs to provide more explicit language regarding what constitutes costs and what constitutes benefits. The action plan needs to be elaborated more completely including the role of WHO oversight for member states. Case histories should be separate for power frequency EMF and for Rf. These should be contained within an annex rather than in the Framework part of the document.

### **Working Group 2**

WHO should consider a Pro & Con Analysis rather than cost-benefit analysis. Any one of five suggested factors (hazard, exposure, consequence, other pertinent information and knowledge gaps) would be sufficient to trigger PP implementation. In the process one must utilize scientific and empirical knowledge and think in terms of what is known, what is predicted, and what is perceived. It is best to use a broad range for impacts and consider a broad range of actions in response. Response must be weighted against evidence that ranges from suspicion to beyond reasonable doubt.

### **General Discussion**

Comments were either general in nature or directed specifically to the case studies. Public concern as well as guidelines must be factored as part of the decision to trigger PP. Public alarm is an issue – the consequences of introducing a PP-based prescriptive measure may increase rather than decrease public anxiety. Involuntary exposures must include benefits analysis (e.g. emergency services) and industry budgets must be factored into cost analysis. Specifically regarding mobile communications, some were of the opinion that triggers for cell phones and masts are illogical because you are still below the accepted International Standards while others felt hand held devices but not base stations fit prescriptions for triggering. How to introduce a PP-based remedy such as using a hands free device was discussed. Should it be recommended, required, advised or encouraged?

### **Adjournment**

Drs. Portier and Repacholi thanked the WG members for their input. WHO staff will take these recommendations as well as ideas surfaced in the Open Meeting into consideration as it drafts a revised document. The meeting was adjourned.