

SEA-Occ.Health-34  
Distribution: General

# Regional Strategy for Occupational Health

*Report of an Intercountry Consultation  
SEARO, New Delhi, 28-29 April 2003*

WHO Project: ICP CSR 001



World Health Organization  
Regional Office for South-East Asia  
New Delhi  
October 2003

© World Health Organization (2003)

This document is not a formal publication of the World Health Organization (WHO), and all rights are reserved by the Organization. The document may, however, be freely reviewed, abstracted, reproduced or translated, in part or in whole, but not for sale or for use in conjunction with commercial purposes.

The views expressed in documents by named authors are solely the responsibility of those authors.

## CONTENTS

	<i>Page</i>
1. INTRODUCTION.....	1
2. OBJECTIVES AND FORMAT .....	1
3. INAUGURAL SESSION .....	1
4. OVERVIEW OF WHO OCCUPATIONAL PROGRAMMES .....	2
4.1 Global Overview .....	2
4.2 Regional Overview .....	3
5. OUTCOMES OF GROUP PRESENTATIONS AND DISCUSSIONS .....	3
5.1 Strengthening Occupational Health Network .....	3
5.2 Promoting the Use of Health Risk Paradigm .....	4
5.3 Capacity Building .....	6
5.4 Intersectoral Collaboration .....	7
6. IDENTIFICATION OF PRIORITY AREAS FOR IMPLEMENTATION.....	7
6.1 Development and Dissemination of IEC Modules.....	7
6.2 Training for Capacity-building .....	8
6.3 Networking.....	8
6.4 Protocols and Guidelines .....	8
7. RECOMMENDATIONS.....	9
8. CLOSING .....	9

### Annexes

1. List of Participants.....	11
2. Programme .....	13



## **1. INTRODUCTION**

An intercountry consultation was held in the South-East Asia Regional Office of WHO from 28-29 April 2003 to formulate a regional strategy for strengthening occupational health in the countries of the Region. There were 15 participants respectively, representing Bangladesh, India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand. Dr Wilawan Juengprasert from the Ministry of Public Health was nominated Chairperson and Dr CK Shanmugarajah, Director of Occupational and Environmental Health, Sri Lanka, as rapporteur. Mr A Hildebrand introduced the participants (see Annex 1 for list of participants).

## **2. OBJECTIVES AND FORMAT**

The objectives of the consultation were as follows:

- (1) To review and endorse the Regional Strategy for Occupational Health, and
- (2) To identify priority areas for implementation by Member Countries and WHO.

The workshop methodology involved short presentations, followed by group activities and extensive interaction with the participants to reinforce the objectives. During the group activities, four components of the regional strategies were developed. These objectives were achieved through discussions during thematic sessions as per the programme given in Annex 2.

## **3. INAUGURAL SESSION**

Dr. Uton Muchtar Rafei, WHO Regional Director, inaugurated the Consultation. Welcoming the participants, he said that the SEA Region accounts for approximately 560 million workers, and the timing of this Consultation was therefore most appropriate. He outlined the commitment of WHO to occupational health starting from 1950 to the present time and the role played by the Regional Office in particular to provide evidence-based

information for priority-setting and planning occupational health programmes. The WHO Regional Office assessed the regional situation over the last five years through a series of surveys on occupational hazards, as well as the infrastructure and capacity for occupational health services in countries of the Region. The major findings of the survey indicated considerable underreporting of occupational diseases and injuries. One reason could be the lack of systematic planning and clear tools and guidelines at the national level. However, the survey indicated that most Member Countries were actively involved in some aspects of occupational health, showing a clear commitment to the programme. It was therefore necessary to consolidate different activities within a regional strategy on occupational health. This would greatly help Member Countries in formulating national plans of action. He also stressed the need for concerted efforts, based on solid evidence and sustainable partnerships to deal with these health problems. The time had come to draw up blueprints for action, and also to foster a regional network in occupational health. This Consultation was therefore highly relevant and timely in bringing together all those directly responsible for planning of occupational health in the Member Countries.

## **4. OVERVIEW OF WHO OCCUPATIONAL PROGRAMMES**

### **4.1 Global Overview**

Dr Gerry Eijkemans, from HQ presented a theme paper on the Responses to meet the Equity Challenges in Safety and Health at Workplace – “The healthy work approach”.

She highlighted the global strategy in terms of equity and sustainable development. She outlined the role of national governments, the effects of globalization and the burden of diseases on the health system challenges. Examples included job security, lack of coverage of the informal sector and the need for a risk-based approach in formulating the strategy to address the challenges in safety of health in a work environment. The participants were made aware of eight points in the WHO Global Strategy on Occupational Health for All, with an emphasis on Healthy Work Environment and Practices. The importance of collaborating centres and networking was mentioned as a way of implementation.

## **4.2 Regional Overview**

Dr Deoraj Caussy provided a regional overview in his presentation entitled – “Regional Strategy in Occupational Health – an evidence-based priority setting.”

Dr Caussy said that the occupational health network in the SEA Region had only two collaborating centres for a 580 million workforce. There is a preponderance of male workers and more than 60% are employed in the agricultural sector. The majority of workers were in the 15-30 age group. One major concern was underreporting, with almost 90 per cent of occupational injuries being unreported. One of the reasons was lack of institutional capacity to administer health safety practices. He said that the proposed regional strategy had four directions in which the national governments were expected to focus their initiatives and activities. He concluded by saying that the purpose of the consultation was to harmonize and finalize the proposed regional strategy based on these directions.

## **5. OUTCOMES OF GROUP PRESENTATIONS AND DISCUSSIONS**

### **5.1 Strengthening Occupational Health Network**

Group I debated on ways to strengthen the network based on the situation analysis of occupational health in the Region and the draft regional strategy. The main economic sectors in the Region were prioritized on the basis of the magnitude of the work-force, the severity of the outcome and the scope for intervention. The five priority areas in descending order of importance are: (1) agriculture; (2) informal sector; (3) household and industry; (4) textile-jute and industry, and (5) mining and quarrying. In order to strengthen the network, specific roles were assigned to each stake-holder: the government, WHO and other partners. It was suggested that the national government contribute to: (1) the development and endorsement of the regional strategy; (2) development of national strategic plan; (3) promotion of the WHO CC network by including the ministries of labour, industries and other relevant sectors; (4) allocation of appropriate resources; (5) setting up of a national information database, and, (6) promote intersectoral coordination. The role of WHO in strengthening the network would include: (1) formulation of the

regional strategy; (2) provision of strategic and technical support to the network such as periodic meeting, web-based communications and linkages on specific topics such as research; (3) development of the network and cross linking with ILO, IPCS etc; (4) mobilization of resources; (5) setting up of norms and standards and, and (6) monitoring and evaluation of the outputs of the network. Other stakeholders such as donors, NGOs, labour unions, and UN agencies have a central role to play in the implementation of the regional strategy as well as in raising awareness and advocacy.

The group expressed the need to involve universities as collaborating centres as the government agencies were already burdened with legislative and enforcement functions. A rational approach in mobilizing available resources including WHO country budget, extrabudgetary funds and specific allocation from the national budget was advocated. It was suggested that the possibility of motivating and involving large enterprises in building the capacity of small enterprises should be explored. Examples of Peru and insurance companies were cited.

## 5.2 Promoting the Use of Health Risk Paradigm

Group II debated on ways to apply the health risk paradigms based on the situation analysis of occupational health in the Region and the draft regional strategy. The health risk paradigm was considered from a two-step process of risk assessment and risk management.

### ***Risk assessment***

During the first session, risk assessment was considered from the standpoint of hazard identification, dose-response and exposure assessment. The limitations for each step were reviewed to provide evidence for any recommendations.

Under the *hazard identification* step, it was noted that there was no consistent mechanism to recognize hazards due to: lack of hazard data-sheet, awareness of hazards, inadequate capacities at governmental, industry and worker levels and inadequate access to information. The group recommended improving the inventory of hazards, and material safety data by providing feedback on the web and through other means, as well as placing greater emphasis on epidemiological research for standard setting.



Under the *dose-response* step, it was noted there were uncertainties in the transfer of dose-response assessment from the West to Asia due to differences in nutritional status, gender, age, geographical considerations, concentration and type of exposure and gene-environmental interaction. It was proposed to conduct research taking gender and age into account including children who are also exposed to hazardous working environments.

The main problem in *exposure assessment* is the lack of job-exposure profiles and pathways of exposure. It was recommended that the use of job-exposure profiles, whenever possible, and research on all exposure pathways at the work-place be promoted. It was pointed out that although regulations set out standards for exposure, the processes of exposure evaluations were not clearly spelt out. Therefore, this aspect must be taken into consideration when framing regulations.

### **Risk management**

In the second session, the group debated on the intervention strategies that could be used for risk management. Risk management strategies depend on legal and socio-economic considerations as well as the feasibility of intervention strategies and availability of control options. The group noted that there was a lack of: (1) commitment from stake holders; (2) infrastructure including experts and laboratory, and (3) non-availability of appropriate technologies. Therefore, it recommended the following four main components for occupational risk management:

- (1) Strengthening of policy;
- (2) Enforcing engineering control and environmental monitoring;
- (3) Biological monitoring and health promotion, and
- (4) Planning and epidemiological surveillance.

*Policy* can be strengthened by promoting the inclusion of occupational health and safety clause in transfer of technology and international trade. Strengthening and enforcement of legislation can be facilitated by: formulating standards and guidelines, creating a critical mass of competent manpower, and strengthening laboratory infrastructure.

The *engineering* controls recommended include: elimination of hazards at source, substitution of hazardous materials, proper housekeeping of hazardous materials, environmental monitoring, maintenance of threshold limit values (TLV) of known hazards and the use of personal protection devices where appropriate.

The *medical* control options include: pre-employment medical examination, regular biological monitoring, the availability of emergency medical care on site and health promotion at work place.

The elements of *planning and epidemiological surveillance* include formulation of a national plan based on the regional strategy and establishing sentinel surveillance with the objective of monitoring trends of occupational injury and diseases for use by policy-makers.

### 5.3 Capacity Building

The aim of capacity building is to provide a critical mass of trained personnel for application of the health risk paradigm at the work place. The group focusing on capacity building recognized that the main stakeholders for capacity building are: the national government, employers, employees, academia and NGOs. The modalities for capacity-building include training through long-term courses (such as Bachelor and Doctorate), medium-term courses consisting of diploma, and short-term training consisting of seminars and technical exchanges. Policy-makers require short-term training, whereas monitoring and enforcement agencies require both short-term and long-term training, while employees require short-term simple instructions. The main topics for training include: basic industrial hygiene, basic medical surveillance, chemical exposures, pesticide safety, mechanical safety, occupational health and safety management and ergonomics.

Curriculum development must focus on problem-based learning for various industrial settings, taking into consideration epidemiological and other public health issues as well as including alternate learning methods, such as distance education and web-based programmes. Capacity-building should also focus on producing persons to undertake research in the areas of occupational health.

It was suggested that in addition to capacity building for training, the network should also consider strengthening infrastructure, surveillance, engineering control, medical control, analytical support and equipments.

#### **5.4 Intersectoral Collaboration**

The group working on intersectoral collaboration recognized that the administration and implementation of occupational health in an activity that is not solely within the domain of the Ministry of Health. The active participation of the ministries of Labour, Transport, Public Work, Home Affairs, Environment and others are also required. The main areas of intersectoral collaboration are in the formulation of national policy and legislation, knowledge management, communication and information management, capacity-building and identification of funding agencies. The group also noted that intersectoral coordination is needed among UN agencies involved in occupational health, including WHO-ILO/IPCS and UNDP. In particular, WHO should promote intersectoral collaboration through intergovernmental bodies such as ASEAN & SAARC as well as in Interministerial Meetings.

### **6. IDENTIFICATION OF PRIORITY AREAS FOR IMPLEMENTATION**

In identifying areas of priority for implementation of the regional strategy, the group took stock of what was already available in the Region.

#### **6.1 Development and Dissemination of IEC Modules**

The group noted that IEC modules were available in India, Indonesia, Sri Lanka and Thailand. India had modules on silicosis, children and chemical exposure, women and chemical exposure, tobacco harvesters, health care workers, introduction to risk assessment, use of PPD, basic toxicology and recognition of occupational diseases. Thailand had modules on accident/injury prevention, silicosis and noise pollution. Indonesia had modules on noise pollution and pesticides whereas Sri Lanka had modules on pesticide poisoning.

The following modules were being developed: (a) chemical exposure and safety and health for farm labourers by Sri Ramachandra College, Chennai; (b) Occupational injury prevention by the Center for Occupational and Environmental Health, New Delhi; (c) Ergonomics by the Ministry of Public Health, Thailand, and (d) pesticide in agriculture-dust reduction in work place by the Department of Health and Security, Indonesia.

Hard or soft copies of these IEC materials would be made available on the NIOH, India web-site ([niohicmr@icenet.net](mailto:niohicmr@icenet.net)) for distribution. The local centres would also disseminate these modules depending on availability of resources.

## **6.2 Training for Capacity-building**

It was decided to share the existing course curriculum and peer review the teaching materials for course content, methodology and evaluation. This activity will be coordinated by the Regional office and the WHO country offices.

## **6.3 Networking**

Web-based information sharing and networking will be done by NIOH with technical support from the Regional Office.

## **6.4 Protocols and Guidelines**

Generic protocols for compiling country occupational health profiles for hazards and risks were identified as a priority. Sri Ramachandra College will take the lead with collaboration of others.

No strategies for occupational health surveillance exist at present and the network recommended medium-term planning for this activity. Thailand will conduct a workshop on occupational disease surveillance and the experience will be useful for the network.

## **7. RECOMMENDATIONS**

The groups make the following recommendations after deliberations of each component of the regional strategy:

- (1) The regional strategy was endorsed with the following modifications: The strategy should have three goals: (i) strengthening the network; (ii) promoting the use of health risks paradigm, and (iii) capacity-building. The proposed intersectoral goal should become a means for achieving the above three goals.
- (2) Every stakeholder in the regional strategy, the national government, WHO, donor agencies etc, should support the implementation of the strategy technically or otherwise in all possible workplace settings.
- (3) On finalization of the strategy, it should be circulated to all stakeholders.
- (4) The final agreed version of the regional strategy is summarized in the Table.

## **8. CLOSING**

The meeting was closed the Regional Director who congratulated the participants on their enthusiasm and dedication. He reminded the participants of the challenges ahead to sustain the energy for implementing the activities identified. He pointed out that the process of networking in the Region had already started through group dynamics during the discussions. In this day of globalization, no activity can be done in isolation.

He concluded by emphasizing that the output of the consultation would have a positive impact on occupational health. First, the blueprint of the regional strategy would be useful to all Member Countries in prioritizing national activities. Secondly, it will also serve as a guide for bilateral donors and others to identify areas of support in the country.

**Table.** Overview of SEARO regional strategies on occupational health and safety

Strategic direction	Product	Means of achievement/activity
1. Strengthening of occupational health network	Functioning Network Established	<ol style="list-style-type: none"> <li>1. Strengthen, link and expand national and regional occupational health network.</li> <li>2. Share information on norms, standards, guidelines, modules and research methods</li> <li>3. Partnership with key-stake holders including ILO and other UN agencies; ASEAN/SAARC; donor communities, and international centers of excellence.</li> <li>4. Promote Intersectoral collaboration with all relevant implementing Ministries</li> </ol>
2.1 Health risk assessment	1. Standardized methods and guidelines for exposure assessment	<ol style="list-style-type: none"> <li>1. Develop and promulgate standard protocols for exposure assessment</li> <li>2. Support occupational health hazard assessment through environmental and exposure monitoring at work place</li> <li>3. Establish national data-base of occupational hazards profiles</li> </ol>
2.2 Health risk management	2. Standardized methods and guidelines for risk characterization	<ol style="list-style-type: none"> <li>1. Support standardized protocol for burden of disease estimates in major economic sectors</li> <li>2. Develop regional guidelines and national protocols for establishing data-bases on occupational disease and injury surveillance</li> <li>3. Establish sentinel surveillance for monitoring trends of occupational risks, diseases and injuries</li> </ol>
2. Promotion of health risk paradigm	1. Protective policies, and legislation Promoted	<ol style="list-style-type: none"> <li>1. Support countries in the formulation of policies and legislation</li> <li>2. Provide technical support for formulation of national plan based on regional strategy and national situation analysis</li> </ol>
	2. Protective practices promoted	<ol style="list-style-type: none"> <li>1. Promote preventive and control measures for reducing occupational risks at work-place</li> <li>2. Enhance health promotion at work-place</li> <li>3. Strengthen health surveillance of workers through regular medical examination</li> </ol>
3. Capacity building	1. Curriculum Development and Training	<ol style="list-style-type: none"> <li>1. Review existing short course curriculum in each country and regionally</li> <li>2. Standardize course contents and teaching methods in nationally relevant areas including industrial hygiene, basic medical surveillance, and occupational health and safety management</li> <li>3. Establish and strengthen occupational health teaching in the region</li> </ol>
	2. Capacity to respond to specific occupational health hazards	<ol style="list-style-type: none"> <li>1. Demonstration projects for improving the work conditions of vulnerable population in priority-hazardous occupations especially in the informal sector.</li> <li>2. Support joint WHO-ILO initiatives including silicosis elimination.</li> <li>3. Support training in the areas of research and surveillance of occupational diseases</li> </ol>

## Annex 1

### LIST OF PARTICIPANTS

#### Bangladesh

Dr Md Aminur Rahman Shah  
Deputy Director & Programme Manager  
Occu. Health and Env. Health  
Directorate General of Health Services  
Mohakhali, Dhaka  
Tele: 00-880-2-9356472 / 8812195

#### India

Dr T K Joshi  
Director  
Centre of Occupational & Environmental  
Health  
Maulana Azad Medical College  
New Delhi 110 002  
E-mail: joshitk@vsnl.com

Dr Kalpana Balakrishnan  
Associate Professor & Head  
Environmental Engineering Cell  
Sri Ramachandra Medical College  
No. 1, Ramachandra Nagar  
Porur Chennai 600 116  
E-mail: kalpanasrnc@vsnl.com

Dr CM Agarwal  
Assistant Director-General of Health Services  
(EPI)  
Ministry of Health and Family Welfare  
Nirman Bhawan  
New Delhi

Dr HN Saiyad  
Director  
National Institute of Occupational Health  
Meghani Nagar  
Ahmedabad 380 016  
E-mail: saiyardhn@yahoo.com

Dr TV Ranga Rao  
Director (Medical)  
Directorate-General  
Factory Advice Service & Labour Institute  
Central Labour Institute  
Post Bag No. 17851, Mankikar Marg  
Sion, Mumbai-400 022  
E-mail: cli@dgfastl.nic.in

#### Indonesia

Dr Erna Tresnaningsih  
Head  
Centre for Occupational Health  
Ministry of Health, R.I.  
Jakarta  
E-mail: tresnaningsih@depkes.go.id

Ms Hanifa Maher Denny  
Chairperson of the Department of  
Occupational Health & Safety  
Faculty of Public Health  
Diponegoro University  
Jl. Prof Sudarto, SH  
Kampus Tembalang (FKM UNDP)  
Semarang, 50235  
E-mail: hanimd@hotmail.com

#### Myanmar

Dr Khin Saw Yi  
Assistant Director (OCH)  
Department of Health  
Ministry of Health  
Government of the Union of Myanmar  
Yangon  
Fax: (095)-1-210652

### **Nepal**

Dr Kokila Devi Shrestha  
Epidemiology & Disease Control Division  
Department of Health Services  
Ministry of Health  
Ramshahpath  
Kathmandu  
E-mail: kokila@vianet.com.NP

### **Sri Lanka**

Dr C K Shanmugarajah  
Director  
Environmental & Occupational Health  
Ministry of Health  
Colombo  
E-mail: shan@health.gov.lk

Dr Shelton Chandrasiri  
Provincial Director of Health Services  
Uva Province  
through: Ministry of Health  
Colombo  
E-mail: sheltond@sltnet.lk; pdhs1@sltnet.lk

### **Thailand**

Dr Somkiat Siriruttanapruk  
Medical Officer and Head  
Research Development Section  
Bureau of Occupational &  
Environmental Diseases  
Department of Disease Control  
Ministry of Public Health  
Tiwanond Road  
Nonthaburi 11000  
E-mail: somkiatk@health.moph.go.th

Dr Wilawan Juengprasert  
Director  
Division of Occupational Health  
Department of Health  
Tiwanond Road  
Nonthaburi 11000  
E-mail: wilawan@health3.moph.go.th

Ms Wantanee Phanprasit  
Assistant Professor  
Faculty of Public Health  
Mahidol University  
25/25 Moo 3, Phuttamonthon 4 Road  
Salaya, Phuttamonthon  
District Nakhon Pathom 73170  
E-mail: phwpp@mahidol.ac.th

### **WHO HQ**

Dr Gerry Eijkemans  
Occupational Health Programme  
E-mail: eijkemansg@who.int

Dr Nida Besbelli  
International Programme on Chemical  
Safety (PHE/PCS)  
E-mail: basebellin@who.int

### **WHO Country Offices**

Dr Cherian Varghese  
NPO, Office of WR India  
E-mail: varghesec@whoindia.org

Mr Shamsul Huda  
Scientist – Environmental Health  
Office of WR Indonesia  
E-mail: hudas@who.or.id

### **WHO SEARO**

Dr Than Sein, Director EIP  
E-mail: thansein@whosea.org

Dr Abdul Sattar Yoosuf, Director SDE  
E-mail: yoosufa@whosea.org

Dr Sawat Ramaboot, Coordinator HP  
ramaboos@whosea.org

Dr Jerzy Leowski, RA NCS  
E-mail: leowskij@whosea.org

Mr Alexander V. Hildebrand, PCS  
E-mail: hildebranda@whosea.org

Dr Gabrielle Ross, GWH  
E-mail: rossg@whosea.org

Dr Gyanendra K. Sharma, STP-DPR  
E-mail: sharmag@whosea.org

Dr Deoraj Caussy, OEH  
E-mail: caussyd@whosea.org



**Annex 2**  
**PROGRAMME**

**Monday, 28 April 2003**

0900-1015 hrs	Inaugural Session	
0900-1000 hrs	Registration	
1000-1015 hrs	Regional Director's Address Introduction of Participants Nomination of Rapporteur /Chairman	Dr Uton Muchtar Rafei Mr Alex Hildebrand
1030-1200 hrs	<b>Technical Session 1: Introduction</b>	
1030-1100 hrs	Inaugural Lecture: An Overview of WHO Occupational Health Programme	Dr Gerry Eijkermans
1100-1110 hrs	Discussions	
1110-1140 hrs	Towards a Regional Strategy in Occupational Health	Dr Harry D. Caussy
1140-1200 hrs	Discussions	
1300-1700 hrs	<b>Technical Session 2: Group Work</b>	
1300-1500 hrs	Regional Strategy for Occupational Health	
1400-1600 hrs	Group 1: Strategic Direction One Strengthening regional occupational health network	Group 1
	Group 2: Strategic Direction Two: Promoting Use of Health Risk Paradigm	Group 2
1630-1730 hrs	Presentation and discussions	Plenary

**Tuesday, 29 April 2003**

0830-1030 hrs	<b>Technical Session 3: Concurrent Sessions</b>	
	Group 1: Strategic direction 3 Capacity building	Group 1
	Group 2: Strategic direction 4 Inter-sectoral collaboration	Group 2

1100-1200 hrs	Presentation and discussions	
1300-1430 hrs	Priority Areas of collaboration at country and regional level to the Regional Strategy	Group work
1430-1500 hrs	Presentation of Regional Strategy	Dr Harry D Caussy
1500-1530 hrs	Discussions on Regional Strategy	
1600-1630 hrs	Recommendations and Closing of workshop	Plenary