

**TASK FORCE 11: TRAINING OF OCCUPATIONAL HEALTH AND SAFETY PERSONNEL**

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The objective is to ensure the harmonized contents of various curricula in occupational health and safety, the full utilization of programmes and materials already available and the sufficient numbers of trained experts in the field.

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**Sharing information on training programmes and materials**

Magdalene Chan, Occupational Health Department, Ministry of Manpower, Singapore (magdalene-chan@mom.gov.sg)

*Keywords*: occupational safety & health training courses, materials, case studies, web-based information

*Target group*: Persons and institutions interested in OSH training information and materials.

The objective of the project is to make available, through the internet, information on OSH training programmes and materials, such as case studies and guidelines.

The project scope involves to promote the utilization of OSH programmes and materials already available, information on such training and materials should be made accessible and the internet is a good vehicle for this. Currently, information on OSH training and materials in Singapore is available on the Ministry of Manpower’s website at the web pages of the Occupational Safety and Health Division. The project scope involves promoting the utilization of OSH programmes and materials already available through the internet. In Singapore, the Ministry of Manpower’s website provides such information at the web pages of the Occupational Safety and Health Division. Visitors to the website can also subscribe free of charge to an OSH Alert service at www.mom.gov.sg/MOM/CDA that informs them of events, training programmes and case studies.

A computer based network is being developed for members of the Association of Southeast Asian Nations (ASEAN) to facilitate the exchange of relevant OSH information and sharing of expertise. The additional link from Singapore to the ASEAN OSHNET web page will provide useful information on the member countries, including training aspects.

The Manpower Ministry’s website has been enhanced and made more user-friendly. Information on OSH training and promotion is available at: http://www.mom.gov.sg/MOM/CDA.

The ASEAN OSHNET website has been established: http://www.asean-oshnet.or.id/

Products: information on occupational safety & health training courses and materials.

*Project start date*: December 2001

*Project completion date*: August 2003.

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**Course on diagnosis and management of Asbestos**

Chia Sin Eng, WHO Collaboration Centres in Occupational Health, Singapore (coclsc@nus.edu.sg)

Nguyen Thi Hong Tu, Department of Preventive Medicine, Ministry of Health, Viet Nam (hongtu@netnam.org.vn)

*Keywords*: chest x-rays, lung function test, asbestosis, workplace assessment

*Target group*: occupational physicians for the Ministry of Health, Viet Nam both at the capital and provincial levels will be selected to attend this Course.

The aim of this project is to train a group of occupational physicians in the diagnosis of asbestosis. These trainers will then train others in the discipline.

The project consisted of a 3-day intensive stay-in course were participants were taught by occupational physicians. The sessions include lectures, case studies, tutorials and workplace visit with on site risk assessment, group presentations and report writings. In addition, the participants were taught how to read the ILO Pneumoconiosis set of standard chest x-rays. They were also shown the different types of lung function test used in diagnosis of asbestosis.

The Course took place in May November in Ho Chi Minh City, Viet Nam. The Singapore International Foundation collaborated on the project.
Forty doctors, 20 from Ho Chi Minh City and 20 from provinces throughout Vietnam, attended and they are now training partners from their provinces.

*Project end date: November 2003*

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**Planning, Management and Controlling**

Wieland Wettberg (Wettberg.Wieland@baua.bund.de), BauA, Germany; Klaus Pickert (klaus.pickert@institut-input.de), Input Institut, Germany; Laurent Théveny (laurent.theveny@inrs.fr), Jean Bataille (jean.bataille@inrs.fr), INRS, France

*Keywords:* training, machinery design,

*Target group:* machinery designers

PMC Lernwelt is a trans-national remote training platform project designed to foster the integration of occupational health and safety requirements as of the design phase of machinery and derived products.

The development of the platform is being managed by BauA, while several health and safety institutions are involved in the project (AUVA-Austria, SUVA-Switzerland, INRS-France) along with some German companies and experts in training and new technologies.

INRS is contributing to the project by providing the "LOGINORME safe machinery design" software produced in France as part of the activities undertaken by the ISSA Education and Training Section. This product is designed for initial and on-going training of machinery designers.

LOGINORME is a decision-making support tool. It takes up the general principles of ISO 12100 and 14121, providing traceability of decisions to eliminate or reduce risk during machine design. The software is available in 5 languages: English, French, German, Portuguese and Spanish.

Further information about PMC Lernwelt is available at: http://www.pmc-center.de/

For further information about Loginorme please contact: jean.bataille@inrs.fr

Bundesanstalt für Arbeitssschutz und Arbeitsmedizin (BauA); Allgemeine Unfallversicherungsanstalt (AUVA), Schweizerische Unfallversicherungsanstalt (suva), Institut National de Recherche et de Sécurité (INRS); International Social Security Association (ISSA)

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**Further development of curricula and materials for occupational health and safety experts - The WHO modules in occupational safety and health**

Linda Forst, Great Lakes Center, USA (Forst-L@uic.edu), Leslie Nickels, Lorraine Conroy

The WHO modules in occupational health are designed for professionals who are charged with the responsibility of protecting the health of workers. These may include public health officers, physicians, nurses, policy makers, plant managers, and union health and safety representatives.

The modules are organized into four economic sectors: Manufacturing, Service, Agriculture, and Mining. Each module (sector) contains all the course materials to present a 16 hour course. For each sector, there is an Instructor Manual and a Student Manual; both have a "Resources" section to be utilized during didactic sessions.

These materials are available in paper format. They are also available on CDs (compact discs) as pdf files (to preserve formatting) and Microsoft Word/Power Point documents (to allow instructors to alter them). The modules were packaged for use with a multidisciplinary audience--representatives of Hygiene, Medicine, Nursing, Epidemiology, and designers of programs and policies in Occupational Health. Individual exercises may be removed, altered, and re-packaged for other target audiences (e.g., groups of one discipline).

CD-ROMs are available free of charge from Linda Forst (Forst-L@uic.edu) and WHO (kortummargote@who.int)

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**On-line training in Occupational and Environmental Health**

Linda Forst, Great Lakes Center, USA (Forst-L@uic.edu)

*Keywords:* environmental health, occupational health, distance learning, on-line learning, international occupational health

*Target group:* WHO put out a message soliciting international students for this pilot. Ten people responded and all 10 were enrolled.
The purpose of this project was to determine whether an on-line, 15-week, interactive format is a viable delivery method for international training. A 3-credit university course was adapted and offered to 10 international students as a pilot. Students are required to read the text, Principles of Environmental Health by Yassi et al, to read additional, posted materials, and to engage in on-line "discussions regarding course material. They took several quizzes, and composed a debate stance with fellow students.

Five the 10 students engaged in the "debate" along with US students, composing two lengthy documents as a group. The whole course is a potential product, though the University of Illinois at Chicago holds intellectual property rights for the moment.

**Postgraduate training courses in maritime occupational health**

Stanislaw Tomaszuhas, Institute of Maritime and Tropical Medicine in Gdynia, Poland (tomasz@limmt.gdynia.pl)

*Keywords*: training of trainers, maritime occupational health

*Target group*: Medical practitioners from coastal areas of maritime countries, who take care for the health of maritime workers, or who plan to do that. Doctors employed in Departments of Health, Departments of Labor, Trade Unions. Health staff of clinics in port cities.

The objective of this project is to train medical officers, mainly from developing countries and countries of Eastern and Central Europe, in maritime occupational health and prepare them for training other doctors in their home countries in the same subject (postgraduate training of trainers).

In most of the developing countries, where hundreds of thousands of seafarers have been employed on "flag of convenience" merchant ships, maritime workers including seafarers and fishermen have not yet been covered by occupational health services. Following the economic and political changes in countries of Central and Eastern Europe during the 1990s, such services provided by governments have been discontinued, and most of the national seafarers there look for employment on foreign flag ships. Rebuilding of the occupational health services there is necessary. The health and safety of seafarers should be better protected.

In summer 2002, funding was obtained from the ITF Seafarers’ Trust. Training materials were obtained from WHO, ILO, ITF, and from other sources. The WHO Intercountry Training Course on Maritime Occupational Health was conducted in Gdynia, Poland, on 6-20 October 2002. 26 participants from Bulgaria, Croatia, Cyprus, Georgia, Germany, India, Indonesia, Latvia, Norway, Philippines, Poland, Russia, Thailand, and Viet Nam were trained by the staff of the Institute in Gdynia, and 10 guest lecturers from abroad.

Lecturers from the WHO CCs in Denmark and Germany were the lecturers in this course. Publications from sister CCs on maritime medicine were distributed among the participants. 26 doctors (trainers) completed the WHO course and received diplomas. The next WHO intercountry training course will be conducted in 2003, subject to the availability of funds.

**Epidemiology of pesticides poisoning.**

Yuxin Zheng, National Institutes in Occupational Health and Poison Control, China (yxzheng@163bj.com)

*Keywords*: Epidemiology, pesticides, poisoning

*Target Group*: Physicians in emergency department of county hospitals

The purpose of this project is to collect the case information of acute pesticide poisoning

A training course on data collection for participants from 11 county hospitals was held.

Funds are provided by IPCS.

**Programme for one-month course for OHS personnel**

Emilia Ivanovich, National Centres of Hygiene, Medical Ecology and Nutrition, Bulgaria (e.ivanovich@nchmen.gov.bulgaria.bg)

*Keywords*: occupational health, postgraduate training, one month

*Target group*: physicians, safety engineers and other staff for Occupational Health Services and all interested in Occupational Health.

There is a lack of occupational health professionals in Bulgaria. Building capacity is of great importance for the country in the process of transition and implementation of new approaches for ensuring health and
safety at work. The drastic economical changes in the transitional period and the reorientation of the system from curative towards preventive make new approaches in the building capacity necessary. A newly designed programme for postgraduate education has been developed to cover the basics of occupational health, risk assessments and comprehensive preventive approaches.

The programme has been successfully implemented for the purposes of one-month training courses (6 modules). A questionnaire for evaluation of the programme has been developed.

Training and continuous education in occupational and environmental health in Central America

Elba de la Cruz, Catharina Wesseling (cwesseli@una.ac.cr), Luisa Castillo (lcastill@una.ac.cr), Patricia Monge (pmonge@una.ac.cr) and Clemens Ruepert (cruepert@una.ac.cr), IRET-UNA, Costa Rica with University of Washington; University of Texas; Karolinska Institute; Stockholm University; Utrecht University; University of Quebec in Montreal; National Autonomous University of Nicaragua at León (UNAN-León); Technological University of Costa Rica.

Keywords: Central America, Graduate programmes, Continuous education, Courses, Training materials

Target group: (i) nurses, physicians, hygienists, engineers, social scientists, toxicologists, environmental scientists; and (ii) professionals in occupational and environmental health and related disciplines.

The purpose of the project is to (i) provide graduate training in occupational and environmental health in Central America; and (ii) develop continuous education (CE) programmes for occupational and environmental health professionals in Central America, focusing on toxic substances and working environment.

(i) A two-year Master Programme in Occupational Health is underway since 1999, organized by IRET and the Technological University of Costa Rica, with emphasis on environmental hygiene. To be expanded to cover Central America. Master Programme in tropical ecotoxicology starts 2003.

(ii) IRET has provided short courses and seminars since 1995. Training materials are produced. International, regional and national conferences and workshops are organized. A network of professionals in occupational and environmental health with interregional training support is being designed.

The following progress has been achieved so far:

(i) Forty Costa Rican students are attending the Master in Occupational Health Programme.

(ii) National and regional CE courses have been organized in occupational and environmental epidemiology; environmental health; occupational hygiene; risk assessment and management; clean technologies; aquatic tropical ecotoxicology; pesticides in the tropical marine environment; watersheds-based ecological risk assessment; pesticide toxicology and environmental chemistry; low-tech methods for analyzing pesticide residues; neurotoxicology; and neurobehavioral research and surveillance. Courses and training materials include a Central American Pesticide Manual and a Manual of Neurobehavioral Tests, both produced in collaboration with PAHO. PAHO has co-funded several courses. International Conference on Pesticide Use in Developing Countries: Impact on Health and Environment was organized by IRET in 1998, attended by 500 participants from over 30 countries.

PAHO is also collaborating on the project. The programme is in progress: courses, theses, and student supervision are in place. Other accomplishments include one international conference; one regional workshop; 14 regional courses; course materials; 2 manuals; over 30 seminars with national and international speakers.

Products: (i) Program in progress: courses, theses, and student supervision. Two courses were completed in 2003: a one-week Central American Course in Epidemiology with 20 participants from 7 countries, and a 2-week Central American Course in Wildlife Toxicology (15 participants from 5 countries); (ii) 1 international conference; 1 regional workshop; 16 regional courses; course materials; 3 manuals; over 32 seminars with national and international speakers; (iii) Scientific-ethical evaluation of projects of other Institutes.

Project start year: 1995

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Capacitación y educación continua de salud y seguridad ocupacional y salud ambiental en América Central

Elba de la Cruz, Catharina Wesseling (cwesseli@una.ac.cr), Luisa Castillo (lcastill@una.ac.cr), Patricia Monge (pmonge@una.ac.cr) and Clemens Ruepert (cruepert@una.ac.cr), IRET-UNA, Costa Rica
Centros incluidos en el proyecto: University of Washington; University of Texas; Karolinska Institute; Stockholm University; Utrecht University; University of Quebec in Montreal; National Autonomous University of Nicaragua at León (UNAN-León); Technological University of Costa Rica.

Palabras claves: América Central, Programas de maestría, Educación continua, Cursos, Materiales educativos

Grupos meta: (i) Enfermeros, médicos, higienistas, ingenieros, profesionales en disciplinas sociales, toxicólogos, profesionales en ciencias ambientales; (ii) profesionales en salud ocupacional y ambiental y disciplinas relacionadas.

Objetivo del proyecto: (i) programa de maestría en salud ocupacional y en salud ambiental en América Central; (ii) desarrollo de programas de educación continua para profesionales en salud ocupacional y ambiental en América Central.


(ii) IRET organiza cursos y seminarios cortos desde hace 1995. Se produce materiales de enseñanza. Se organizan conferencias y talleres internacionales, regionales y nacionales. Se diseñará un red de profesionales en salud ocupacional y ambiental.

Avance:

(i) 40 estudiantes costarricenses están participando en el Programa de Maestría en Salud Ocupacional.

(ii) IRET ha organizado cursos de educación continua nacionales y regionales en epidemiología, salud ambiental, higiene ocupacional, evaluación y manejo de riesgos; tecnología limpieza, ecotoxicología acuática tropical, plaguicidas en el ambiente marítimo tropical, evaluación de riesgos ecológicos en base en cuencos, toxicología de plaguicidas, química ambiental métodos de tecnología de bajo costo para el análisis de residuos de plaguicidas, neuroxicología, e Investigación ciencia y vigilancia neuroconductual. Materiales de educación incluyen el Manual Centroamericano de Plaguicidas y el Manual de Pruebas Neuroconducentales, ambos producidos en colaboración con OPS. La OPS ha co-financiado cursos. IRET organizó la International Conference on Pesticide Use in Developing Countries: Impact on Health and Environment en 1998, con 500 participantes de más de 30 países.

Colaboración con otros centros: Ver arriba (Centros incluidos en el proyecto). OPS.

Productos: (i) El programa se está llevando a cabo: cursos, tesis, y supervisión de estudiantes; (ii) 1 conferencia internacional; 1 taller regional; 14 cursos regionales; materiales para cursos; 2 manuales; mas de 30 seminarios con presentantes nacionales y internacionales.

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**WHO/WPRO Training Programmes**

Hisashi Ogawa, WPRO (Ogawah@wpro.who.org)

The following are the activities funded by WHO regular country programme budgets for training in occupational health:

China - Workshops and study tours on occupational health promotion at medium and small-scale workplaces. Funding is secured. The activity has been initiated.

Philippines - Fellowship training of staff on environmental/occupational health risk management and on ergonomics. Funding is secured. The activity has been initiated.

Viet Nam - Training courses on health promotion at workplaces; workshop on assessment of health and economic losses; Fellowship training on epidemiology in occupational health and on occupational health in technology transfer. Funding is secured. The activity has been initiated.

Other contributors: Kaj Elgstrand, ICOH SC on Development and Occupational Health (kaj.elgstrand@arbetslivsinstitutet.se); Bonnie Rogers, ICOH SC on Education and Training (rogersb@email.unc.edu); David Zalk, IOHA (zalk1@illnl.gov)

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**Assistance to occupational hygiene graduate programmes in developing countries and countries in transition**
David Zalk (zalk1@illni.gov) and Berenice Goelzer (berenice@goelzer.net), IOHA, USA

Keywords: prevention, IOHA, occupational hygiene, training, ACGIH International Committee  
Target group: bodies deemed appropriate as described within IOHA articles of association.

The aim of this project is to utilize IOHA expertise and member organisation support in delivering content criteria for occupational hygiene graduate programmes, occupational hygiene mentorships, training, publications, and related materials to participating university programmes. It aims to offer professional delivering content criteria for occupational hygiene graduate programmes, occupational hygiene contacts as direct student mentors and deliver these materials to universities in developing countries and countries in transition, and any other bodies deemed appropriate recipients by IOHA.

ACGIH and the ACGIH International Committee are supplying mentorships to requesting students in Masters of Public Health programme at the University Witwatersrand in South Africa. IOHA, through ACGIH, are also establishing a fund of a minimum of $2000 annually for at least five years for the purchase and distribution of educational publications to university libraries and other entities as deemed appropriate through the IOHA. Two BOD members of IOHA have delivered their commitment to the UW to teach modules associated with the MPH programme. Content criteria for occupational hygiene graduate programmes currently in active development. Content criteria for graduate programmes in occupational hygiene. The Mentorship programme is being actively disseminated and ACGIH publications and other technical documents are available.

IOHA, University of Birmingham, UK and NGO, IOHA are collaborating on the project.

Graduate training in occupational health
Fernando G. Benavides (fernando.benavides@cexs.upf.es), Occupational Health Research Unit, Research Unit on Respiratory and Environmental Health, Barcelona, Spain.

Keywords: graduate training, occupational health
Target group: Graduate and postgraduate students in occupational and environmental health from any country, on a competitive basis. Applications from students from Spanish-speaking developing countries are especially encouraged.

The purpose of the project is to provide masters and doctoral level training in occupational health. Funded opportunities for students from Spanish-speaking developing countries are being identified.

Public funds from Catalunya support the academic infrastructure for this activity, and students are required to pay tuition in this program. However, scholarship opportunities are also available, on a competitive basis, for qualified students. In particular, the proposed Barcelona WHO Collaborating Centre will work with the WHO Collaborating Centre at The University of Texas to offer scholarships, on a competitive basis, to students from developing countries in Latin America. The WHO website and the Network of Collaborating Centres in Occupational Health will disseminate announcements of scholarship opportunities. These academic programs are open to citizens of other countries as well. The languages of instruction are Catalan, Spanish and English.

The graduate programs are already in place. Scholarships for students from Spanish-speaking developing countries are expected to be in place for the 2003-2004 academic term.

Centres collaborating on this project are the Southwest Center for Occupational and Environmental Health at The University of Texas School of Public Health in Houston, Texas.

Short-term training and continuing education workshops and short courses in Spanish for occupational health professionals
Fernando G. Benavides (fernando.benavides@cexs.upf.es), Occupational Health Research Unit, Research Unit on Respiratory and Environmental Health, Barcelona, Spain; George L. Delclos (gdelclos@sph.uth.tmc.edu), Houston, University of Texas

Keywords: short-term training, continuing education
Target group: Occupational health researchers, graduate students and professionals from Spanish-speaking developing countries.

The purpose of the project is to provide short-term training, in Barcelona, in specific areas of occupational health for researchers from Latin America, on a case-by-case basis, and to support the continuing education
activities in Latin America currently being conducted by the Southwest Center for Occupational and Environmental Health at The University of Texas School of Public Health.

This project will add to existing short-term training and continuing education offerings for Latin American occupational health professionals. Many of these activities, especially the short courses, will be conducted in collaboration with the University of Texas WHO Collaborating Centre. This latter Centre is already established in this area in several Latin American countries. Financial support for these activities is secured largely through a U.S. Fogarty International Center training grant at the University of Texas. Technical consultation may be requested from PAHO, largely for assessing short-term and continuing education needs in Latin America. For the short-term training and teaching activities in Barcelona, trainees from Latin America have access to the full complement of facilities and faculty of the Unit during their stay.

Coordination, implementation and evaluation of continuing education courses and workshops in Latin America will be provided by The University of Texas Collaborating Centre. The proposed WHO Collaborating Centre in Barcelona will provide faculty and course materials for selected short courses in Latin America. Partial financial support, in the form of short-term traineeships and scholarships, for these courses will be provided by separate sources, including the Fogarty Center training grant held by the University of Texas. The proposed new Collaborating Centre in Barcelona will make important contributions by providing course faculty and instructors in those areas of expertise where the University of Texas is lacking.

Short-term training and continuing education courses are already being offered by the University of Texas Collaborating Centre. The support provided by the proposed WHO Collaborating Centre in Barcelona will broaden the spectrum of Spanish-language expertise in occupational health, allowing a greater diversity of offerings for Latin American occupational health professionals. In preparation for this activity, a postdoctoral fellow from the proposed Barcelona collaborating centre will be spending one year at The University of Texas, in part to assist in preparation of training materials and delivery.

New “packaged” Spanish-language continuing education courses and training modules will be added to the existing inventory of training materials already produced by The University of Texas.

Sharing of training programs and materials in occupational health and safety

Kenneth R. Laughery (laugher@ruf.rice.edu), Chair IEA STP Committee

Keywords: training programs, training materials, management systems, ergonomics, occupational health and safety personnel

Target group: occupational safety and health personnel active in industry and in educational and training institutions, instructors and trainers applying ergonomics to occupational health and safety practices

The objective of this project is to promote the sharing of training programs and materials in applying ergonomics within occupational health and safety practices. The relevant training programs and materials are collected through the various activities of the IEA STP Committee and its affiliated Technical Committees. The results will be distributed through these committees and the federated societies. The network of field experts associated with the IEA IDC Committee will also be utilized in the collection and dissemination of such programs and materials.

The collection of training programs and materials is under way through the IEA activities and through IEA-endorsed conferences. The efficacy of disseminating these materials through the IDC Committee is being examined.

The IEA IDC Committee is collaborating on this project.

Sharing training materials on the web

S. Len Hong, Canadian Centre for Occupational Health and Safety, Canada (hongl@ccohs.ca)

Keywords: education materials, training materials, educators, trainers, OHS curriculum

Target groups: curriculum developers, teachers, OHS trainers, skill development

This Project will focus on content that can be used to develop training materials for teaching occupational health and safety at the primary and secondary school level. The content will be based on occupational health and safety principles. The organization of the content will enable teachers to integrate OHS information into their daily teaching activities. Additionally the content will be arranged to meet the needs of proper curriculum design and to enable the use of student achievement grids and learning objectives.

Phases of this project will be implemented over the next three years. It will be completed by 2004. Funds are in place.
Training for occupational physicians and hygienists
Marianne Sereda, Institut universitaire de santé au travail, Switzerland (Marianne.Sereda@inst.hospvd.ch)
Keywords: occupational health, legislation, training centres, quality of the training in OH
Target group: OH physicians, hygienists, ergonomists, OH nurses
The aim of the project is to follow the training in OH, and also develop distance learning in the future. Several publications in OH and ergonomics are already available.
Institut für Hygiene und Arbeitsphysiologie, ETH Zürich, Switzerland is collaborating on the project.

Utilizing existing training materials of the Lausanne Institute on the web
M.Guillemin (Michel.Guillemin@inst.hospvd.ch) and Marianne Sereda (Marianne.Sereda@inst.hospvd.ch), Institut universitaire de santé au travail, Switzerland; Prof Krueger, Institut für Hygiene und Arbeitsphysiologie in Zürich (ETH), Switzerland
Keywords: Basic Support for Cooperative Work
Target group: occupational physicians, hygienists, ergonomists, safety ingeneers, occupational health nurses
The objective of this project is to share documents, input for discussions, information on OHS problems and OHS news, and to create a Distance Learning Project in the future. All the students will utilize this tool as often as possible.

Web-based training for occupational medicine
Dr. Joerg Reichert, Institute and Outpatient Clinic for Occupational and Environmental Medicine, University of Munich, Germany (joerg.reichert@arbeits.med.uni-muenchen.de)
Keywords: web based learning
Target group: Health care professionals learning occupational medicine, medical students
The purpose of the project is the dissemination of web based learning modules in occupational medicine. Occupational medicine has a wide range of aspects, and prevention is a major topic. In order for doctors to obtain knowledge about occupational and environmental influences, occupational medicine is a compulsory subject in the medical curriculum at German universities. About 650 5th year medical students are taught at our department every year. Within this course for occupational medicine each student visits six small-group-sessions held by different tutors. In order to enhance the learning experience by a more patient-oriented format of this course, we integrated a case-oriented, e-learning-tool. The aim of this project is to improve learning and memorizing of occupational medicine topics and increase the students’ motivation for the subject. The web based training programme in occupational medicine which was primarily developed for students has been altered in order to be used by various health care professionals.
Up to now, 12 cases have been developed, two of them have been translated into English and Spanish (www.promediweb.de; Login: gastarb; Password: gastarb). An international co-operation is currently planned.
Other Centres collaborating on the project: 5 other national and international universities

Packaged training course for health care workers (available in English and in Spanish)
George Delclos, University of Texas, USA (GDelclos@sph.uth.tmc.edu)
Training materials have already been developed. The course is available. Funding would be needed to support travel and course delivery.

Publishing the Journal International Maritime Health
Stanislaw Tomaszunas, Institute of Maritime and Tropical Medicine in Gdynia, Poland (tomasz@immt.gdynia.pl)
Keywords: publishing, exchange of experiences, occupational health
Target group: Scientists in research institutes, health staff in ports and on ships, shipowners, seafarers' unions, international organizations and non government organizations, Departments of Health, Departments of Labour, port health authorities.

The objective of this project is to continue publishing the journal as a forum for the exchange of experiences and dissemination of information on the results of research on the health problems of maritime workers: seafarers, fishermen, divers, dockers, shipyard workers; and to inform health staff in maritime countries on practical activities aimed at the protection and promotion of health of workers at sea and in ports.

52 volumes of this journal (previously published under a different title) were published up to 2001. Similar journals are published in Japan, China, Spain and Ukraine, in their national languages. The IMH is the only specialized journal published in English. It is indexed in Medline. Materials for volume 53/2002 have been collected (19 original and review articles received from authors from Austria, Germany, UK, Denmark, Poland, Canada, Sweden, Norway, Estonia, Netherlands, and Georgia), and texts for the Chronicle section. Texts for volume 53 were received from authors from the Centres in Germany and Denmark. Volume 53/2002 of the IMH journal will be published before the end of the year.

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Training of occupational health and safety personnel

Jean-Marie Mur, INRS, France (jean-marie.mur@inrs.fr)

Keywords: Training, Occupational Health and Safety, Programme, French

Target group: French speaking people involved in Occupational Health

The aim of this project is to gather training programmes on OHS in French, and to put the references of French training programmes in OHS on the Internet site of the WHO CCs in OHS.

The project is on going.

Two kinds of sites have been identified:

- "open" sites : access is free and does not need any registration;
- Sites with registration: in this case, the access may be free or not.

Progress: Several internet links have been put on the site. After a few months of interruption due to technical problems, the site is now open again, and several additional links will be added.

Project start date: January 2002

Project end date: Permanent

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Training of Occupational Health and Safety Personnel

Prof. Dr Jovanka Karadzinska Bislimovska, Institute of Occupational Medicine, Republic of Macedonia (bislimovska_j@hotmail.com)

Keywords: occupational health, education, development of curricula, training

Target group: university teachers, physicians, nurses, safety engineers, professionals in occupational and environmental health and related disciplines

Project start date: June 2002

The objective of this project is to develop content and forms of education programmes and training of undergraduate and postgraduate studies in the field of occupational health.

The Institute is a base of the Chair of Occupational Medicine, Medical Faculty, Skopje and provides lecturing activities in the field of occupational medicine for undergraduate students (Medical Faculty, Dentistry Faculty, Radiological technicians, Interdisciplinary studies for safety at work-safety engineers) and students at the postgraduate level (specialization-3 years, subspecialisation- 2 years, masters degree-2 years, PhD degree-3 years). It is an institution appointed by the Ministry of Health for practical education of medical doctors who specialize in occupational medicine, hygiene, and social medicine and those who specialize in pulmonology and allergology as well as clinical toxicology. The Institute organizes educative seminars, short courses for the purpose of training of occupational health experts. The Institute organized the First meeting of Occupational Medicine Chairs of 9 Universities of South-east Europe (March, 2002). Common conclusions, recommendations and suggestions for actual and future activities in the educative field (training curricula) of occupational medicine in this region of Europe were achieved. Development of training curricula on different levels in area of occupational health for new competencies of occupational health physician, occupational hygienist and nurses is now underway in the Republic of Macedonia. Introducing four years of Occupational
Health specialization and harmonization with EU schools and establishing a specialization programme based on WHO and EASOM guidelines should be achieved. Development is expected for the course of occupational health as a part of a new postgraduate teaching programme, Masters programme of Public Health Medical faculty Skopje. Activities also comprise the participation of an expert level for the curriculum development of the postgraduate masters course on “Environmental and Occupational Health” for the joint WHO/Council of Europe initiative “Health Development Action in South East Europe “South East Europe Health Network, in the framework of the Social Cohesion Initiative of the Stability pact for SEE. In the framework of this project short courses or educative seminars aimed at OHS professionals and practitioners will be organized on occupational allergy, stress at work, health promotion at workplace. Specific educational materials for occupational health personnel (booklet on stress at work, videotape on workplace health promotion in Macedonian language) will be prepared.

The accomplishments so far include:

- Educative seminar-one day training concerning stress at work -new approach for occupational health physicians from 25 Occupational Health Services at the municipality level.
- Developing, printing and distributing of the educational booklet ( 12 pages in 2000 Copies) titled “Stress at work”.
- Description of training curricula and required competence for occupational health physician.

**Ergonomics professional training program**

Victor Liu, California State University at Northridge (CSUN), School of Public Health, University of California at Los Angeles (UCLA), USA (vliu@ucla.edu)

with the Center for Scientific Research and Postgraduate Education at Ensenada, Mexico.

*Keywords*: training, ergonomics, health professionals

Target group: occupational health professionals working with maquiladoras

The purpose of this project is to provide in depth training to occupational health or related professionals working in the maquiladora industry in Baja California, Mexico.

Thousands of maquiladora factories, involving labor intensive assembly operations, have been established over the years on Mexico’s side of the border with the United States. Nearly one-third of them are located in Baja California. Some studies have indicated that musculoskeletal problems due to ergonomic hazards might be one of the major health issues in maquiladoras. This project was developed to provide occupational safety and ergonomics training to health professionals from Baja California who are working in maquiladoras. The curriculum includes 12 monthly weekend training sessions at CSUN incorporating theoretical concepts and practical tools for conducting worksite assessments. A field practicum involving applied research is required for completing the training.

Two new physicians have just begun the 12-month training program, with support from the UCLA-Fogarty international training program. The next opening for trainees will be in spring 2004.

**Training for occupational physicians**

Manuel Peña, European Institute of Health and Social Welfare, Madrid, Spain (admon@ie-es.com)

*Keywords*: occupational health, training center, quality of the training in Occupational Health

*Target group*: Occupational health physicians, Occupational health nurses.

The aim of the project is to follow the continuous training in Occupational Health, developing distance learning. Several publications in OH are already available.

*Project start date*: 1995

**Occupational health and safety training documents in Spanish**

Angela Helmer, Labor Occupational Safety and Health, UCLA, Center for Occupational and Environmental Health (COEH), USA (ahelmer13@yahoo.com)

*Keywords*: worker safety, health, educational materials, Spanish
**Target group.** Spanish-speaking workers in the US and Latin America, labor unions, community-based organizations, academia, health professionals.

The purpose of the project is to provide Spanish-speaking workers in the US and Latin America with educational materials concerning workplace safety and health (e.g., agriculture, pesticides, noise, metals, construction, ergonomics, women workers, mining, biological hazards, hazardous waste, forestry, toxic substances, etc.).

This project focuses on updating an existing Spanish language bibliography, which was initially compiled through funding from PAHO and the COEH and published in 1990 and 1999 under the title "La Fuente Obrera – A Worker’s Sourcebook". New educational materials (e.g., fact sheets) are being developed in Spanish for workers on the topic of safety and health.

The bibliography and educational materials will be posted on the Labor Occupational Safety and Health website (www.losh.ucla.edu), so that workers from throughout the Americas can have access to the information. These materials are being collected from different institutions in the US, Latin America and Europe.

Funding to update the bibliography has been secured through the National Institute of Environmental Health Sciences for this one-year project.

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**Postgraduate training courses in occupational safety and health**

Manuel Peña, European Institute of Health and Social Welfare, Madrid, Spain (admon@ie-es.com)

*Keywords:* Postgraduate, occupational health, distance learning, on-line learning, CD-Rom.

*Target group:* interdisciplinary professionals, graduate students.

The purpose of this project is to provide postgraduate training in occupational safety and health. This includes the development of training materials for postgraduate training in occupational and environmental health for interdisciplinary professionals. Courses will be made available through webCT on the Internet or downloadable from CDRom or from webpages. All aspects of occupational health including epidemiology, occupational hygiene, occupational health services management, occupational medicine, legislation, health promotion, social and behavioural impact factors and relevant environmental health will be covered.

This is a postgraduate master course, and the Institute is officially authorized by the Spanish Public Administration. This training is regulated by the Ministry of Labour and Social Affairs.

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**Postgraduate training courses in public health**

Manuel Peña, European Institute of Health and Social Welfare, Madrid, Spain (admon@ie-es.com)

*Keywords:* Postgraduate, public health, health promotion, on-line learning.

*Target group:* physicians, nurses, other relevant graduates in health and related sciences.

This project is proposed to provide postgraduate training in public health. This includes the development of training materials for postgraduate training in public health for health professionals. Courses will be made available through Internet. All aspects of public health including epidemiology, occupational health management, health promotion, life styles, and socio-economic, socio-psychological factors determining life quality and human health will be covered.

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**Gathering and sharing of training programmes and materials in occupational health and safety**

Daniel Hryhorczuk, Great Lakes Centres, University of Illinois in Chicago, USA (dhryhorc@uic.edu)

*Keywords:* occupational, safety, health, training

*Target group:* Collaborating Centres and their trainees

The purpose of this project is to develop a web-based system to track training programmes offered by the network of WHO Collaborating Centres in Occupational Health.

The individual Collaborating Centres that comprise the global network of WHO Collaborating Centres in Occupational Health are each offering a variety of occupational safety and health training courses in their own regions as well as around the globe. There is currently no central, WHO-endorsed site that offers prospective trainees a complete and up-to-date list of these training opportunities. This project reviews the training notification systems that are currently available on the web, assesses their usefulness and limitations, and seeks to propose a shared system for registering training opportunities which can be used
by members of the network and their prospective trainees. This project will propose the key fields that need to be entered into, will assist in the development of a pilot site, and evaluate the usefulness of this system from the standpoint of course providers and users.

A survey instrument to capture data has been developed that would be useful for prospective trainees. The websites of 22 of the Collaborating Centres have been surveyed to determine the extent to which individual Centre web sites provide information which can help prospective trainees learn about training opportunities and register for future courses. The Canadian Centre website has initiated a prototype system for registering courses. The survey instrument is currently being piloted at three Collaborating Centres. Once the key data elements have been identified, the web page will be developed and the system pilots in collaboration with the Canadian Centre for Occupational Safety and Health.

Agricultural workers and use of pesticide (teaching materials and instructions for the course delivery)
Marco Maroni, ICPS, International Centre for Pesticide and Health Risk Prevention, Unit of Occupational Medicine, Hospital L. Sacco, University of Milano, Italy

Keywords: Agriculture, chemicals, pesticides, training, education

Target group: Workers, Occupational Health Physicians

The purpose of the project is the development of teaching materials to be used for courses addressed to workers for the safe use of pesticides in agriculture.

Agriculture is one of the most dangerous working activities in the world (accidents and occupational diseases). Risk may arise during several activities: pesticide application may pose health risks to the farmers and pesticide workers, often as a consequence of improper or careless handling, even if it may be necessary to prevent losses of the agricultural production. The preparation of teaching material for training activities among pesticide workers is aimed at giving advice on how these health risks can be reduced. The material is thought to be used by agricultural workers all over the world, also as a tool to help health professionals and pest managers in promoting safe working procedures.

Institute of Occupational Health and Poison Control, Chinese Centres for Disease Prevention and Control, China is collaborating on the project.

Assistance in adaptation of various materials to local conditions
Tom Sorahan (T.M.Sorahan@bham.ac.uk), The Institute of Occupational Health, University of Birmingham, UK; Heather Jackson (Heather.Jackson@lyondell.com), International Occupational Hygiene Association (IOHA), USA

Keywords: prevention, control banding, occupational hygiene, work-related illness, ILO Toolkit

Target group: bodies deemed appropriate as described within IOHA articles of association.

The aim is to utilise IOHA expertise in delivering Occupational Hygiene training and related materials locally to countries, CC’s, Universities, and any other bodies deemed appropriate recipients by IOHA.

ACGIH and ACGIH International Committee are supplying mentorships to requesting students in Masters of Public Health programme at the University Witwatersrand in South Africa. IOHA, through ACGIH, is also establishing a fund of a minimum of $2000 annually for at least five years for the purchase and distribution of educational publications to university libraries and other entities as deemed appropriate through the IOHA. Two BOD members of IOHA have delivered their commitment to the UW to teach modules associated with the MPH programme. The Mentorship programme is being disseminated and ACGIH publications and other technical documents are available.

Other Centres collaborating on the project are IOH, University of Birmingham, UK and NGO, IOHA.

Gathering and sharing of training programmes and materials: Evaluation of effectiveness of training in occupational health - methodology and application
Andrzej Boczkowski, Nofer Institute of Occupational Medicine, Poland (abocz@imp.lodz.pl)

Keywords: training in occupational health, quality of training, evaluation of training effectiveness, assessment methodology, evaluation procedures
Target group: all persons and institutions having something in common with the training in occupational health

The aim of the project is to develop procedures and instruments of evaluation of training effectiveness in the field of occupational health and, after verifying in the course of special pilot studies, to implement them to the OH training practice.

The quality of training in occupational health is of key importance from the point of view of the future OH practice. In this connection the activities aiming to monitor and assess the quality of teaching and learning in this field are particularly important. The training quality is understood as a training effectiveness, i.e. (1) real achievement of educational objectives during the courses and (2) real achievement of defined standards of professional competencies.

Two assessment questionnaires were developed, each including several parts aimed to measure the effectiveness of training process in its different aspects. The evaluation procedures with the use of these questionnaires are also elaborated and applied after many courses and postgraduate studies in the Nofer Institute of Occupational Medicine. As a methodological result of these applications the changes in both questionnaires and procedures are introduced and their new improved version are prepared.

Two books and several papers were published and presented on national and international scientific meetings.

The project funding is in place and the project is due to be completed in 2004.

Gromadzenie i upowszechnianie programów i materiałów szkoleniowych: Ocena skuteczności szkoleń z zakresu opieki zdrowotnej nad pracującymi - metodologia i zastosowanie

Andrzej Boczkowski, Instytut Medycyny Pracy im. Prof. J. Nofera, Polska (abocz@imp.lodz.pl)

Słowa kluczowe: szkolenie w zakresie opieki zdrowotnej nad pracującymi, jakość szkolenia, ocena skuteczności szkolenia, metody oceny, procedury ewaluacyjne

Grupa przeznaczenia: Wszelkie osoby i instytucje mające coś wspólnego ze szkoleniem w zakresie opieki zdrowotnej nad pracującymi.

Celem projektu jest opracowanie procedur i narzędzi oceny skuteczności szkolenia w zakresie opieki zdrowotnej nad pracującymi oraz, po zweryfikowaniu w toku badań pilotażowych, wdrożenie ich do praktyki kształcenia w tym zakresie.

Jakość kształcenia w zakresie opieki zdrowotnej nad pracującymi ma kluczowe znaczenie dla przyszłej praktyki w tej dziedzinie. W związku z tym działania mające na celu monitorowanie i ocenę jakości nauczania i uczenia się w tym zakresie mają szczególną wagę. Jakość szkolenia rozumiana jest jako jego skuteczność, tj. (1) rzeczywiste osiąganie celów kształceniowych w trakcie szkoleń oraz (2) rzeczywiste osiąganie określonych standardów kompetencji profesjonalnych.


Opublikowano dwie książki oraz kilka artykułów, przygotowano szereg donieśień prezentowanych na konferencjach naukowych krajowych i międzynarodowych.

Projekt finansowany jest wewnętrznie i ma być zakończony w 2004 r.

Training programme for seafarers: Updating the text of the International Medical Guide for Ships

WHO/ILQ/IMO; Stanislaw Tomaszunas, Institute of Maritime and Tropical Medicine, Gdynia, Poland (tomasz@immt.gdynia.pl)

Funding is in place. Gdynia will update several chapters for the IMGs-3.

Training of occupational health and safety personnel

J Myers, Occupational and Environmental Health Research Unit, South Africa (Myers@cormack.uct.ac.za)
Keywords: Internet, e-learning, CD rom, self-directed learning, postgraduate

Target group: doctors, nurses, occupational hygienists, environmental engineers, other relevant graduates in health and related sciences

The purpose of this project is to provide postgraduate training in occupational health. This includes the development of electronic materials for postgraduate training in occupational and environmental health for occupational health professionals including doctors, nurses, occupational hygienists and environmental engineers. Courses will be made available through webCT on the Internet or downloadable from CD Rom or from webpages. All aspects of occupational health including epidemiology, occupational hygiene, occupational health services management, occupational medicine, toxicology, legislation, health promotion, social and behavioural impact factors and relevant environmental health will be covered.

The project is currently in progress with some materials for the first of 8 block courses in epidemiology, biostatistics and research methods under construction. It is planned to have this block ready for delivery on an experimental basis to residential students doing their first block of the Postgraduate Diploma in Occupational Health in March 2003. The course will be taken in a computer laboratory to simulate distance conditions.

National Centre for Occupational Health, University of Natal, Peninsula Technicon and University of Witwatersrand

Are collaborating on the project. Coursework materials are under construction.

Project start date: October 2002

Project end date: December 2004

Organization of an international consultation on capacity building in OH&S to address access to training programmes and intellectual property issues

Gerry Eijkemans, WHO/HQ (eijkemansg@who.int)

There was agreement by CCs and WHO at the Changmai Network meeting in 2001 to carry out preliminary activities before proceeding to hold this consultation. In 2002, the gathering of information on existing training courses was begun by several Collaborating Centres. Additionally, an international meeting was sponsored in Baltimore, US, in October 2002 by WHO, NIOSH, ICOH, and the Johns Hopkins Collaborating Centres to assess the status of internet-based education for developing countries. Further, the University of Illinois Collaborating Centres piloted an effort to include 10 developing nation students in the Basic Principles in Occupational Health Internet course. In 2003, there will be an assessment of the information and consideration of the next steps to be followed.

Funding is in place. The project will be completed by 2005.

Development of evidence-based occupational health (medicine) training course and material

Frank van Dijk, Coronel Institute, The Netherlands (f.j.vandijk@amc.uva.nl)

Funding is partly in place, and partly needed especially for material development. The project is scheduled to be completed by December 2004. Invitation for collaboration has been presented to other Centres e.g. in Thailand, South Africa, Finland (Timo Leino, e-mail: timo.leino@occuphealth.fi) and the UK to contribute to this project. Coronel Institute is co-operating on this topic, as well as in two ICOH SCs and the European Association of Schools of Occupational Medicine (EASOM).

International two-year training course: occupational safety and health & development for participants from Northern Africa, Middle East and Iran

Kaj Elgstrand, National Institute for Working Life, Sweden (kaj.elgstrand@arbetslivs institutet.se)

Funding is in place. The project started in September 2001, and is to be completed before the end of 2003.

International two-year training course: occupational safety and health & development for participants from Asia

Nils Petersson, National Institute for Working Life, Sweden (nils.petersson@arbetslivs institutet.se)

Funding is in place. The project started in October 2002, and is to be completed before the end of 2004.
Establishment of an international working group for utilisation of telemedicine to reduce health risks of seafarers

Xaver Baur, Central Institute of Occupational Medicine, Hamburg, Germany (xaver.baur@bug.hamburg.de)

Keywords: Telemedicine, merchant ships, accidents, emergencies, seafarers

Target group: occupational health staff in departments of health/labour, ship owners, insurance agencies, trade unions of seafarers.

The aim of this project is to promote the introduction of suitable telemedicine equipment on board of ships without a doctor in order to improve medical care of ill/injured seafarers. Telemedicine is an extremely useful new technology that should be immediately used to improve medical assistance of seafarers. The major objective of the project is to reinforce international standardisation, harmonisation and co-operation that are urgent to introduce effective and compatible telemedical devices.

A pilot study involving the following steps has been started: further development of medical devices; tests for suitability and applicability of the devices in co-operation with nautical officers and testing the medical suitability of the equipment in special, simulated emergencies and diseases, among others, cardiac diseases, inhalation traumata, injuries, skin diseases. A further step will be an appropriate, intensive education and training of captains and first officers.

A preliminary concept has been prepared. CIRM, Rome and the Norwegian Centre of Telemedicine are collaborating on the project.

Project start date: May 2004
Project end date: December 2005

Development of a comprehensive medical training package for captains and first officers on ships

Anthony Low, Port Health Centres, Hamburg, Germany (anthony.low@bug.hamburg.de)

Keywords: Medical training package, international, ship officers.

Target group: occupational health staff in seafaring, educational centress for ship officers, maritime transportation departments and trade unions, shipping agencies, seamen.

By developing this medical training package, this training programme for seafarers - which at present can be very different in quality and duration from country to country - should be a guide for decision-makers in agencies dealing with seafaring, especially in developing countries, as to raising their appropriate teaching standards.

The training package will encompass detailed basic theoretical and practical medical training specifically for ship officers, taking into account medicines and medical equipment carried on board. Besides a short history of treatment on ships without doctors, it will emphasize prophylaxis and therapy to improve health conditions at sea. Knowledge gained from several decades of standardised medical maritime education in Germany will be integrated in the package.

The theoretical part of the training package is nearing completion. Collaboration is on between HPHC and the WHO Collaborating Centres, Gdynia, Poland.

Project start date: July 2003
Project end date: December 2004

Ausarbeitung eines umfassenden(ausführlichen) medizinischen Ausbildungsprogramms (Paketes) für Schiffskaftänne und Erste Offiziere

Anthony Low, Hamburg Port Health Centres (HPHC) des ZFA, (anthony.low@bug.hamburg.de)

Schlüsselwörter: Medizinische Ausbildung, international, Schiffsoffizier.


Durch die Ausarbeitung dieses medizinischen Trainingspakets wird dieses Ausbildungsprogramm für Seeleute - welches sich zur Zeit von Land zu Land erheblich hinsichtlich Qualität und Ausbildungsdauer unter-scheiden kann - eine Richtlinie bzw. Hilfe sein für jene, die Entscheidungen in Behörden und
Schiffsagenturen treffen, insbesondere in den sich entwickelnden Ländern, bezüglich der Anhebung der entsprechenden Ausbildungsstandards.


Train the trainers' curricula on health promotion at work
Alberto Zucconi, Istituto dell’Approccio Centrato sulla Persona IACP, Italy (azucconi@iacp.it)
Funding is in place.

Development of a core syllabus and eLearning course in occupational health psychology
Amanda Griffiths (amanda.griffiths@nottingham.ac.uk) and Stavroula Leka, (stavroula.leka@nottingham.ac.uk), Institute of Work, Health & Organisations (I-WHO), UK
Keywords: syllabus, occupational health psychology, eLearning, training, personnel
Target group: educators, trainers, occupational health and safety professionals, occupational health and safety personnel.

The purpose of the project is to produce a core syllabus in occupational health psychology that will form the basis for training initiatives for occupational health and safety personnel. To also develop an eLearning course in occupational health psychology that will facilitate flexible distance learning on an international basis. The scope of this project is the development of a core syllabus in occupational health psychology. This syllabus will then serve as a basis for the development of appropriate training initiatives, based on eLearning for occupational health psychology internationally.

A draft outline of the syllabus has been prepared and is now under review. The eLearning course has started to be developed. The project will be completed by March 2005.

Project start date: March 2003
Project end date: March 2005

Developing resources for end users, including practical solutions and training materials
Sergio Tavassi, ISPESL, Italy (tavassi.doc@ispesl.it)
Keywords: risk profiles, solutions, safety checks, sectors, sub-sectors
Target group: employers, workers’ safety representatives, workers, responsible people of prevention and protection services, decision-makers, stakeholders

The aim of this project is to support SMEs for risk assessment. The Information System will be redesigned, according to the target group needs, focusing on reduction of risk exposure for each subsector. Designing the new information system addressed to SMEs and updating of the databases is underway. The National network of the European Agency for safety and health at work is collaborating on the project.

Psychosocial factors surveillance workshop in Mexico
Peter Schnall, UCLA and University of California at Irvine, School of Public Health, University of California at Los Angeles (UCLA), USA (pschnall@ucla.edu)
with the University of Sonora, the National Autonomous University of Mexico, Professional Association of Occupational Safety and Health, and other institutions in Mexico
Keywords: training, work stress, surveillance
Target group: occupational health professionals and academics, government agency representatives responsible for worker health

The purpose of the project is to train health professionals and researchers on how to conduct workplace surveillance.
A growing network of psychosocial stress researchers in Mexico has recently identified the need to hold a workshop that would provide training in workplace surveillance. Increasing evidence correlates psychosocial stressors in the work environment with the etiology of hypertension and cardiovascular disease. The training would focus on methodological and practical issues in the measurement of workplace psychosocial factors, such as job strain and effort-reward imbalance, and blood pressure as a health outcome indicator. Blood pressure measurements are non-invasive and, with the development of ambulatory monitors, simple to use at an employee’s worksite. The workshop is expected to promote workplace surveillance by health professionals responsible for labor health and safety and to facilitate research studying the relationship between work stress and hypertension.

This project is in the planning phase and is expected to be completed in 2004 with partial support from the UCLA-Fogarty international training program.

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**Training on blood pressure surveillance in the workplace**

Peter Schnall, Center for Occupational and Environmental Health, School of Public Health, University of California at Los Angeles (UCLA), USA (pschnall@ucla.edu)

with Leonor Cedillo at the College of Sonora and the Sonora section of the national union CTM (Central de Trabajadores de México).

Keywords: worker training, work stress, surveillance, occupational health, blood pressure measurements

Target group: industrial workers, health professionals, union leaders, academics

The purpose of the project is to train workers and health professionals on how to conduct workplace surveillance of blood pressure.

This project is part a larger effort by the College of Sonora and some union groups in the State of Sonora to provide practical occupational health and safety training to workers. The training effort has been developed as a 40-hour course including topics in industrial hygiene, ergonomics, psychosocial stress factors and health outcomes. This project will support the development of a module on workplace surveillance as part of the overall training course. The module will focus on blood pressure measurement as a potential indicator of psychosocial stress in the workplace. While useful to workers and occupational health practitioners, this module will also be informative for academics conducting psychosocial research.

The 40-hour course was held in June 2003. The Ford Foundation is funding the overall course and publication; the UCLA-Fogarty international training program will support the surveillance training module.

Information presented within the 40-hour course will be compiled and published into a practical manual that can be used as a reference for evaluating workplaces. This project will contribute a chapter on blood pressure surveillance as part of the manual.

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**Training and continuous education in occupational and environmental health**

Manuel Peña, European Institute of Health and Social Welfare, Madrid, Spain (admon@ie-es.com)

*Keywords: Graduate programs, Continuous education, Courses, Training materials*

*Target group: nurses, physicians, hygienists, engineers, social scientists, toxicologists environmental scientists; and professionals in occupational and environmental health and related disciplines.*

The purpose of the project is to provide graduate training in occupational and environmental health; and develop continuous education programs for occupational and environmental health professionals, rising awareness of managers and professionals on the development of integrated policies of Health, Environment and Safety Management in enterprises.

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**On-line training in Occupational and Environmental Health**

Manuel Peña, European Institute of Health and Social Welfare, Madrid, Spain (admon@ie-es.com)

*Keywords: Environmental health, occupational health, distance learning, on-line learning*

*Target group: hygienists, engineers, social scientists, toxicologists environmental scientists; and professionals in occupational and environmental health and related disciplines.*

The purpose of this project is to develop an on-line, 4-week, interactive format for environmental and occupational health training.
Evaluation of effectiveness of training in occupational health – methodology and application
Andrzej Boczkowski (abocz@imp.lodz.pl) and Stanislaw Tarkowski (tarko@imp.lodz.pl),
Nofer Institute of Occupational Medicine, Poland
Funding is in place. The project will be completed by 2004.

Training courses on prevention of childhood lead poisoning
Yuxin Zheng, National Institutes in Occupational Health and Poison Control, China (yxzheng@163bj.com)
Keywords: lead, poisoning
Target Group: Professionals in occupational health and maternal and child health
The purpose of this project is to promote the knowledge in prevention of childhood lead poisoning.
Two training courses have been held. Two more training courses are being planned.
Funds are provided by WPRO/WHO

Training course - occupational health and safety in hospitals.
Manuel Peña, European Institute of Health and Social Welfare (admon@ie-es.com)
Keywords: program administration, surveillance, hospital ergonomics, worker training
Target group: hospital administrators, physicians, nurses, hygienists, hazardous waste specialists and epidemiologists, as well as workers with an interest in healthcare worker health and safety.
The aim of this project is to conduct a workshop that provides basic training in fundamental aspects of health and safety in hospitals, which may eventually be modified for use in other non-hospital healthcare settings. The aim of the project is to develop distance learning at a broad audience with an interest in occupational hazards of healthcare workers. Its structure combines something of interest to the whole group at 4 beginning and ending monographic seminars on Health and Safety Program Management in Hospitals, Surveillance, Hospital Ergonomics and Worker Training in Hospital Health and Safety.

Training course – health management
Manuel Peña, European Institute of Health and Social Welfare (admon@ie-es.com)
Keywords: hospital management, quality assurance, human resources
Target group: hospital administrators, physicians, nurses, hazardous waste epidemiologists, as well as professionals with an interest in healthcare management.
The aim of this project is to conduct a workshop that provides continuous training in fundamental aspects of health management in hospitals and non-hospital healthcare centres. The aim of the project is to develop distance learning at a broad audience with an interest in Health Systems and Services Development, quality assurance, health economy and human resources management.

National conference on research needs and lessons learnt for coordination and policy formulation on occupational health among key stakeholders
Nguyen Khac Hai, National Institute of Occupational and Environmental Health, Vietnam (haink@hn.vnn.vn)
Keywords: research need, coordination, policy formulation, occupational health.
Target group: academic institutions, decision-makers at ministries, medical university
The purpose is to recommend measures for strengthening coordination in policy formulation on OH and translating research results into policies on OH. The conference will be held in 2005 and funds have been secured by WHO, Vietnam Goverment.

Distance learning in ergonomics for Portuguese speaking countries in Africa.
David Caple, davidcaple@pacific.net.au; Chair, International Ergonomics Association (IEA), International Development (ID) Committee, Melbourne, Australa.
Keywords: ergonomics, education, MSD, distance learning.
Target Group: students in ergonomics in Africa.
Purpose of project: This IEA initiative is to translate an existing distance learning program in ergonomics from English to Portuguese and then offer it to Portuguese-speaking students in Africa. The IEA consists of 42 Federated Societies across the world who work cooperatively to advance the science of ergonomics. The society in Portugal is proposing to develop an agreement with a university in the UK who currently offer a distance learning program in ergonomics. The course materials will be translated from English to Portuguese and then offered as part of Portugal’s distance learning programs in Africa.

Meetings of the involved parties have occurred in Madeira and Brazil in 2004. A draft agreement has been developed by the IEA for consideration by the respective universities.

Names of other Centres collaborating on the project: University of Lisbon, Portugal; University of Nottingham, UK

Product: A distance learning program in Portuguese.
Project start date: July 2004
Project end date: July 2006

Enhancement of Occupational Health and Safety in Mexican Industry
Leonard Sassano, lssassano@iapa.ca, Director Strategic Alliances, Industrial Accident Prevention Association (IAPA), Toronto

Keywords: Mexico, voluntary compliance programme

Target Group: IAPA is engaged in a project in collaboration with the Mexican Ministry of Labour, Dirección General De Seguridad Y Salud En El Trabajo (DGSST) and (STPS) in the promotion and application of the Mexican voluntary compliance programme known as SASST.

Purpose of Project: The Mexican government is committed to promoting the integration of HS&E into Mexican industries through its SASST programme. The objective is to apply SASST within workplaces to improve the health and safety of workplaces and working conditions for all workers. It is realized that Mexican workplaces require to engage a managed approach and adopt a management system to successfully apply SASST. The project will focus on the development and engagement of a managed system to successfully integrate the SASST compliance programme.

Project Results will include:

- The achievement of healthier and safer workplaces for Mexican workers.
- The development and implementation of an OHS Management System to successfully apply the SASST voluntary compliance programme. This will lead to improvement of working conditions and reduction of injuries and illnesses within the workplace.
- The empowerment of workers, and improved communication and cooperation between management and workers through the successful engagement of SASST and a managed approach towards HS&E.
- To contribute towards sustainability and building capacities among STSP, DGSST, and independent assessors to lead the successful integration of SASST together with a managed system’s approach into Mexican workplaces.

Key Project Area Outcomes (Products):
1. Completed May 2003: developed and delivered a four day training program on SASST programme implementation to 40 STPS assessors and DGSST inspectors from across Mexico.
2. Completed October 2003: presentations on SASST and OHS Management Systems completed at two major OHS conferences in Mexico and at regional workshops across Mexico involving government, employers and worker groups.
3. Completed November 2003 – December 2004: a Consultant Certification process was developed to enable Mexican assessors to provide services to enterprises enrolled in the SASST programme.
5. December 2007: pilot applications and evaluate results of interventions; make necessary modifications and refinements based on results; apply nation wide.

Project Start Date: January 2003
Project End Date: December 2007
Work and Health in Central America (SALTRA) www.saltra.net
Regional Program Director: Dr. Catharina Wesseling, Instituto Regional de Estudios en Sustancias Tóxicas Universidad Nacional, Apdo 86 - 3000 Heredia, Costa Rica cwessli@una.ac.cr
Swedish Program Director: Mr. Kaj Elgstrand, Swedish National Institute for Working Life, SE-113 91 Stockholm, Sweden Kaj.Elgstrand@Arbetslivsinstytutet.se

Keywords: Long-term collaboration program, Central America, prevention of occupational accidents and diseases

Target group: All stakeholders are targeted in participating countries: Belice, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. Workers are the primary beneficiaries. Equity considerations are an overriding principle throughout the Program (gender, the underprivileged, indigenous populations, children and youth, worker empowerment, informal sector).

Purpose of the Program: The general long-term objective of the program is to promote workers’ safety and health, and create sustainable systems for OSH and public health promotion. The objective for the first four years is to establish a solid and well operating basis for long-term actions in OSH and health promotion.

Abstract: The first four year phase comprise the following 13 projects:
Four projects involve actions for risk reduction and health promotion:
- Accident prevention and safety promotion in the construction trade
- Safety and health in sugarcane production
- Workplace health promotion and risk prevention for hospital, hotel and restaurant personne
- Community empowerment, the informal sector: work, health, and social and economic intervention.

Three projects aim at capacity building for monitoring occupational hazards and health risks:
- Occupational safety and health profiling and development of occupational safety and health indicators of sustainable development
- Exposure and endpoint information systems (health hazard and risk surveillance
- Safety and health training and risk monitoring for workers’ organisations.

Three projects deal with professional capacity building:
- Regional interdisciplinary network of professionals in occupational safety and health; support to pre-existing training programs
- Twinning
- Hazard identification and outbreak studies.

Finally, there are three projects dealing with programme preparations and communication:
- Communication of occupational safety and health information
- Preparation proposal Phase II
- Establishment of organizational infrastructure in the Region.

The Swedish International Development Cooperation Agency (Sida) is providing a support of about 3 million US dollars for the first four year phase. SALTRA is governed by a Board of Directors, involving representatives of the main participating organisations.

The Program started in November 2003. The first Program year was dedicated to establishing organisational infrastructure and starting up of activities in some of the participating countries. The second Program year is dominated by starting up of activities in the remaining participating countries, further development of the project plans and competence development among the Program collaborators.

Names of Centres collaborating on the Program: The main collaborating partners are the National University at Heredia, Costa Rica; the National University at León, Nicaragua; Universidad de San Carlos, Guatemala; SICA (the Central American Integration System); the National Swedish Institute of Public Health, and the National Swedish Institute for Working Life

International training programs for OSH specialists: The Swedish National Institute for Working Life (NIWL) has organised ten international training programmes since 1993. The programmes have been financed by the Swedish International Development Cooperation Agency (Sida). During 2004 Sida contracted an external consultant to evaluate the training programmes. Here the training programs are described, the evaluation is summarised and information given about the likely continuation.

Program start date: November 2003
Program end date: October 2015

OSH training courses
Mr. Kaj Elgstrand, Swedish National Institute for Working Life, SE-113 91 Stockholm, Sweden, Kaj.Elgstrand@Arbetslivsinstitutet.se ; Mr. Nils Petersson, Swedish National Institute for Working Life, SE-113 91 Stockholm, Sweden, Nils.Petersson@Arbetslivsinstitutet.se

Keywords: Action-oriented training, Africa, Asia, Latin America
Target groups: The programme is primarily designed for engineers and production managers, decision-makers, university teachers, trade unionists and specialists in the field of occupational safety and health. Each training programme is oriented towards a specific region: Asia, Middle East and Northern Africa, Southern Africa, Eastern Europe, or Latin America. The trainees may be employed by governmental ministries, public or private enterprises or universities.

Purpose: The training programmes are based on the belief that efficient occupational safety and health work also benefits production and productivity. That requires cooperation between OSH researchers, experts and professionals as well as production staff. Cooperation is also required between employers, employees and government authorities. For this reason, the course participants are selected to represent a mix of expertise to facilitate an exchange of information and experiences between Sweden and cooperating countries and within the group of participants. All courses are designed to present and expose theories and practices to the participants, including the implementation of an action for change in the participants’ own working environment.

The short-term objectives, to be achieved by the participants at the end of the training, are to:

• plan, carry out, follow-up, report and evaluate an action for change;
• cope with problems and possibilities related to improvement of occupational safety and health;
• support and manage development of work organisation and working conditions, making use of workers’ involvement.”

The primary objective directly relates to the change project implemented by each of the participants in their home country while the other objectives complement the implementation of the project.

Abstract: The ten training programmes organised in 1993-2004 were evaluated during 2004. The ten programmes are described in the following, and the evaluation is summarised. Negotiations are ongoing (in June 2005) between the sponsor (Sida, the Swedish International Development Cooperation Agency) and the organiser (NIWL, the Swedish National Institute for Working Life), aiming at the organisation of three additional training programmes: for Latin America 2006-2008, for Southern Africa 2007-2009, and for Asia 2008-2010.

The training programmes: The training programmes included six, one-year programs, “Occupational Safety and Health in Practice”, for participants from Africa, Latin America, Asia and Eastern and Central Europe. In addition, four, two-year programs, “Occupational Safety, Health & Development”, for participants from Latin America, Middle East, Southern and Northern Africa and Asia were also evaluated.

Since 1998, each course has run over two years and included three main study periods with a follow-up activity between the first two periods. There have been approximately 24 participants in each course with a group of 6 Swedish tutors involved in all periods of the course. The group of tutors constitutes the “Course Faculty” and includes the course leader.

First study period: The first period of five weeks in Sweden combines lectures, seminars, group work and discussions on specific topics such as policy and organisation of occupational safety and health in Sweden, action for change at enterprise level, accident prevention, ventilation, prevention of noise, pesticide intoxication, musculo-skeletal disorders and psycho-social work risks.

The first period also includes 6-8 visits to a variety of industries and workplaces in Sweden. The participants are divided into groups of 4-5, with each group visiting different factories/workplaces. The participants prepare questions in advance of the visits and report their observations in plenary follow-up meetings.

A priority during the first period is the preparation of the individual project to be implemented during the course. Participants select and prepare an idea for their individual project prior to the course. Lectures and workshops are conducted on project planning techniques including analysis of problems, formulation of objectives, result indicators and questionnaires. There is also group and individual tutoring to help participants prepare a work plan for the implementation of their projects.

Mid-term seminar: Six months after the end of first study period, mid-term seminars are arranged in the participants’ countries. In the majority of cases, 3 or more participants come from the same country so they
are able to meet with two of the Swedish tutors involved in the course, (the same tutors are involved from
the first to third period). The seminars are normally for one day and focus on the commencement and
progress of the individual projects. The Swedish tutors also visit the participants’ workplaces, including the
places where the individual projects are being implemented.

Second study period: About one year after the end of the first period of the course all participants meet
together, in a participating country, with the Swedish tutors for 1.5 weeks. The main activities are
presentations and discussions of the individual projects (both in plenary sessions and individually),
exchanges of information about occupational safety and health and factory visits in the host country. At all
stages of the course there is communication by email, fax, etc, between the participants and their
respective course tutors regarding the implementation and final reporting of the individual projects.

Third study period: The third period takes place about one year after the second period in a different
participating country. It is also 1.5 weeks and includes the same main activities as the second period as well
as final reporting and evaluation of the individual projects.

Summary of courses implemented 1998 – 2004:

<table>
<thead>
<tr>
<th>Period</th>
<th>Time and place</th>
<th>Main activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Period</td>
<td>5 weeks in Sweden</td>
<td>Lectures and workshops on specific topics. Factory visits. Planning of individual projects.</td>
</tr>
<tr>
<td>Mid-term</td>
<td>3 days in each participant country six months after 1st period</td>
<td>Follow-up of individual projects. Visits to participants’ workplace.</td>
</tr>
<tr>
<td>seminars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Period</td>
<td>1.5 weeks in a participating country one year after 1st period</td>
<td>Presentation of progress of individual projects. Information on OSH in the country. Workplace visits.</td>
</tr>
<tr>
<td>3rd Period</td>
<td>1.5 weeks in another participating country, two years after 1st period</td>
<td>Final report and evaluation of individual projects. Information on OSH in the country. Workplace visits.</td>
</tr>
</tbody>
</table>

Course requirements: Before participants receive a course diploma they must have satisfied the following
criteria: they must have attended all three periods of the course and implemented and reported a change
project, approved by all of the course faculty. Projects not approved during the third period can be
approved later, (within 1-2 years), if the project or the report had been improved in agreement with the
Course Faculty. The ten training programmes evaluated had a total of 240 participants, 188 of whom had
been approved for a course diploma at the time of the evaluation. By May 2005, 207 participants have
been approved for the course diploma. The course organiser (NIWL), gives participants possibilities to rate
and comment on the performance of each period of the course (including each activity, lecturer, etc). The
participants also complete a questionnaire at the end of the course. These comments are included in all
NIWL reports to Sida.

The evaluation: The aim of the evaluation was to assess to what extent the programme reflects Sida
priorities both in the area of health and working environment and the general focus of Swedish development
cooperation, i.e. poverty alleviation. The evaluation should also include recommendations on how to meet
future needs in cooperating countries. The main questions covered by the evaluation were:

1. the relevance of the present programme in relation to Sida priorities?
2. to what extent has the programme been relevant with regard to objectives, target group for
   participation, contents, teaching methods and structure?
3. what have been the effects of courses at the workplace or in working environment of the participants?
   Have changes been possible?
4. is the course programme relevant for meeting the needs in the area of health and working
   environment in the cooperating countries?

To collect the necessary information, the evaluator revised written documents concerning the training
programmes, made a brief analysis of needs in cooperating countries and Swedish competence in the area,
interviewed staff at Sida, course managers, course tutors and lecturers, and through an email questionnaire
to former participants.

The relevance of the training programmes:

In relation to Sida priorities, the following summary was made by the evaluator:
"The programme is line with the overall objectives for Sida’s work towards reduction of poverty and with the overall of objectives through an integrated and multi-sectoral approach, with focus on strengthening of capacities to improve safety and health within different working environments. The programme is also well in line with Sida’s policy for support of health and development and a good example of an outcome-oriented system of continuous monitoring and evaluation of programmes.

However, comparing the specific subject or problem areas, covered in the courses and the individual projects, with the poverty focus and the analysis of needs in cooperating countries, there seems to be room for more focus on specific subjects such as child labour, migrant workers in agriculture, transfer of hazards from industrialised to developing countries, HIV/AIDS and women workers."

The evaluator made the following comments on the achievement of course objectives:’...it is clear that the short term objectives of the training courses have been fulfilled to a high degree, both as valued by the participants themselves and following the result indicator defined for the courses – the approval of the individual projects."

With respect to the relevance, efficiency and costs of course implementation, the following conclusions were made: ‘...it could be concluded that the course structure and the selection of participants have been relevant in relation to the objective of the course. The course structure has been carefully designed and gradually developed based on the experiences made, including extensive course evaluations by the participants. The main focus of the course design is on developing participants’ skills through the implementation of an individual action-oriented project." "Regarding the relation between costs and results it could be concluded that a more substantial reduction of course costs (eliminating completely some of the present parts of the course) would not make it possible to have the same ambition regarding individual project implementation, nor to achieve the same results of the course........the conclusion is that the costs for courses seem to be justified in relation to the results achieved."

The effects of the courses: With reference to the effects of the training programme, the evaluator summarises:’...it could be concluded that the courses seem to have had clear short and medium term effects contributing towards better occupational safety and health both directly at different workplaces and indirectly through increased awareness, training and improved regulations."

In addition, about 80 % of the participants say that attending the course had effects for themselves. About half (40 %) mention direct promotion in their work position, whereas the other half (40 %) refers to that the course has given them increased confidence, respect, credibility, recognition, etc.

Meeting the needs in participating countries: On behalf of the evaluator, a review of the course programme has been made in relation to selected international research on the topic. The review was made at the Department of Public Health and Clinical Medicine at Umeå University. The following highlights are taken from the review:

"The content of this type of programs should fill important knowledge gaps, address key issues in the field, stimulate networking and have an impact OSH policy making. It is however difficult for a short term training program to deal with all the OSH issues particularly in the complex and diverse situation of low- and middle-income countries. The training program (implemented by NIWL) has nevertheless been able to select relevant common topics and problems related to the situation in the participant countries. Furthermore, the program exposes the participants to actory and workplace visits, both in Sweden and in countries in the their own region. This promotes fruitful discussions comparing the situation and the possibilities in different countries. The mixed backgrounds of the participants also contribute to the exchange of different opinions, ideas and open the mind to the perspectives of other professionals. At the same time, the different backgrounds of the participants could make it difficult to satisfy the expectations of everybody. The result of the course evaluations, however, seems to indicate that this has seldom been the case.

The planning, development and fulfilment of the project in the participant’s working environment is fundamental, not only for the approval of the course, but also for the educational training process as such, and most important, for the adaptation of knowledge and skills learnt to the realities in the participant’s country. The approved projects seem to be of good quality and related to relevant problems in the participant’s country. The strong criteria related to the objectives of the course when evaluating the different projects, strengthens the quality of both the projects and of the training program itself. For the course projects to be meaningful, the close supervision that seems to be applied by the course organiser is necessary. This supervision is most probably a key factor of the course success.

The program emphasizes the combination of theory and practice in a pedagogic way of learning. Throughout the course, active participation of the trainees through oral, visual and written presentations is
applied. In addition, the focus on prevention during the lectures and the importance given to the action for change in their own working place, makes the whole training process practical and useful. The tools and skills acquired when implementing the course projects can later be applied by the participants in future projects in their working environment. The outcomes of the projects in terms of reduced accidents, etc, could also be used as examples convincing individual employers and authorities of the advantages of good OSH. The continuous and thorough internal evaluation of the training program is a sign of the course organisers’ interest to improve the course and its adaptation to the needs of the participants.

The division of the courses by continents also seems to be a positive aspect. The participants share similar socio-political contexts, and this facilitates learning of feasible strategies to improve the local occupational health situation. The shared background is also important for the creation of links among the participants."

The evaluator concludes"....the review leads to the conclusion that the training courses have been and continues to be relevant in relation to the needs in the area of occupational safety and health in low- and middle-income countries."  

Project start date: 1993  
Project end date: 2010