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DIRECTOR’S SUMMARY FOR 2011

UNU-IIGH continues to make good progress in the fifth year of its operation. In terms of academic programme, it has continued to collaborate in the Masters of Public Health in Yemen, Sudan, and Nepal. In Yemen, a second batch of 30 students were registered in the programme. The programme with University of Medical Science and Technology (UMST), Khartoum in Sudan has also taken a second batch of students. The programme in Nepal with BP Koirala Institute of Health Sciences (BPKIHS) is also progressing well. Up to December 2011, 27 students from 6 different countries who are registered with the National University of Malaysia (UKM) in their Ph.D. programmes are being supervised by UNU-IIGH's senior research fellow and other research fellows. So far in 2011, 8 students have graduated with Ph.Ds and one student graduated with a MSc. A revised Proof of Concept (PoC) to offer a joint Master between UNU-IIGH and UKM planned for 2012 was submitted to the Academic Committee in November. Another PoC to offer a joint Master in Health Informatics between UNU-IIGH and UNU-IIST planned for 2012 was also submitted.

In terms of capacity building, the Institute has completed the Casemix training for about 800 personnel in the Philippines which was hosted by the Philippines Health Insurance Corporation and funded by WHO/ EU/ Deutsche Gesellschaft fur Zusammenarbeit (GTZ). The plan is to implement Case-mix in 1600 hospitals. The institute has also completed the Casemix training programme for 300 personnel funded by Sanatorio Americano, Montevideo, Uruguay.

The institute is currently involved in implementing the UNU-Grouper in collaboration with the Ministry of Health, Indonesia (KEMENKES) and funded by AUSAID. The UNU Grouper is to be implemented in 1300 hospitals. Recently the Institute signed an MoU with the University of Science, Malaysia (USM) for the implementation of the Casemix in the USM Hospital. An MoU with GNU Solidario, an open source provider for Health and Hospital Information Systems (HIS), was also signed. A workshop on an open source health information system (MEDICAL) was organized with GNU Solidario for the staff to be familiar with the development of an efficient and affordable health information system for developing countries. An MoU for the implementation of Casemix with the Hanoi School of Public Health, Vietnam is in the pipeline. The institute has also been offering 2 online training programmes, namely the Open Source Software Online Training for Health Information System and the Casemix Online Training.

In terms of research, the Institute is involved in 30 research projects in six thematic areas. The thematic areas are accessibility, efficiency and quality of care in health system, climate change and health, newly emerging and re-emerging diseases, IT in Health, impact of globalization on health and chronic non-communicable diseases. These projects are conducted by UNU-IIGH research students and research assistants or in collaboration with colleagues from partner institutes in US, Malaysia, Sweden, Iran, Indonesia, Jordan, Cambodia, Korea, China, Japan, Germany and Canada. So far in 2011, there are 26 publications resulting from the various research projects which include two articles published in the LANCET. In fact, UNU-IIGH was entrusted by the China Medical Board to organize the Malaysian launch of the LANCET’s Health in South East Asia series in May 2011.

The Institute continues to profile itself by supporting and being involved in seminars, conferences, and workshops related to global health, either locally or internationally. In February, UNU-IIGH took part in the UNU Lecture Series at the UN in New York. UNU-IIGH co-organized the 2nd Global Health and Preventive Medicine Conference in Heidelberg, Germany in June. A visit to UNU-INRA, Accra, Ghana was to discuss collaboration in Environmental Health and to link with The National Health Insurance Corp for the implementation of Casemix in Ghana. UNU-IIGH was also involved in UNU-INRA’s International Conference on Sustainable Development in Natural Resources in December. It is actively seeking networks with other institutions within the UNU RTC/Ps, UN agencies, Ministries of Health of UN Member States and other non-governmental organizations. The Institute is exploring the possibility of establishing a twinning partner in Indonesia.

The main challenges for UNU-IIGH among others would be to increase accessibility to its capacity building programmes and to be able to take on additional professional and support staff for long term sustainability.
**UNU-IIGH**

The mission of the United Nations University International Institute for Global Health (UNU-IIGH) is to undertake research, capacity development and dissemination of knowledge related to key issues of human health. The institute seeks to contribute to the development and strengthening of health services policy frameworks and management actions, particularly for people in developing countries, and to support the implementation of promotive and preventive approaches to human health.

The objectives of UNU-IIGH are to enhance the efficiency, quality, access and equity in the delivery of healthcare services; to undertake and strengthen research in Global Health towards achieving the Millennium Development Goals (MDGs); to facilitate the dissemination of information and innovation on global health to the developing countries; to build and enhance capacities crucial in addressing global health issues especially in developing countries and to promote networking among research institutions in developed and developing countries.

The institute is actively involved in capacity building in terms of training and collaborating in academic post-graduate programmes, including research, with various academic, governmental and non-governmental institutions in several UN member countries.

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**COMPARATIVE ADVANTAGE OF THE INSTITUTE**

There are two main areas where the Institute may have an advantage in building capacities in the developing countries. Firstly, it is its expertise and experience in the implementation of the Casemix, as can be seen in Indonesia, Malaysia, Mongolia, Uruguay and the Philippines. Chile, Vietnam and Yemen have shown interest in the Casemix. Secondly, UNU-IIGH acts as a provider of training on open source for health practitioners to develop their own health information systems (HIS). Both the Open Source and Casemix trainings have been launched as online programmes so as to make it more accessible to health practitioners in developing countries. The present offering of Masters and Ph.Ds in Global Health in collaboration with the National University of Malaysia, (UKM) University of Science and Technology, Sanaa, Yemen, University of Medical Sciences and Technology, Khartoum, Sudan and B.P. Koirala Institute of Health Sciences, Nepal, is aimed at producing health leaders in developing countries.
ACTIVE PARTNERSHIPS

UNU Institute for Environment and Human Security (UNU-EHS)
July 2009 - July 2012
Collaborating in research entitled “Connecting Environmental Changes, Impacts and Responses in the Mekong Delta to Human Wellbeing and Ecosystem Integrity.”

UNU International Institute for Software Technology (UNU-IIST)
March 2011 - December 2011
UNU-IIGH collaborated with UNU-IIST in the development of open source health information systems in terms of business process and workflow. Another collaboration is the plan to offer a joint Master in Health Informatics in 2012. Apart from UNU-IIST, GNU Solidario, an NGO which developed MEDICAL, an open source healthcare information system, is also involved in this program.

UNU Institute for Water, Environment and Health (UNU-INWEH)
July 2009 - June 2012
1. Collaborating in research entitled “Connecting Environmental Changes, Impacts and Responses in the Mekong Delta to Human Wellbeing and Ecosystem Integrity”

2. Project VyGIL: Addressing Global Vulnerability to Diseases

3. Collaborating in the Global Environmental Change and Human Health Programme in a capacity building project entitled “Global Environmental Change and Human Health: Extreme Events and Urbanization in the APN Region

UNU Institute for Sustainability and Peace (UNU-ISP)
July 2009 - July 2012
Collaborating in research entitled “Connecting Environmental Changes, Impacts and Responses in the Mekong Delta to Human Wellbeing and Ecosystem Integrity.”

Gwangju Institute of Science and Technology (GIST)
December 2008 - June 2011
Collaborating in research entitled “Health and Health Care Cost Assessment of Arsenicosis in Cambodia.”

Chinese University of Hong Kong
October 2010 - December 2011
Collaborating in research entitled “Assessing Air Pollution Exposures in Pacific Rim Port Communities.”

GNU Solidario
March 2011 - December 2011
GNU Solidario, a NGO which developed MEDICAL, an open source healthcare information system, is involved in the collaboration activities between UNU-IIGH and UNU-IIST.

Hong Kong Baptist University
December 2008 - June 2011
Collaborating in research entitled “Health and Health Care Cost Assessment of Arsenicosis in Cambodia.”

National University of Malaysia
December 2008 - June 2011
Collaborating in research entitled “Health and Health Care Cost Assessment of Arsenicosis in Cambodia.”

Universiti Putra Malaysia
January 2010 - December 2011
Collaborating in research entitled “School environment and its impact on asthma, allergy and respiratory symptoms among secondary school children.”

University of Southern California
October 2010 - December 2011
Collaborating in research entitled “Assessing Air Pollution Exposures in Pacific Rim Port Communities.”

University of Uppsala
January 2010 - December 2011
Collaborating in research entitled “School Environment and its Impact on Asthma, Allergy and Respiratory Symptoms Among Secondary School Children.”
The overall objective of this project is to develop an interactive, globally applicable and globally accessible tool that provides visual representation of current and projected environmental disease indicators and disease incidence for the purpose of targeted research and intervention, as well as policy and capacity development.

The programme was initiated by a scoping meeting in Kuala Lumpur in March 2009. The approach is through collaborative research activities with local and international partners. Workshops, seminars and conferences will be organized at local, regional and international levels.

3) Information Technology in Health
This programme seeks to address the problem of limited information technology (IT) application in health care systems of developing countries, mostly due to inadequate planning, the high cost of propriety IT software and the lack of technical capacity in health human resources. Development of open source software and training will assist these countries to adopt IT in health care at affordable rates and will ensure the long-term maintenance of these systems by drawing on locally developed human resource capacity. Input from health IT experts with practical experience working in developing countries will be systematically sought in the development of training modules. The training modules will emphasize the exposure of trainees to the complete cycle of the implementation of IT projects from the planning, implementation and evaluation aspects. This will enable them to undertake field applications of the training modules after completion of the training programme.

This programme is being led by Dr Nurhizam Safie.

The aim of this programme is to support the development and deployment of efficient and affordable health information systems in developing countries.

This programme will be implemented by UNU-IIGH in collaboration with Open Source Health Care Alliance (OSHCA) and GNU Solidario, NGOs specializing in open source technology. Apart from them, UNU-IIGH will collaborate with WHO-Family of International Disease Classifications and UNU-IIST in the development of health management information systems and disease classification systems.

4) Leadership Development Programme in Global Health
The hospital management and health economics inputs from UNU-IIGH in the Master of Public Health programmes carried out with partner universities in Yemen, Nepal and Sudan are a continuation of ongoing projects started in 2008-2009. UNU-IIGH is also collaborating in a Ph.D. programme with the National University of Malaysia. Ph.D. candidates will be selected from a pool of applicants and will be registered with the National University of Malaysia. They will be supervised by research fellows in UNU-IIGH. Postdoctoral fellows will be selected through a competitive process. These candidates will spend between one to two years.
years in UNU-IIGH to conduct research under supervision by research fellows. Ph.D. fellowships will be opened to final year Ph.D. students and will be supported by UNU-IIGH. They will spend between six months to one year in UNU-IIGH. They will be supervised by research fellows to analyze their data and prepare publications in high impact journals.

This programme will be supervised by Dr. Mohamed Salleh Mohamed Yasin, Director, and supported by other professional staff of UNU-IIGH.

The aim of this programme is to develop leaders in global health by building human capacity through postgraduate training.

The focus of this programme is to support developing countries to conduct master’s programmes and to train future leaders in global health at the Ph.D. and postdoctoral levels.

**PROJECT / ACTIVITIES**

1) **Capacity Building in Casemix System in the Philippines**

*(Hosted by the Philippine Health Insurance Corporation and funded by WHO/EU/Deutsche Gesellschaft für Zusammenarbeit (GTZ)).*

This capacity building project is to support the overall reform in the Philippines Health Insurance Corporation (PHIC), a government agency responsible to run the National Health Insurance Programme (NHI) in the Philippines. The aim of the reform is to enhance the population coverage of the NHI and to improve the efficiency of the PHIC operation by introducing package payment based on the casemix system. Presently, it is estimated that 76% of the 88 million population of the Philippines is covered by NHI. Healthcare providers are reimbursed using fee-for-service methods. Rise in healthcare cost due to over prescription of drugs, extended length of stay, use of unnecessary investigation and operating procedures as well as unnecessary admissions are among the source of inefficiency in retrospective payment methods such as fee-for-service. UNU-IIGH was approached by the PHIC to develop and implement the casemix system in stages at all the hospitals providing services, beginning with 19 hospitals in the 2010 pilot project and gradually to be extended to cover all 1,600 hospitals in the country by 2014.

Related Programme: Accessibility, Efficiency and Quality of Care in Health System

2) **Health Risk and Health Care Cost Assessment of Arsenicosis in Cambodia.**

This project was aimed at assessing the health risk and health care cost of arsenicosis in Cambodia. The project was a joint research collaboration between UNU-IIGH, UNU & GIST, Hong Kong Baptist University, National University of Malaysia and Royal University of Agriculture, Phnom Penh. The research involved water, food, hair and nail sampling for arsenic; health survey and clinical assessment of the study population; and assessment of the economic burden of arsenicosis. All research activities have been completed and the project is at the data analysis and publication stage. A 5th Research Workshop was held in Phnom Penh on 2nd and 3rd of May 2011 to look into data analysis and publications. An article titled “Health Risk Assessment or Inorganic Arsenic Intake of Cambodia Residents through Groundwater Drinking Pathway” had been published in the journal of Water Research. A conference to disseminate the research findings to Cambodian stakeholders is planned for early 2012. A recently enrolled Ph.D. student will study the effect of arsenic exposure on the neurobehavioral profile of secondary school children in Cambodia.

Related Programme: Climate Change and Health

The Academy of Science Malaysia, under the auspices of the Ministry of Science Technology and Innovation commissioned UNU-IIGH to conduct a study to explore the role of science, technology and innovation (STI) to achieve greater health and economic outcomes for the country by 2050. This independent analysis was undertaken to answer three core questions focused primarily on STI and health: (1) Where is the country at? (2) Where does the country want to be?, and (3) How does the country get there? These questions were answered through reviews, synthesis, and analysis of secondary data, policies, legislation, strategies and plans, as well as information gathered from national and international experts. The outcome of the study is a roadmap towards achieving greater well being of Malaysians and sustainable economic outcomes for Malaysia by 2050. The study was conducted over a period of nine months from March to December 2010.

Related Programme: Accessibility, Efficiency and Quality of Care in Health System

4) The Development of Open Source Software and Grouper for Casemix Costing Software to Enhance Efficiency and Quality of Health Delivery System in Hospitals of Developing Countries.

Casemix is a system that measures hospital performance, aiming to reward initiatives which increase efficiency in hospitals. It also serves as an information tool that allows policy makers to understand the nature and complexity of healthcare delivery system. Casemix Grouper is a software package that is used to implement all the data variables information for this system. It is used to gather all information from various levels of variables (e.g. age, gender, severity of illness) and analyze the result to get a complete report. To generate this report, Diagnosis Related Groups (DRGs) is the best-known system that is used in this financial model. It classifies acute inpatient episodes into a number of manageable categories based on clinical condition and resource consumption. The same illness which is treated at different stages of services will determine the performance quality of the hospital. This information is coded by the Health Information Managers in order to allocate a DRG. Each DRG is allocated a ‘weight’, which is dependent on the average cost of inputs such as services by clinicians, nurses and hospital managers required to achieve the appropriate patient outcome. The facility is reimbursed a predetermined amount for each patient episode.

Related Programme: Information Technology in Health

5) The Global Disease Vulnerability Project.

The Global vulnerability to disease project (VyGIL) aims to develop an interactive global vulnerability tool for water-related diseases, in collaboration with UNU-INWEH, UNU-EHS, UCLA and others. The project is being implemented in Malaysia with a proof-of-concept project entitled “An Approach to Identify Risk of and Vulnerability to Dengue Fever and Chikungunya in Malaysia for the Purpose of Mitigation and Management.” This initial study is looking into the influence of physical, human and disease factors on the prevalence and distribution of dengue and chikungunya cases in Malaysia. Initial secondary data collection and qualitative field study has been initiated in August 2010. The success of the Malaysian project will see the expansion of the main project to other water-related diseases like schistosomiasis and cholera. The Mekong Delta and West Africa have been recognized as potential study sites for schistosomiasis and cholera respectively. Currently, there are 3 Ph.D. students working actively on various aspects of this project.

Related Programme: Climate Change and Health
UNU POSTGRADUATE PROGRAMMES

1) Master in Community Health Science
   A revised Proof of Concept (PoC) to offer a joint Master between UNU-IIGH and UKM planned for 2012 was submitted to the Academic Committee in November. A Comprehensive Proposal is being prepared for submission to the committee in May 2012.

2) Master in Health Informatics
   The PoC to offer a joint Master in Health Informatics between UNU-IIGH and UNU-IIST planned for 2012 was submitted to the Academic Committee in November. A Comprehensive Proposal is being prepared for submission to the committee in May 2012. A scoping workshop which will involve the stakeholders to review the curriculum will take place in March 2012.

3) Master in Public Health
   The present offerings of Master in Public Health in collaboration with the National University of Malaysia, University of Science and Technology, Sanaa, Yemen, University of Medical Sciences and Technology, Khartoum, Sudan and B.P. Karaula Institute of Health Sciences, Nepal aimed at producing health leaders in developing countries are still ongoing.

TWINNING PROGRAMMES

Identify twin partners in Indonesia, Saudi Arabia and Panama
A third meeting will be held at UNU-IIGH on 27 June 2011 between the Vice Rector and the Dean of the Medical School, Universitas Andalas, with the Director of UNU-IIGH to discuss the development of the possible twinning relationship.

The outcome of a meeting with the Ministry of Higher Education, Kingdom of Saudi Arabia, which took place on the 5 June 2010 with regard to twinning, is still pending.

A decision arising from a meeting with the International Center for Sustainable Development (CIDES) hosted by Knowledge City, Panama to discuss the possibility of twinning is also pending.

POLICY BRIDGING / THINK TANK FUNCTION EFFORTS

1) Megascience Framework Study for Sustained National Development: Health and Medicine
   UNU-IIGH was commissioned to conduct a nine-month study on “Megascience Framework Study for Sustained National Development: Health and Medicine” by the Academy of Science, Malaysia. The study focused primarily on the role of Science, Technology and Innovation (STI) as a means to achieve the desired health and economic outcomes for Malaysia. It will be used as a source of reference for policy makers to come out with a blueprint for Malaysian Health towards 2050. The final report was submitted in early 2011.
EVENT INFORMATION

1) Book launch; 24 January 2011: Journal Launch: LANCET Series on Health in South East Asia (private event)
SRF and RF in Climate Change attended the Launching of LANCET Series for South East Asia. The Series was launched during the Second Global Health Forum on Human Resource for Health and Prince Mahidol Award Conference in Bangkok, Thailand.

Associated Programme
Leadership Development Programme in Global Health
Climate Change and Health

Location
Bangkok, Thailand

Co-organisers
China Medical Board and The Lancet

4) Workshop; 14 - 18 February 2011: Workshop on Case-mix Costing in Uruguay (private event)
SRF lead the UNU-IIGH Casemix team to conduct a two-day Workshop on Case-mix Costing in Montevideo, Uruguay. The workshop was attended by around 35 participants. The workshop was followed by one and a half day meeting with Casemix from Team Sanatorio Americano Hospital, the leading hospital for Casemix system implementation in Uruguay.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Montevideo, Uruguay

Co-organisers
Sanatorio Americano Hospital & UNU-IIGH

SRF, RF (in Information Technology in Health) and Director of UNU-IIGH attended the Annual Conference. Director of UNU-IIGH presented a plenary paper and SRF participated as Panelist in Discussion Panel on Leadership & Governance in Health. SRF also participated as a Discussant in Debate on Evidence Based Practice & Health Information. SRF presented a paper in the Round Table discussion 3. RF (in Climate Change) participate in a Forum on Environment and Sustainable Development via audio-conference from Kuala Lumpur.

Associated Programme
Information Technology in Health

Location
Dubai, UAE

Co-organisers
UNU-IIGH & HBMeU

3) 8 - 11 February 2011: Meeting with Ministry of Health Indonesia on Implementation of Casemix System (private event)
SRF and RF (in Accessibility, Efficiency and Quality of care in health system) attended a meeting at the Ministry of Health to discuss the progress of implementation of UNU-CBG in all Hospitals in Indonesia for provider payment under JAMKESMAS.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Jakarta, Indonesia

Co-organisers
Ministry of Health Indonesia

5) Lecture; 22 - 26 February 2011: Mission to UNU-ONY and Visit to UNU-FNP in Cornell University (public event)
Director, SRF and RF (Climate Change and Health) visited UNU-ONY to participate in UNU lecture series in United Nations, New York. The theme of the event is “Where is Global Health Heading?” The team also visited Cornell University in Ithaca to explore collaborative work in human nutrition with UNU-FNP.

Associated Programme
Leadership Development Programme in Global Health

Location
NY, USA & Ithaca, USA

Co-organisers
UNU-ONY (New York), UNU-FNP (Ithaca)
6) **Workshop; 28 Feb 2011 - 9 March 2011: Short Course on Project Management, Planning, Monitoring and Evaluation (private event)**

UNU-IIGH in collaboration with International Training Centre for Casemix and Clinical Coding of UKM and Public Health Specialists Association of Malaysia conducted short course on Project Planning, Monitoring and Evaluation attended by eight management personnel of Second Urban Primary Health Care Project, Ministry of Local Government, Rural Development & Cooperatives (MOLGRDC), and Government of Bangladesh.

**Associated Programme**
Leadership Development Programme in Global Health

**Location**
UNU-IIGH, Malaysia

**Co-organisers**
UNU-IIGH, ITCC & PPPKAM

7) **7 - 8 March 2011: Mission to Macau (PRIVATE EVENT)**

Director, SRF and RF and Research Assistant and IT Consultant participated in a two-day mission to UNU-IIST Macau to participate in a Collaborative Research Workshop on IT in Health. This is followed by a meeting to discuss collaborative IT Projects in Health system between the two UNU institutes.

**Associated Programme**
Information Technology in Health

**Location**
Macau

**Co-organisers**
UNU-IIST & UNU-IIGH

8) **9 March 2011: Official Hand Over of MY-DRG to UKM Medical Centre (private event)**

UNU-IIGH and International Training Centre for Casemix and Clinical Coding of UKM Medical Centre co-organised the official hand over of the customised Casemix grouper, the MY-DRG to UKM on 9th of March 2011. The Grouper was received by UKM Vice-Chancellor Professor Tan Sri Dato’ Wira Sharifah Hapsah Shahabudin. Director of UNU-IIGH made the Opening Remarks and SRF presented a briefing on the development of MY-DRG in the event.

**Associated Programme**
Accessibility, Efficiency and Quality of Care in Health System

**Location**
UKMMC, Malaysia

**Co-organisers**
UNU-IIGH & ITCC-UKMMC

9) **Conference/Symposium; 24 March 2011: Seminar on Global Health (public event)**

SRF participated and presented a plenary paper in the seminar.

**Associated Programme**
Leadership Development Programme in Global Health

**Location**
UNISZA, Kuala Terengganu, Malaysia

**Co-organisers**
UNISZA & UNU-IIGH

10) **25 - 27 March 2011: Mission to Universitas Andalas (UNAND) and Rumah Sakit Umum Dr. M. Djamil, Padang, Indonesia (private event)**

Director, SRF and RF attended a meeting in Fakultas Kedokteran, Universitas Andalas Indonesia to discuss and finalise the working paper for setting-up UNU-IIGH Twin in Universitas Padang to be submitted to Department of Higher Education, Indonesia. On top of that RF (IT in Health) attended a meeting with Management Directors of Rumah Sakit Umum Dr. M. Djamil, Padang on the open source solutions in health information systems of the hospital.

**Associated Programme**
Accessibility Efficiency & Quality of Care in Health Systems

**Location**
Universitas Andalas, Padang Indonesia

**Co-organisers**
Universitas Andalas


Postdoctoral Fellow Dr. David Baguma presented an oral paper on "Investigation of Water Safety Plan Application in Rural Domestic..."
Rainwater Harvesting Households. The aim of the conference was to provide a unique forum to report and exchange information and experience in development of rainwater harvesting systems technology worldwide. Participants were from various countries such as the United States, the Virgin Islands, Thailand, the Philippines, Kenya, China, Iran, Brazil, Germany, Mexico, India, Austria and Malaysia.

Associated Programme
Climate Change and Health

Location
The International Hall, Chinese Cultural University Taipei, Taiwan

Co-organisers
The 15th International Rainwater Catchments System Conference (IRCS)

12) 4 April 2011: Students Network outreach activities (private event)
Director chaired the meeting attended by a group of students from Sudan. The main objective of the meeting was to strengthen and build background knowledge for networks among students. The meeting ended on the progress, outreach and links of the institute in international forum, and emphasised to the participants the importance of science subjects and career development in medical related subjects.

Associated Programme
Leadership Development Programme in Global Health

Location
UNU-IIGH

Co-organisers
The Cochrane Collaboration and Penang Medical College

Director, SRF and RF of UNU-IIGH attended the MED-e-TEL Conference in Luxembourg. The three of them presented papers in the workshop which promoted Open Source Software as one of the main pillars of a sustainable framework for providing e-health and education for developing countries.

Associated Programme
Information Technology in Health

Location
Luxembourg

Co-organisers
The International Society for Telemedicine & eHealth (IsfTeH) and GNU Solidario

14) Workshop; 25 - 26 April 2011: Introduction to Cochrane Systematic Reviews (private event)
The workshop was held as part of the educational training programme for graduate students as well as, Postdoctoral and Research Fellows from UNU-IIGH and the National University of Malaysia. The workshop was led by Professor Jacqueline Ho, a certified Cochrane Systematic Reviewer, Professor Hans van Rostenberghe, Dr. Sharifah Halimah Jaafar and Dr. Ooi Cheow Ping. The participants were taught on the basics of scoping review topics, writing a review protocol, searching for studies and assessing the risk of bias (critical appraisal) of included studies and were exposed to common data types encountered in systematic reviews, methods of conducting a meta-analysis, using the Review Manager (Revman) software package, exploring and interpreting results.

Location
UNU-IIGH

Co-organisers
The Cochrane Collaboration and Penang Medical College

15) Workshop; 2 - 3 May 2011: 5th Research Workshop on Health Risk and Health Care Cost Assessment of Arsenicosis in Cambodia (private event)
The fifth research workshop was carried out on the 2nd and 3rd of May 2011 in Phnom Penh which was attended by 11 researchers from UNU-IIGH, the National University of Malaysia, National Cheng Kung University of Taiwan, Hong Kong Baptist University, Royal University of Agriculture, Phnom Penh and Ministry of Health, Cambodia. The purpose of this workshop was to present and discuss the research findings of each sub-study and to prepare for publication the research results. It was agreed among the researchers that a conference to disseminate research findings to Cambodian stakeholders would be held in October 2011.

Associated Programme
Climate Change and Health

Location
Holiday Villa, Phnom Penh
Co-organisers
National Cheng Kung University of Taiwan, Hong Kong Baptist University, Royal University of Agriculture, Phnom Penh and Ministry of Health, Cambodia.

The main objective of the Forum was to provide a platform for postgraduate students to communicate their knowledge and experience gained during postgraduate work and to share with those who were newly enrolled in the programme. Recent updates on research methods and new research findings were made available through keynote addresses and plenary sessions by international speakers. 21 postgraduate students of UNU-IIGH made oral presentations and posters in this conference.

Associated Programme
Leadership Development Programme in Global Health

Location
Universitas Gadjah Mada, Yogyakarta, Indonesia

Co-organisers
Universitas Gadjah Mada, Naresuan University & UNU-IIGH

17) Workshop; 24 - 25 May 2011: Morbidity Technical Advisory Group Meeting of ICD-11 Revision (private event)
SRF attended and co-chaired the Morbidity Technical Advisory Meeting on ICD-11 Revision held at the American Health Management Information Building, Chicago, USA. The objective of the meeting was to assess the development of the ICD-11 and provide input on the use of ICD-11 for morbidity classification including the Casemix system. The meeting was attended by eight members of the Morbidity TAG.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
American Health Management, Chicago, USA

Co-organisers
World Health Organization Family of International Classification

18) 27 - 30 May 2011: Meeting on Health Leadership Programme (private event)
Director and SRF of UNU-IIGH attended a meeting arranged by the Senior Programme Adviser of UNU-IIGH (Mr. Clarence Pearson) on the collaboration effort between UNU-IIGH and Columbia University for the Health Leadership Programme.

Associated Programme
Leadership Development Programme in Global Health

Location
Columbia University, NY, USA

Co-organisers
Columbia University, NY, USA

19) Conference/Symposium; 31 May 2011: Malaysian Launch of the LANCET’s Health in South East Asia Series (private event)
Following the launching of the LANCET’s Health in South East Asia Series in Bangkok on 25 January 2011 in conjunction with the Prince Mahidol Award Conference 2011, a Malaysian launch of the series was carried out in Kuala Lumpur on 31 May 2011. The purpose of this launch was to highlight the key health issues and findings from the Lancet publication to Malaysian stakeholders. The launching was a half-day event attended by 60 participants. This event was funded by the China Medical Board. A total of five published papers were presented by four co-authors.

Associated Programme
Leadership Development Programme in Global Health
Climate Change & Health

Location
The Legend Hotel, Kuala Lumpur

Co-organizers
China Medical Board & The LANCET

20) Conference/Symposium; 6 - 7 June 2011: FAIR International Conference on Health Insurance (private event)
SRF presented a paper on “Managing Moral Hazards Among Healthcare Providers: Role of Prospective Payment Mechanisms using Casemix System” in the Conference organized by The Federation of Afro-Asian Insurers and Reinsurers (FAIR) and Malaysian Insurance Institute. The Conference was held at the Prince Hotel, Kuala Lumpur.
21) Conference/Symposium; 14 - 16 June 2011: 2nd Global Health and Preventive Medicine (private event)
UNU-IIGH had a session addressing all the thematic areas of the institute.

Associated Programme
Leadership Development Programme in Global Health

Location
Prince Hotel, Kuala Lumpur

Co-organisers
Malaysian Insurance Institute & Federation of Afro-Asian Insurers and Reinsurers (FAIR).

22) 19 - 23 June 2011: Visit to UNU-INRA (private event)
The visit was to discuss collaboration with UNU-INRA in areas related to Environmental Health and with the National Health Insurance Corp to look at possibility of implementing Case-mix in Ghana insurance system.

Associated Programme
Leadership Development Programme in Global Health

Location
Heidelberg, Germany

Co-organisers
University of Heidelberg

RF was invited to present a paper titled “Risk Management: Environmental Health Perspective”.

Associated Programme
Climate Change and Health

Location
Universiti Putra Malaysia

Co-organisers
Universiti Putra Malaysia

24) Workshop; 21 June 2011: Status of Research & Development (R&D) in Tropical Medicine in Malaysia (private event)
The objective of the forum was to undertake a situation analysis of the current status of research in tropical medicine in Malaysia. The forum enabled various public and private research institutes and universities to identify and deliberate on issues, gaps and challenges pertinent to R&D in tropical medicine and at the same time provide an insight to the current and future areas of tropical medical research for future planning.

Associated Programme
Newly emerging, Reemerging Diseases and Chronic Non-Communicable Diseases

Location
Medical Academies of Malaysia, Kuala Lumpur, Malaysia

Co-organisers
Akademi Sains Malaysia & Institute for Medical Research Kuala Lumpur, Malaysia

This annual conference is attended by family medicine specialists and primary care practitioners from local and international organisations. This year’s theme highlighted the importance of providing adequate care to patients especially in cases of communicable diseases e.g. dengue, H1N1, influenza prior to referring them to tertiary care.

Associated Programme
Newly emerging, Reemerging Diseases and Chronic Non-Communicable Diseases

Location
The Royale Bintang Hotel, Seremban, Malaysia

Co-organisers
26) **Workshop; 27 - 30 June 2011: Workshop on MEDICAL Development (private event)**
UNU-IIGH and GNU Solidario organised a workshop on open source health information system (MEDICAL). The aim of this workshop was to train internal participants about the development of efficient and affordable health information systems in developing countries, namely MEDICAL.

**Associated Programme**
Information Technology in Health

**Location**
UNU-IIGH

**Co-organisers**
GNU Solidario

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27) **Lecture; 18 - 22 July 2011: Environmental Health Intensive Course at the University of Medical Sciences and Technology, Khartoum, Sudan (private event)**
RF (Climate Change and Health) was invited to deliver an intensive course on environmental health by the University of Medical Sciences and Technology in Khartoum, Sudan, to students of its Master of Public Health Programme.

**Associated Programme**
Leadership Development Programme in Global Health

**Location**
UMST, Khartoum in Sudan

**Co-organisers**
University of Medical Sciences and Technology, Khartoum, Sudan

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28) **Workshop; 26 - 30 July 2011: Case-mix Workshop 1: Introduction to UNU-Case-mix Grouper & IT in Casemix System (private event)**
SRF, RF and Casemix IT consultant conducted the first workshop to support the development of Indonesian DRGs system in Bandung, Indonesia. The Workshop was attended by around 120 participants from public and private hospitals in Indonesia.

**Associated Programme**
Accessibility, Efficiency and Quality of Care in Health System

**Location**
Bandung, Indonesia

**Co-organisers**
Ministry of Health Indonesia & UNU-IIGH

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29) **Workshop; 9 - 13 August 2011: Casemix Workshop and Signing of TA:Case-mix Coded Data Collection (private event)**
SRF, RF and Casemix consultant conducted the second workshop to support the development of Indonesian DRGs system in Bandung, Indonesia. The workshop was attended by around 130 participants from public and private hospitals in Indonesia. This workshop is focused on casemix coded data collection, evaluation and analysis for developing new National INA-CBGs Tariff. At the opening of the workshop on 9 August, signing of the Technical Arrangement document was conducted between UNU-IIGH and Ministry of Health Indonesia.

**Associated Programme**
Accessibility, Efficiency and Quality of Care in Health System

**Location**
Bandung, Indonesia

**Co-organisers**
Ministry of Health Indonesia & UNU-IIGH

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30) **Conference/Symposium; 19 - 21 August 2011: Casemix Workshop and Dialogue in Medan (private event)**
Director of UNU-IIGH, SRF & RF conducted a two-day workshop to introduce UNU-CBG Casemix grouper to hospitals around Western Sumatera region organized by the Adam Malik Hospital. The Workshop was followed by dialogue with academic staff of Universitas Sumatra Utara on the implementation of the Casemix system for provider payment in Indonesia. The programme was attended by around 80 participants.

**Associated Programme**
Accessibility, Efficiency and Quality of Care in Health System

**Location**
Medan, Indonesia

**Co-organisers**
MOH Indonesia and Adam Malik Hospital.
31) Conference/Symposium; 25 - 26 August 2011: Bionetwork Asia Conference (private event)

SRF participated in the conference and presented in Panel Discussion on “How Can Industry Make the Most Out of Academia in Asia?”.

**Associated Programme**
Accessibility, Efficiency and Quality of Care in Health System

**Location**
Grand Hyatt Hotel, Singapore

**Co-organisers**
BioNetwork Asia

32) Conference/Symposium; 11 - 15 September 2011: Fourth International Contaminated Site Remediation Conference (private event)

RF was invited to present a paper entitled “Arsenicosis in Cambodia from Exposure to Arsenic in Groundwater”.

**Associated Programme**
Climate Change and Health

**Location**
Adelaide, Australia

**Co-organisers**
CRC Care

33) 12 - 13 September 2011: HIS Study Visit to Rumah Sakit Umum Kristen (private event)

SRF, RF, Programmer and UKM Specialist Centre Technical Assessment Team visited Rumah Sakit Umum Kristen to evaluate the current open source health information systems implemented at the hospital.

**Associated Programme**
Information Technology in Health

**Location**
Rumah Sakit Umum Kristen, Jombang, East Java, Indonesia

34) Conference/Symposium; 14 - 16 September 2011: Stroke 2011: 22nd Annual Scientific Meeting of the Stroke Society of Australasia (SSA-ASM) (private event)

Two Ph.D students presented papers titled “Post-Stroke Care at Community Level : A Pilot One-Stop Stroke Care Centre Based in Primary Care” and “Functional Limitation and Quality of Life for More Than 2 Years Post-Stroke: A Study among Malaysian Stroke Survivors” at the Adelaide Convention Centre and won a Travel Award and a Scientific Award respectively from the Stroke Society of Australasia. The students were Dr. Aznida Firzah Abdul Aziz and Ms. Nor Azlin Mohd Nordin.

**Associated Programme**
Newly emerging, Reemerging Diseases and Chronic Non-Communicable Diseases

**Location**
Adelaide Convention Centre, Adelaide, Australia

**Co-organisers**
Stroke Society of Australasia

35) 19 - 21 September 2011: International Symposium on Global Environmental Change and Human Health : Healthy Forests for Life (private event)

RF (Climate Change and Health) was invited to present a paper entitled “Forest and Human Health : Review of Case Studies” in Verbania, Italy.

**Associated Programme**
Climate Change and Health

**Location**
Verbania, Italy

**Co-organisers**
UNU-INWEH, Institute of Ecosystem Study, Italy, Water Research Institute, Italy and Italian National Research Council.

36) Workshop; 20 - 24 September 2011: Case-mix Workshop 3: Casemix Coded and Costing Data Analysis (private event)

SRF, RF and Casemix consultants conducted the third workshop to support the development of Indonesian DRGs system in Surabaya, Indonesia. The Workshop was attended by around 80 participants mainly from public hospitals in Indonesia and members of MOH Case-mix Centre. This workshop usas focused on Coding and Costing Data Analysis.

**Associated Programme**
Accessibility, Efficiency and Quality of Care in Health System
Location
Surabaya, Indonesia

Co-organisers
Ministry of Health Indonesia & UNU-IIGH

37) Conference/Symposium; 26 - 29 September 2011: Health Economics Workshop (private event)
SRF participated in Health Economics training focusing on Healthcare Financing and Payment System. The training programme was attended by 30 international participants from the region. SRF presented two papers: 1) Use of UNU-CBG for Provider Payment 2) Comparison between Tax and Social Health Insurance for Health Financing.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Bali, Indonesia

Co-organisers
South East Asia Health Economics Institutions Network and Universitas Indonesia

RF (IT in Health) was invited to present a paper titled “Change Management in Health Information Systems Implementation”.

Associated Programme
Leadership Development Programme in Global Health

Location
The Legend Hotel, Kuala Lumpur

Co-organisers
UNU-IIGH and Malaysian Public Health Physician’s Association (PPPKAM)

39) Workshop; 5 - 10 October 2011: Workshop on Casemix System in Uruguay (private event)
SRF led the UNU-IIGH Casemix team to conduct a Workshop on Casemix System to present the final results of Casemix implementation in Uruguay. The Workshop was attended by around 40 participants. He also attended a one-day International Seminar on Casemix organised by Sanatorio Americano Hospital to disseminate information related to the Casemix projects to stakeholders in Uruguay and other Latin American countries. Around 60 participants from various countries in the region attended the International Seminar.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Montevideo, Uruguay

Co-organisers
Sanatorio Americano Hospital & UNU-IIGH

40) 16 October 2011: MOU Signing Ceremony with Universiti Sains Malaysia (private event)
Director of UNU-IIGH and SRF attended a MOU signing ceremony to mark the start of a Casemix implementation project in Hospital USM (HUSM), the teaching hospital under Universiti Sains Malaysia. In this project, UNU-IIGH will provide support to Universiti Sains Malaysia over a period of three years to implement a pilot project to employ UNU-CBG & MY-DRG Casemix system for quality and efficiency enhancement in HUSM.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Penang, Malaysia

Co-organisers
Universiti Sains Malaysia & UNU-IIGH

41) Conference/Symposium; 18 - 23 October 2011: 27th Patient Classification System International/Case-mix Conference (private event)
SRF and RF participated in the 27th Patient Classification System Casemix Conference. Four scientific papers from UNU-IIGH Casemix projects in developing countries were presented in the conference.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Montreal, Canada
Co-organisers
PCSI International and Canada Institute for Health Information

SRF participated in WHO-Family of International Classification Meeting as a co-chair of the Morbidity Technical Advisory Group for ICD-11 Revision. In the meeting, SRF presented the report on the progress of ICD-11 Morbidity Coding.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Cape Town, South Africa

Co-organisers
WHO and Medical Research Council of South Africa

43) Conference/Symposium; 10 - 12 November 2011: 21st Asia Pacific Cancer Conference (private event)
SRF participated in The 21st Asia Pacific Cancer Conference International Conference and presented a paper titled “Innovative Financing in Cancer Care: Role of Pay for Performance in Cancer Management”.

Associated Programme
Newly Emerging, Reemerging Diseases and Chronic Non-Communicable Diseases

Location
Kuala Lumpur, Malaysia

Co-organisers
APCC, Malaysian Oncological Society and Ministry of Health Malaysia.

44) Workshop; 14 - 15 November 2011: Health Economics Workshop (private event)
SRF participated in health economics training focusing on healthcare financing and payment system. The training programme was attended by 20 international participants from the region. SRF presented two papers: 1) Use of UNU-CBG for Provider Payment 2) Comparison between Tax and Social Health Insurance for Health Financing.

Associated Programme
Newly Emerging, Reemerging Diseases and Chronic Non-Communicable Diseases

Location
Bandung, Indonesia

Co-organisers
Ministry of Health Indonesia & UNU-IIGH

45) Workshop; 15 - 19 November 2011: Case-mix Workshop 5: Finalisation of Hospital Tariff and Adjustment Factor (private event)
SRF, RF and Casemix consultants conducted the fifth workshop to support the development of Indonesian DRGs system in Bandung, Indonesia. The Workshop was attended by around 80 participants mainly from public hospitals in Indonesia and members of MOH Casemix Centre. A half-day meeting with stakeholders was held during the workshop to discuss on issues related to tariff adjustment factor.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Bandung, Indonesia

Co-organisers
South East Asia Health Economics Institutions Network and Universitas Indonesia

46) Conference/Symposium; 21 - 22 November 2011: International Seminar on Socioeconomic and Mental Health Burdens of HIV/AIDS in Developing Countries (private event)
The international seminar offered an opportunity to foster productive discussions and interactions between speakers and participants. This seminar also addressed gaps in policies and promoted the integration of primary mental health care approach into HIV/AIDS programmes to overcome current and future challenges. The event was the first of its kind and attracted participants from Europe, Africa and all over Asia.

Associated Programme
Newly Emerging, Reemerging Diseases and Chronic Non-Communicable Diseases

Location
Jakarta, Indonesia

Co-organisers
South East Asia Health Economics Institutions Network and Universitas Indonesia
Location
Palace of the Golden Horses, Kuala Lumpur

Co-organisers
UNU-IIGH & Centre of Excellence for Research in AIDS University Of Malaya.

47) Conference/Symposium; 24 - 25 November 2011: Doing it better: Transforming Humanitarian Efforts (private event)
The objective of the conference involved a discussion on the health and medical related aspects of disaster care. This is because the humanitarian efforts landscape is constantly changing and evolving. Issues such as climate change adaptation and the increasing value of preparedness and risk reduction mean that some of the old ways of doing things may no longer be relevant. The increasing frequency and severity of natural disasters coupled with technological advances mean that there are interesting paradigms and scenarios that have emerged, posing both opportunities and challenges. The participation of UNU-IIGH focused on raising issues on interventions that anchor on: “Integration of Environmental Protection and Climate Change Adaptation in Health Services for Livelihoods Improvement in Developing Countries” (paper presented by Postdoctoral Fellow, Dr. David Baguma).

Associated Programme
Leadership Development Programme in Global Health

Location
The Legend Hotel Kuala Lumpur

48) Conference/Symposium; 26 - 29 November 2011: Third International Conference on Rural Medicine (private event)
SRF and RF (Climate Change and Health) participated in The Third International Conference on Rural Health. SRF presented a symposium paper entitled “Future Challenges on Health Financing in Malaysia”. He also participated in a Panel Discussion on Health Financing. RF presented a symposium paper on “Global Climate Change: Implications for Public Health Policy”.

Associated Programme
Climate Change and Health

Location
Kota Kinabalu, Sabah, Malaysia

Co-organisers
Universiti Malaysia Sabah, UNU-IIGH and Ministry of Health Malaysia.

49) Conference/Symposium; 29 Nov 2011 - 2 December 2011: AITEC Afrihealth (private event)
SRF and RF participated in The International AITEC Afrihealth Conference and conducted Workshops on “Use of Case-mix System for Health Financing Developing Countries” and “Open Source Healthcare Information System”. During the mission, meetings were held with senior officers of the Ministry of Health Kenya and National Hospital Insurance Fund of the Ministry of Medical Services Kenya to introduce Casemix System and Open Source Health Information System.

Associated Programme
Information Technology in Health

Location
Nairobi, Kenya

Co-organisers
AITEC Africa

50) Workshop; 4 - 8 December 2011: Health Economic Intensive Course at the School of Dental Sciences. (private event)
RF was invited to deliver an intensive course on health economics by Universiti Sains Malaysia to students of its Doctor of Dental Public Health Programme.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
USM, Kubang Kerian in Malaysia

Co-organisers
USM & UNU-IIGH

51) Conference/Symposium; 5 - 7 December 2011: Casemix Workshop/International Conference on Sustainable Development of Natural Resources in Africa (private event)
Director of UNU-IIGH, SRF, RFs (IT in Health and Climate Change) participated at The International International Conference on
Sustainable Development of Natural Resources in Africa. During the Conference, SFR and RF (IT in Health) conducted a Workshop on “Introduction to Casemix System for Health Financing”. Participants at the Workshop were senior officers of the National Health Financing Scheme of Ghana, Ministry of Health Ghana and academics of the University of Ghana.

Associated Programme
Information Technology & Health
Climate Change an Health
Leadership Development Programme in Global Health.

Location
Accra, Ghana

Co-organisers
UNU-INRA & UNU-IIGH

52) Conference/Symposium; 10 - 12 December 2011: 21st Asia Pacific Cancer Conference (private event)
SRF participated in The 21st Asia Pacific Cancer Conference International Conference and presented a paper on “Innovative Financing in Cancer Care: Role of Pay For Performance in Cancer Management”.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Kuala Lumpur, Malaysia

Co-organisers
APCC, Malaysian Oncological Society and Ministry of Health Malaysia.

53) 11 - 18 December 2011: Virtual University for Cancer in Africa Control Meeting (private event)
SRF participated and chaired the selection committee for Virtual University for Cancer Control in Africa Proposals under Programme Action for Cancer Therapy (PACT) of International Atomic Energy Agency.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Vienna, Austria

Co-organisers
International Atomic Energy Agency (IAEA)

54) Conference/Symposium; 14 - 15 December 2011: Fifth Environmental Health Impact Assessment and Auditing Seminar (private event)
RF was invited to present a paper entitled “Environmental Health Impact Assessment and Current Practices in Malaysia”.

Associated Programme
Climate Change and Health

Location
Universiti Teknologi MARA, Puncak Alam, Selangor, Malaysia

Co-organisers
Universiti Teknologi MARA

55) Workshop; 26 - 31 December 2011: Workshop and meetings on Casemix in Iran (private event)
SRF and Casemix IT consultant event to Tehran, Islamic Republic of Iran to conduct a Workshop on “Casemix/DRG System For Health Financing” in Social Insurance Organization of Iran. The workshop was attended by more than 40 participants from SSO, Ministry of Health Iran and academic staff of universities in Tehran. Social Security Organisation has selected three hospitals for pilot implementation of the Casemix system based on UNU-CBG. The hospitals are Milad Hospital, Kishonai Hospital and Rasool Ekram Hospital. During the mission, meetings were held with Heads and academic staff of School of Health Management and School of Public Health at Tehran University of Medical Sciences to introduce UNU-IIGH.

Associated Programme
Accessibility, Efficiency and Quality of Care in Health System

Location
Tehran, Iran

Co-organisers
Social Security Organisation of Iran, Tehran University of Medical Science & UNU-IIGH.