

HIA 2007

**South East Asian and Oceania Regional
Health Impact Assessment Conference**

THE MENZIES SYDNEY, AUSTRALIA

Wednesday, 7 - Friday, 9 November 2007



FINAL PROGRAM AND ABSTRACT BOOK

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NSW HEALTH

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ORGANISING COMMITTEE

Mark Harris
 Ben Harris-Roxas
 Anne Alymer
 Elizabeth Harris
 Robert Quigley
 Lynne Kemp
 Jenny Hughes
 Dianne Katscherian
 Decharut Sukkumnoed
 Mary Knopp
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WELCOME

Welcome to the HIA2007 South East Asia and Oceania Health Impact Assessment Conference. This conference will bring together health impact assessment practitioners from across the Asia Pacific region for the first time to share experiences, consolidate learning and to showcase the wide range of activity that is occurring. We hope this conference will lead to increased intersectoral action to improve health across the region.

SPEAKERS

Andrew Gilman



Sustainable Solutions International, Ottawa

Dr. Andrew Gilman is a Research Fellow at the University of Ottawa Population Health Institute and President of Sustainable Solutions International, a small international consulting firm. He has applied his expertise in health and environment as a research scientist (toxicology and epidemiology) and policy maker for the federal Department of Health in Canada and for several international agencies over the last 35 years. Dr. Gilman established and managed the first Office of Sustainable Development for Health Canada from 1999-2004 and has worked to develop five international agreements to control the global distribution of persistent substances which can harm health.

Jessica McCormick



Department of Health Sciences at Monash University

Jessica McCormick's area of expertise is in policy-linked HIA. In 2002, Jessica attended the first meeting in Melbourne which explored the feasibility, and

potential application of HIA within a policy context in Australia. Since then, she has developed an extensive skill base in the theoretical and practical aspects of HIA. Her research has primarily focused on community based applications of HIA to regeneration initiatives in Australia and overseas. Jessica is working collaboratively with the Department of Human Services in Victoria, and with colleagues at Monash University, is providing technical support and capacity building to state, regional and local government demonstration projects.

Rob Quigley



Quigley and Watts Associates, Wellington

Robert Quigley is one of New Zealand's leading proponents of health impact assessment, and is a director of the Wellbeing, Equity and Health Impact Assessment Research Unit – jointly operated between Quigley and Watts Ltd, the University of Otago and the Public Health Advisory Committee. He recently published the International Association for Impact Assessment's Best Practice Guidelines on Health Impact Assessment as the lead author in an international consortium of contributors. Robert is director of Quigley and Watts Ltd, a contract company that trains, evaluates and carries out HIA.

Jeff Spickett



Jeff Spickett has been involved in research, education and consultancy work since the mid 1970s when he took up a position of lecturer in environmental health at Curtin University of Technology. He has obtained many research grants including, several from the NHMRC and has supervised many research degree students as well as developing and teaching environmental health courses. Jeff has an extensive record of consultancy work including a significant amount with the world health organisation, much of which has been in the area of health impact assessment. This work resulted in recognition as a WHO Collaborating Centre in Environmental Health Impact Assessment about 5 years ago. Jeff has been the Director of the Centre since its inception.

Dianne Katscherian



Department of Health WA

The Western Australian Department of Health believes that the health of the community should be considered in the development of policies and other developmental activities as part of decision-making processes. Over the past few years many proposals have been identified that have not adequately considered key health issues particularly those related to changes to the environment and land use planning. Health Impact Assessment (HIA) was identified by the Department as a mechanism which would provide for consideration of potential health issues during the planning stages of proposals. Dianne was employed by the Department in 2003 to consider the development and implementation of HIA for Western Australia. The roles of community consultation and health risk assessment are seen as key elements of HIA processes for WA. Dianne has an educational, public health and environmental science background which encompass the main facets of HIA and

is committed to the advancement of processes which raise the role of health and wellbeing in decision making at all levels. Dianne is also an adjunct Lecturer in Environmental Science at Murdoch University.

Ben Harris-Roxas



Centre for Health Equity Training research and Evaluation, University of New South Wales, Sydney, Australia

Ben Harris-Roxas has worked on HIA for the past five years as part of the Health Inequalities team at the Centre for Health Equity Training, Research and Evaluation (CHTERE) at UNSW.

He is an investigator on the NSW HIA Project, a major HIA capacity building grant funded by the NSW Department of Health. Ben has been involved in 20 HIAs and he is currently supporting several more to be completed. His research interests involve equity focused HIA and the impact and effectiveness of HIA.

Robert Bos



Sanitation and Health, World Health Organization, Geneva

Robert Bos is a public health biologist trained at the University of Amsterdam in Medical Biology and in Basic and Clinical Immunology.

His career with the World Health Organization started in 1981, first on assignment in Costa Rica as associate immunologist, and since 1983 in WHO headquarters in Geneva, Switzerland. The first period in Geneva (1983-1990) he worked in the Division of Vector Biology and Control as a member of the Secretariat of the joint WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control (PEEM). Early work with Martin Birley of the Liverpool School of Tropical Medicine, in particular the development of Guidelines for Forecasting of Vector-borne Disease Implications of Water Resources Development Projects, was the precursor to HIA activities. In 1990 he moved to WHO's Environmental Health Programme; with this re-positioning, and particularly

following the UNCED in Rio 1992 and WHO's ensuing strategy for health and environment, the profile of HIA in his programme of work was enhanced, mostly in connection with capacity building activities.

In 1991, he coordinated an initiative to develop a training course addressing the capacity needs in intersectoral collaboration in support of HIA. The modular course was first tested in Zimbabwe in 1992, and evolved through trials in Ghana (1994), Tanzania (1995), Central America (1996) and India (1997) into an 18-day task-oriented problem-based learning course, whose modules focus on critical decision-making points in the HIA process.

As a next phase, WHO and DBL developed a comprehensive HIA capacity building package, whose implementation started in 2003 in the countries of the Mekong River Basin (Lao PDR, Thailand, Cambodia and Viet Nam). Similar initiatives are in the planning stages for the countries belonging to the Gulf Cooperation Council and for countries of East and southern Africa.

In 2000 he was instrumental in the conclusion of a Memorandum of Understanding between WHO and IAIA for the collaboration in the field of HIA.

Ashley Gould



Welsh Local Government Association, Cardiff

Originally from Blackwood in the South Wales valleys, Ashley is an Environmental Health Officer by profession. He has 15 years experience in several Welsh and English local government and National Health Service settings, in enforcement, advisory and policy development capacities.

In his current role as Health Improvement Advisor to the Welsh Local Government Association he co-ordinates support for health improvement activity across Welsh local government as well as working closely with the Welsh Assembly Government on public health improvement policy. Specific current activity includes: delivery of a national project to develop success measures for health and well-being partnership activity; developing a health improvement component to a flagship Assembly

Government regeneration project; and securing high level interest in and commissioning specific support for action to bring World Health Organisation 'Healthy Cities' status to a number of urban conurbations in Wales.

The work of the WLGA's Health Improvement Team centres on the Route to Health Improvement – an organisational development programme to assist Councils' understanding of the health impact of their services and maximising the positive impacts by creating the best corporate environment. Ashley co-ordinates delivery of the work, supports Cabinets and Corporate Management Teams and established and maintains an online database of notable practice. He is also immediate past Secretary/treasurer to the Directors of Public Protection Wales.

Elizabeth Harris



Research Centre for Primary Health Care and Equity, University of New South Wales, Sydney

Elizabeth Harris is the Director of the Centre for Health Equity Training, Research and Evaluation (CHETRE) at the University of New South Wales. She has had extensive experience in developing and implementing practical and policy interventions to reduce health inequalities, including research on Aboriginal health, the health of disadvantaged communities, early childhood and health impact assessment. Elizabeth was an author of the Equity Focused Health Impact Assessment Framework and the New South Wales Health and Equity Statement.

Richard Morgan



Centre for Impact Assessment Research and Training, University of Otago, Dunedin, New Zealand

Richard K. Morgan is a Professor in the Department of Geography at the University of Otago, Dunedin, New Zealand. He has been involved with environmental impact assessment (EIA) since 1980, when he began evaluating New Zealand impact assessment procedures. Richard also has interests in the scientific study of human impacts on soils and vegetation, and is still active in research and teaching in these areas. However, EIA has steadily developed as his main area of interest, for research, teaching and consulting purposes. He published a textbook on EIA in 1998, with Kluwer Academic Publishers, and teaches a graduate paper on EIA at the University of Otago.

Richard was President of the International Association for Impact Assessment (IAIA) (<http://www.iaia.org/>) in 2003-4, and remains an active member of the Association. This year he has again taken on the role the convenor of the New Zealand Association for Impact Assessment (NZAIA).

Health impact assessment has developed as a major part of Richard's work over the last 10 years, starting in April 1998 when he organised the first New Zealand workshop on HIA in Christchurch, in association with the IAIA annual meeting. Since that time he has contributed to the development of HIA in New Zealand in a variety of ways, through research, training courses, and presentations to conferences and workshops. Most recently Richard completed an independent review of a respiratory illness baseline study for a major smelter development in S. Africa, and has been invited to talk to a number of HIA workshops and conferences in Australia and Thailand.

Richard established the Centre for Impact Assessment Research and Training (CIART) in 1999; earlier this year, he joined with Louise Signal (Dept of Public Health, Wellington School of Medicine) and Robert Quigley (Quigley & Watts) to set up the HIA Research Unit within the University of Otago.

Wiput Phoolcharoen



Thai Healthy Policy Foundation, Bangkok, Thailand

Dr. Wiput Phoolcharoen has wide-ranging expertise in public health issues in the South East Asian Region. He is the former Director of the Thai Health Systems Research Institute and currently the President of the Thai Healthy Public Policy Foundation.

Decharut Sukkumnoed



Thai Healthy Policy Foundation and Kasetsart University, Bangkok, Thailand

Dr. Decharut Sukkumnoed is an economist from Kasesart University and the research co-ordinator of a HIA research and development program in Thailand. Decharut has facilitated the development of HIA since the idea was introduced in Thailand 2000, and today Thailand's constitutional assertion of HIA in 2007 is symbolic of his effort and devotion.

Daniel Tarantola



Initiative on Health and Human Rights, University of New South Wales, Sydney, Australia

Professor Daniel Tarantola a former senior advisor to the World Health Organisation (WHO) is best known for his influential work in the area of HIV/AIDS and human rights.

Dr Tarantolas distinguished career saw him involved in the formation of Medecins Sans Frontieres, the Harvard School of Public Health, as a Senior Associate with the Francois-Xavier Bagnoud Centre for Health and Human Rights, and as an Instructor with the Department of Population and International Health.

Gareth Williams

Cardiff Institute of Society, Health and Ethics, Cardiff University, United Kingdom

Professor Gareth Williams has been a member of the School of Social Sciences at Cardiff University since 1999. He is Deputy Director of the Regeneration Institute (a joint initiative with the Department of City and Regional Planning), Associate Director of the Cardiff Institute of Society Health and Ethics, Director of the Welsh Health Impact Assessment Support Unit, Chair of the Management Group of the All Wales Alliance for R&D in Health and Social Care and a member of the executive group of Quality, a node of the ESRC's National Research Methods Centre.

He is published widely in academic and professional journals and has written and edited a number of books and was recently one of the editors of *Community Health and Wellbeing: Action Research on Health Inequalities* to be published by Policy Press, Bristol, England in October 2007. One recent publication of interest is his chapter: 'History is what you live: understanding health inequalities in Wales', in the book edited by Pamela Michael and Charles Webster 'Health and Society in Twentieth Century Wales', University of Wales Press.

Lynn Kemp

Research Centre for Primary Health Care and Equity, University of New South Wales, Sydney, Australia

Lynn Kemp is Deputy Director of the Centre for Health Equity Training, Research and Evaluation. Lynn is currently part of the team conducting the NSW HIA Capacity Building Project.

Lynn has a long-time interest in equity and the appropriate provision of health and human services to meet the needs of populations, and has undertaken numerous health service evaluations. Her recent area of focus has been in health public policy for children, and Lynn is a member of the Families NSW Research and Evaluation Advisory Group.

Patrick Harris

Research Centre for Primary Health Care and Equity, University of New South Wales, Sydney, Australia

Patrick Harris is a research fellow at the Centre for Health Equity Training, Research and Evaluation, at the University of New South Wales.

Patrick coordinates the Health Inequalities, Healthy Public Policy and Health Impact Assessment stream at the Centre which aims to build capacity for Healthy Public Policy and the use of health impact assessment as a tool to improve decision-making and to engage partners across a range of sectors to better consider the health impacts of their work.

SOCIAL PROGRAM**Welcome Reception**

Date: Wednesday, 7 November 2007
Venue: Melbourne Room, Menzies Hotel Sydney
Time: 6:30 pm – 8:00 pm

Conference Dinner

Date: Thursday, 8 November 2007
Venue: Captain Cook Cruises, Commissioner Steps, Circular Quay
Time: 6:45 pm for
 7:00 pm Departure

Public Health Walking Tour of Sydney

Date: Friday, 9 November 2007
Venue: Departing from the Menzies Hotel Foyer
Time: 6:45 am

GENERAL INFORMATION**Certificate of Attendance**

Certificates of attendance at the Conference are included in your registration documentation.

Badges

Identification badges are mandatory and will be required for admission to all sessions, the Exhibition and social functions included in the registration fees.

Conference Organiser**ICMS PTY LTD**

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Messages

The Conference Registration Desk will take messages for delegates during the Conference. Messages will be posted on the message board, located next to the registration desk. Delegates are requested to check the message board during breaks.

Mobile Phones and Pagers

As a courtesy to speakers and other delegates, we request that all mobile phones and pagers are in silent mode or switched off before entering sessions.

No Smoking Policy

Delegates should be aware that smoking is banned in public buildings and many hotels and restaurants throughout Australia, including the Conference venue.

Registration Desk

The Registration Desk will be open at the following times:

Wednesday, 7 November	8:00 - 19:00
Thursday, 8 November	8:30 - 17:30
Friday, 9 November 2007	8:30 - 17:30

PROGRAM

Wednesday, November 7		
09:00-16:00	<p>Pre-Conference Workshop 01</p> <p>What is HIA? A one day introductory workshop on HIA.</p> <p>Facilitator Jessica McCormick</p>	Perth Suite
09:00-16:00	<p>Pre-Conference Workshop 02</p> <p>Health Risk Assessment A one day introductory course in Health Risk Assessment.</p> <p>Facilitators Jeff Spickett and Dianne Katscherian</p>	Brisbane Suite
09:00-16:00	<p>Pre-Conference Workshop 03</p> <p>HIA as a Tool for Healthy Public Policy A series of formal and informal sessions discussing the role HIA plays in the development of Healthy Public Policy.</p> <p>Facilitators Patrick Harris and Lynn Kemp</p>	Adelaide Suite
16:30-18:30	<p>Asia Pacific HIA Network Meeting</p> <p>Facilitator Robert Quigley</p> <p>Meeting of HIA Practitioners from Across the Asia Pacific region. The Meeting will include:</p> <ul style="list-style-type: none"> • Updates on HIA Activities in Individual Countries • Discussion to Identify Common Issues • Identification of Avenues for Action and Resource-sharing 	Brisbane Suite
18:30-20:00	<p>Welcome Reception</p>	Brisbane Suite
Thursday, November 8		
09:00-11:00	<p>Welcome to Country</p> <p>Official Opening - The Hon. Verity Firth, NSW Minister for Science and Medical Research</p> <p>Plenary Session</p> <p>Planning for Health and Sustainability</p> <p>Chairperson Dr Denise Robinson, Deputy Director-General, Population Health and Chief Health Officer, NSW Department of Health</p> <p><i>Sustainable Futures</i> 203 Andrew Gilman, Sustainable Solutions International, Canada</p> <p><i>Linking HIA and Other Forms of Impact Assessment: Lessons and Experience</i> 202 Prof Richard Morgan, University of Otago, New Zealand</p> <p><i>Health in Planning and Impact Assessment</i> 201 Yolande Stone, NSW Department of Planning, Australia</p>	Sydney Room
11:00-11:30	<p>Poster Session</p> <p><i>Evaluation of Effect of Urban Air Pollution Due to Motor Vehicle on Community's Health and Recommendation of Intervention</i> 401 Dr Bao Nguyen Duy, National Institute of Occupational and Environmental Health, Vietnam</p> <p><i>Reaching Men with IEC to Improve their Knowledge and Participation in Reproductive Health: Lessons Learned from Tribal Population of Central India</i> 402 Kalyan Brata Saha, Regional Medical Research Centre for Tribals (ICMR), India</p> <p><i>Sustainability and Health Impact of a Community-based Falls Prevention Program in Minority Communities</i> 403 Meryl Lovarini, University of Sydney, Australia</p> <p><i>Health Impact Assessment of Corporate Activities</i> 407 Yoshihisa Fujino, University of Occupational and Environmental Health, Japan Naomi Kuroki, University of Occupational and Environmental Health, Japan</p> <p><i>Development of Training Model and Capacity Building for Health Impact Assessment; Case study on Agriculture Chemical in Thailand</i> 408 Kornwipa Punnasiri, Ministry of Public Health, Thailand</p> <p><i>Health Impact Assessment of Kwaenoi Dam in Phitsanulok, Thailand</i> 409 Piyamaporn Duangmontri, Ministry of Public Health, Thailand</p>	Level 1 Foyer

Thursday, November 8 (continued)		
	<p>Poster Session (cont.)</p> <p><i>The Coffs Harbour 'Our Living City' Settlement Strategy – A Health Impact Assessment (HIA)</i> 410 Andrew Tugwell, North Coast Area Health Service, Australia</p> <p><i>Status of Health Impact Assessment in Korea</i> 411 Young Soo Lee, Korea Environment Institute, Korea</p>	Level 1 Foyer
11:00-11:30	Morning Tea	
11:30-13:00	<p>Concurrent Sessions</p> <p>Creating and Sustaining Environments for Health: The South East Asian Experience Chairperson Prof Anthony Zwi</p> <p><i>Learning from Working Across Boundaries</i> 206 Chanthaphone Soutsakhone, National Centre for Environmental Health and Water Supply, Laos</p> <p><i>The Futures of Rayong: Creating the Alternatives of Community Development</i> 207 Suphakit Nuntavorakarn, Healthy Public Policy Foundation, Thailand Somporn Pengkam, National Health Commission Office, Thailand</p> <p><i>HIA as a Tool of Healthful Agriculture and Food Policy in Thailand</i> 208 Orapan Srisookwatana, Office of the National Health Commission, Thailand</p> <p><i>Climate Change and Health Impact - A Western Australian Perspective on Adaptation</i> 209 Dianne Katscherian, Department of Health, Australia Prof Jeffery Spickett, Curtin University, Australia</p>	Adelaide Suite
	<p>HIA in Practice: Promoting Community Health and Wellbeing Chairperson Michelle Maxwell</p> <p><i>Improving Community Mental Well-being using Impact Assessment</i> 210 Anthea Cooke, Inukshuk Consultancy, United Kingdom</p> <p><i>Health Impact Assessments from an Aboriginal Community Context</i> 211 Scott Trindall, Hunter New England Area Health Service, Australia</p> <p><i>Empowering Communities with their Community Health Impact Assessment Tool</i> 212 Colleen Cameron, Coady International Institute St. Francis Xavier University, Canada</p> <p><i>HIA: An Opportunity for Promoting a Healthier Nutrition Environment</i> 213 Elizabeth Good, Queensland Health, Australia</p>	Brisbane Suite
	<p>HIA and Local and Regional Government 1 Chairperson John Kurko</p> <p><i>HIA Application for Local Government : A Case Study of the Agricultural Development Policy at Local Level</i> 214 Jittima Rodsawad, Department of Health, Thailand</p> <p><i>Bringing Together Health and Local Government: Health Impact Assessment as a Catalyst</i> 215 Andrew Gow, Greater Southern Area Health Service, Australia Matthew Lynch, Palerang Council, Australia</p> <p><i>Health Impact Assessments and Structure Plans for Local Government</i> 216 Penelope Francis, City of Stonnington, Australia Karen Watson, Australia</p> <p><i>Planning for Social Wellbeing: Using Social and Health Impact Assessment in Local Government</i> 217 Jessica McCormick, Monash University, Australia Narelle Algie, Department of Human Services, Australia Vivienne Colmer, City of Greater Dandenong, Australia</p>	Perth Suite
11:30-13:00	<p>Workshop</p> <p>Australian Interjurisdictional Roundtable on HIA</p> <p><i>Interjurisdictional Roundtable</i> 218 Elizabeth Harris, University of New South Wales, Australia</p>	Sydney Room
13:00-14:00	Lunch	Level 1 Restaurant

Thursday, November 8 (continued)

14:00-15:30	<p>Concurrent Sessions Brisbane Suite</p> <p>Intitutionalising HIA 1 Chairperson Dr Rosemary Aldrich</p> <p><i>Outcome Mapping and Monitoring HIA Progress in Thailand</i> 219 Decharut Sukkumnoed, Kasetsart University, Thailand</p> <p><i>A Policy Place for HIA</i> 220 Dr Dave Trudinger, Department of Human Services, Australia</p> <p><i>HIA: The Journey of a Thousand Miles Begins with one Step - Creating the Preconditions for Effective Uptake of HIA at the State Level</i> 221 Danny Broderick, Department of Health, Australia Dr Kevin Buckett, Department of Health, Australia</p> <p><i>Health Impact Assessment and Regeneration: Exploring Possibilities and Creating Opportunities</i> 222 Jessica McCormick, Monash University, Australia</p>
	<p>HIA in Practice Adelaide Suite</p> <p>Chairperson Andrew Gow</p> <p><i>Fuelling the Revolution: HIA as a Cornerstone of Public Health Service Planning at Southern Health</i> 223 Carol Fountain, Southern Health, Australia</p> <p><i>HIA's for Building Healthy Communities</i> 224 Karen Gillham, Australia</p> <p><i>Health Impact Assessment as a Tool for Fair Social Investment</i> 225 Margaret Earle, Public Health Advisory Committee, New Zealand Lynette Stewart, Australia</p> <p><i>Using Rapid Equity Focused HIA to Enhance the Consideration of Health Equity in Policy and Program Development</i> 226 Ben Harris-Roxas, University of New South Wales, Australia</p>
	<p>HIA and Local and Regional Government 2 Sydney Room</p> <p>Chairperson Jenny Hughes</p> <p><i>Improvement of Thai Local Government Planning after Introducing Health Impact Assessment</i> 227 A/Prof Uraivan Inmuong, Khon Kaen University, Thailand</p> <p><i>Health Impact Assessment: The Development of Tools to Support Decision Making at East Gippsland Shire Council</i> 228 Jenny-Lynn Potter, Deakin University, Australia</p> <p><i>HIA through Health Assembly: Flood Problem Solution at Chiang Mai Province, Thailand</i> 229 Surasak Buntain, National Health Commission Office, Thailand</p> <p><i>The Impact of Local Government Plans on the Health of Australians Living in Coastal Areas</i> 230 Susan Furber, South Eastern Sydney and Illawarra Area Health Service, Australia</p>
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16:00-17:00	<p>Plenary Session Sydney Room</p> <p>Equity, Participation and Democracy in HIA - Rhetoric and Reality Chairperson Martin Turnbull</p> <p><i>HIA and Equity</i> 232 Elizabeth Harris, University of New South Wales, Australia</p> <p><i>Health, Democracy and Human Rights</i> 233 Daniel Tarantola, University of New South Wales, Australia</p> <p><i>HIA and Participation</i> 234 Decharut Sukkumnoed, Kasetsart University, Thailand</p> <p><i>Discussion</i></p>
18:45-22:00	<p>Conference Dinner Cruise Circular Quay, Captain Cook Cruise</p>

Friday, November 9

09:00-11:00	<p>Plenary Session</p> <p>Working Across Boundaries - HIA as a Foundation for Healthy Public Policy Chairperson Sarah Thackway</p> <p><i>The Role of HIA and Healthy Public Policy in Health System Reform</i> 301 Dr Wiput Phoolcharoen, Thai Healthy Policy Foundation, Thailand</p> <p><i>Health Impact Assessment: Protecting and Promoting Health</i> 302 Robert Bos, World Health Organization, Switzerland</p> <p><i>Health Improvement within the Political Process: The Role of HIA</i> 303 Prof Gareth Williams, University of New South Wales, Australia</p> <p><i>HIA2008 Asia Pacific HIA Conference</i> 304 Dr Amphon Jindawatthana, National Health Commission Office, Thailand</p>	Sydney Room
11:00-11:30	<p>Poster Session</p> <p>Posters from the previous day will be presented during this session.</p>	Level 1 Foyer
11:30-13:00	<p>Concurrent Sessions</p> <p>Intitutionalising HIA 2 Chairperson Mark Thornell</p> <p><i>HIA in Law: The First Step of HIA in Thailand</i> 305 Dr Amphon Jindawatthana, National Health Commission Office, Thailand</p> <p><i>Tipping Points Creating Momentum for HIA</i> 306 Jenny Hughes, NSW Department of Health, Australia Joe Elias, Australia Venessa Wells, Australia</p> <p><i>New Zealand's Health Impact Assessment Support Unit</i> 307 Frances Graham, Ministry of Health, New Zealand Paula Hawley-Evans, Ministry of Health, New Zealand</p>	Adelaide Suite
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11:30-13:00	<p>Workshop</p> <p>Approaches to Working with Local Government 316 Ashley Gould, Welsh Local Government Association, United Kingdom</p>	Sydney Room

Friday, November 9 (continued)

14:00-15:30	<p>Concurrent Sessions</p> <p>Creating and Sustaining Environments for Health Chairperson Uma Rajappa</p> <p><i>A Place for Health Professionals in Strategic Planning Processes</i> 317 Paul Brookfield, Griffith University, Australia A/Prof Darryl Low Choy, Griffith University, Australia</p> <p><i>Urban Sprawl, Physical Activity and Obesity in Sydney, Australia</i> 318 Frances Garden, New South Wales Department of Health, Australia</p> <p><i>Opening Doors & Breaking Down Barriers: A Whole of Community Approach to Supporting Indigenous Secondary School Students in Accessing Ongoing Educational Pathways</i> Kathryn Naden Deb Jones</p>	Brisbane Suite
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14:00-15:30	<p>Workshop</p> <p>Practitioner Forum Chairperson Sophie Dwyer</p> <p>The practitioner's forum will provide an opportunity for a facilitated discussion of practical issues relating undertaking health impact assessments. Participants are encouraged to suggest issues relating to their own HIA practice to discuss.</p>	Sydney Room
16:00-17:00	<p>Panel Discussion - Future Gazing</p> <p>Chairperson Dr Lynn Kemp, University of New South Wales, Australia</p> <p>Speakers: Rob Quigley, Quigley and Watts Ltd Ashley Gould, Welsh Local Government Association Decharut Sukkumnoed, Thai Healthy Policy Foundation and Kasetsart University Ben Harris-Roxas, Centre for Health Equity Training, Research and Evaluation (CHETRE)</p>	Sydney Room

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ABSTRACTS

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Pre-conference Workshop: What is HIA?

*Jessica E McCormick,
Monash University, Australia*

Health Impact Assessment (HIA) is a rapidly developing public health tool. It uses a structured approach to identify and analyse the potential, and often unanticipated health impacts of proposals on the health of populations, and the distribution of those effects within the population. The value of HIA to sectors outside the health domain is being increasingly recognised, particularly where considerations of health and wellbeing outcomes have not traditionally been a primary concern. The benefits of conducting a HIA are to support and improve evidence-informed decision making, contribute to improvements in health, and reduce health inequalities. This one day workshop is intended for practitioners who want to expand their awareness and understanding of HIA and its uses. It is offered as a way for participants who have little or no prior knowledge of HIA to find out more about the process involved; the principles underpinning it; and explore how HIA has been applied by organisations such as local governments and health services to influence policy and practice. The format of the workshop is designed to be interactive, featuring a mix of presentations and 'learn-by-doing' practical activities that enable participants to engage in the various steps of the HIA process.

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Learning from Working Across Boundaries

*Chanthaphone Soutsakhone, National
Centre for Environmental Health and
Water Supply, Laos*

*Santanu Lahiri, World Bank Water and
Sanitation Program, India*

The Rural Water Supply and Sanitation (RWSS) Sector is managed by the National Centre for Environmental Health and Water Supply under the Ministry of Health, Lao PDR. The Centre prepared and launched the Lao PDR RWSS Sector Strategy in November 1997. Since then, the Centre has designed a number of RWSS sub-components of these multi-sectoral projects supported by different external agencies. The RWSS Components of these multi-sectoral projects are now either completed or in the process of final implementation. This

paper briefly highlights the learning from these RWSS Projects on aspects related to working across boundaries.

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The Futures of Rayong: Creating the Alternatives of Community Development

*Suphakit Nuntavorakarn, Healthy Public
Policy Foundation, Thailand*

*Wipawa Chuenchit, Healthy Public Policy
Foundation, Thailand*

*Decharut Sukkumnoed, Kasetsart
University, Thailand*

*Somporn Pengkam, National Health
Commission Office, Thailand*

The development of petrochemical industrial complexes in Rayong province, particularly in the Mab Ta Phut area, has begun since 1982. Several years afterwards, it has been proved to cause severe impacts to the environment and people's health, while the socio-economic transformations following the fast growth of the industries are increasingly evident.

Despite the fact that many of the impacts from the previous phases are yet unresolved or not even mentioned by the Government, the Master Plan on Petrochemical Industrial Development (Phase III: 2004-2018) is being eagerly implemented. According to the Plan, more than 50 plants worth 400,000 million baht will be established on this once-fertile land on the eastern coast of Thailand. Will it be once again that human well-being must be surrendered to the proclaimed 'national interest'? And how to escape from the 'local vs. national' hostility?

A more participatory, healthy public policy process is proposed in response to these questions due to the concern voice by Mab ta Phut's people that they never had an opportunity to participate in the policymaking process; nor did they receive the information before the projects were implemented.

To achieve this, a series of researches and public communication and policy deliberation processes, including the HIA of development policy alternatives in Rayong province are planned. This paper will discuss and elaborate more on the health and social impacts from industrial policy and the use of HIA and other tools such as health assembly to propose alternatives of healthy public policy in the development process.

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HIA as a Tool of Healthful Agriculture and Food Policy in Thailand

*Orapan Srisookwatana, Office of the
National Health Commission, Thailand*

Health Impact Assessment (HIA) has been introduced to agricultural policy formulation in Thailand since the first research on the scoping of HIA in contractual farming in 2001. Subsequently researchers have taken their effort to take into account HIA in policy making especially regarding to pesticide. Those researches recognized that HIA would include health at all dimensions – physical, mental, social and spiritual. During the health system reform movement since 2001, HIA was mentioned in the drafting National Health Bill. It was apparently acceptable and progressive under the healthful agriculture and food safety agenda. In 2004 this agenda was proposed to health assembly nationwide including area-based, issue-based and national assemblies. Researches and empirical evidences on the impact to health were publicized for recommendation development. Eventually the proposal was adopted by the Council of Ministers.

In 2006 a study was found that HIA could be feasibly implemented through interactive learning process and multisectoral participation. Finally area-based development plan on healthful agriculture was adopted by the local government. It seemed to be successful in integration of HIA to local regulation and promote sustainable agriculture in local policy formulation.

Since March 2007, National Health Act was enacted. The National Health Commission has been responsible to constitute criteria and process on HIA to existing public policies. Individual has right to request as well as participate in HIA process. Thus if HIA has been participatory and practical it should be possibly an essential tool of healthful agriculture and food policy formulation in the future.

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Climate Change and Health Impact - A Western Australian Perspective on Adaptation

*Dianne Katscherian, Department of
Health, Australia*

*Jeffery T Spickett, Curtin University,
Australia*

Western Australia is likely to experience a climate in the near future that is more variable, more extreme and significantly different from our recent past. These

changes are almost certain to impact on our health. The ability to anticipate and adapt to aspects of climate change that may impact on our health is critical. Failure to adopt such a proactive approach may result in an inefficient and costly reactive cycle of responding and recovering from health impacts as they occur.

The type and extent of health impacts that may arise from climate change are a reflection of the unique environmental, climatic and socio-economic parameters of WA. A project, which included two workshops held in Perth, with participants from a wide range of health and non-health sectors, addressed the issue of climate change and health in WA. Outcomes included identification of potential health impacts, vulnerable groups and regions; a qualitative risk assessment of potential impacts and a consideration of possible adaptation measures in WA.

This project has provided the basis for a collaborative, proactive approach that can deliver opportunities to effectively adapt to minimise the health impacts of climate change in WA.

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Improving Community Mental Well-being using Impact Assessment

Anthea G Cooke, Inukshuk Consultancy, United Kingdom

Alex Scott-Samuel, Liverpool University, United Kingdom

Jude Stansfield, Care Services Improvement Partnership, United Kingdom

Tony Coggins, South London and Maudesley Mental Health NHS Trust, United Kingdom

Helen West, University of Liverpool, United Kingdom

“Action on housing, noise, traffic congestion, fear of crime, cleaning and greening the environment all contribute to mental health. Even small improvements in mental well-being will achieve significant cost benefits through improvements in physical health, productivity and quality of life.” (Making it possible, NIHME/CSIP 2005)

In the UK, a partnership including IMPACT, CSIP, SLAM, Liverpool Culture Company, Inukshuk Consultancy identified a need to develop work to assess the impact of proposals on sustainable mental well-being for communities. The intention was to enable policy makers and planners to:

- Increase awareness and

understanding of mental well-being

- Identify positive and negative impacts on mental well-being of ‘proposals’
- Produce a set of evidence based recommendations to respond particularly to negative impacts
- Develop local indicators of mental well-being.

The partnership have now published a MWIA toolkit drawing on theory and practice in HIA and the evidence base concerned with protecting and promoting mental health and well-being. The work has received national and growing international profile and support.

Developing the toolkit included:

- Building on an earlier toolkit developed in London, 2004
- Critically appraising existing impact assessment toolkits
- Reviewing literature of evidence base
- Drafting toolkit
- Piloting MWIA
- Revising and publishing.

The presentation will share this work using case studies including comprehensive MWIA of Liverpool 2008 European Capital of Culture. Delegates will have an opportunity to consider this work, discuss applying the toolkit to their practice in impact assessment, and developing work on localised indicators to measure impact.

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Health Impact Assessments from an Aboriginal Community Context

Scott P Trindall, Hunter New England Area Health Service, Australia

Colin Bell, Hunter New England Area Health Service, Australia

Implementers of health promotion programs in Australia often overlook potential impacts on Aboriginal communities. Health Impact Assessments (HIAs) can help implementers consider these impacts. ‘Good for Kids. Good for Life.’, the largest child obesity prevention program in Hunter New England Region promotes healthy eating and physical activity for children (up to 15 years) in the Hunter New England region of NSW. The program has a specific focus on Aboriginal children.

Good for Kids operates through a range of settings including preschools and schools. Representatives from these settings/agencies formed an Aboriginal Health advisory group to guide the implementation of the program. Members of the group undertook a screening process, adopted a culturally appropriate model of health and conducted an adapted, rapid, equity-focused HIA of the

Good for Kids program via a workshop in March 2007.

Recommendations from the rapid equity focussed HIA, itself adapted for cultural appropriateness, will be presented in the context of the implementation of the Good for Kids program.

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Empowering Communities with their Community Health Impact Assessment Tool

Colleen Cameron, Coady International Institute St. Francis Xavier University, Canada

Sebanti Gosh, Association For Social and Health Advancement, India

PATH (People Assessing Their Health) is a health promotion process that uses community health impact assessment to build the capacity of people to become active participants in the development of healthy communities. PATH is based on the belief that people know a lot about what makes and keeps them healthy and that they should be involved in the planning and decision-making processes that affect the health of their communities.

The PATH process as developed in northeastern Nova Scotia, Canada in 1996. In 2006, it was introduced in Mukitmanipur, India with a tribal community that was about to embark on an Endogenous Tourism Project. Using the PATH process, the management team of the tribal community was able to critically analyze their situation, describe the social, political, cultural and economic factors that affect their health and develop a vision of a healthy community. From this vision, they developed a community health impact assessment tool (CHIAT) which they can use to assess the potential impact that any project; program or policy might have on the health of the community.

This presentation will discuss the lessons learned about how the process enabled people to think about the well-being of their community and how the CHIAT has helped them become active players in the decisions that affect the health of their community. Since PATH is one of the very few truly community driven health impact assessment processes, the presentation will also discuss the lessons learned about using this process in other contexts and cultures.

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HIA: An Opportunity for Promoting a Healthier Nutrition Environment*Elizabeth Good, Queensland Health, Australia**Melinda Hammond, Queensland Health, Australia**Anita Groos, Queensland Health, Australia**Caroline Martin, Queensland Health, Australia*

Issues addressed: With the increasing prevalence of obesity and diet-related chronic diseases, the influence of the environment on health is receiving greater attention. (Ball, K., Timperio, AF, Crawford, DA: 2006) Modifying the environment to make it easier for communities to access healthy food is a key part of reversing the obesity epidemic. This project aimed to develop guidelines to enable practitioners to consider food and nutrition issues when conducting health impact assessments.

Methods: Review of published and grey literature on the relationship between the built environment and nutrition-related health outcomes, as well as strategies to create supportive environments for healthy eating. Nutrition guidelines were drafted and disseminated to a purposive sample of environmental health practitioners and public health nutritionists for input.

Results: The finalised nutrition guidelines (Queensland Health: 2006) outline key assessment considerations for a number of desired outcomes including: improving access to healthy foods and drinks; increasing access to breastfeeding facilities; and decreasing fast food outlet density and unhealthy food advertising. It was not possible to directly link exposure to the built environment with nutrition outcomes; however associations between elements of the built environment and health outcomes and/or behaviours have been made.

Conclusion: Food and nutrition issues need to be considered along with other public health issues in HIA. Guidelines to support consideration of the nutrition impacts of a proposed policy, program or project may increase attention to this aspect of the environment. Further research to identify and measure the impact of the nutrition environment on health behaviours is needed.

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HIA Application for Local Government : A Case Study of the Agricultural Development Policy at Local Level*Jittima Rodsawad, Department of Health, Thailand*

This paper is focused on how HIA could be positioned and applied in the local government in Thailand as this tool was increasingly being shown to be effective in putting health on local government policy cycles. The HIA is used to assess the link between the development policy, health determinants and health outcomes at a local level. The process that is extremely important which is focused on developing an engagement process with local community. This trial of the HIA process was considered to be an extremely valuable process by participants. The authors have developed the tool kits to synthesize the findings indicating the expected health effects and health gains of such agricultural policy and also gathered the data of the situation in the community. The findings are presented and discuss how they should be used to inform the policy decision making process. The authors recommend the incorporation of health impact assessment principles and processes would contribute into the development of local government policy cycles.

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Bringing Together Health and Local Government: Health Impact Assessment as a Catalyst*Andrew J Gow, Greater Southern Area Health Service, Australia**Matthew Lynch, Palarang Council, Australia*

Contemporary health promotion theory calls for upstream intervention to influence the social determinants of health. This can be challenging to put into practice as most social determinants of health are outside of the direct control and responsibility of the health system. However, integrating broader concepts of health with the business of other agencies has the potential to make a difference.

To test a way integrating health outcomes with the agenda of another agency, Greater Southern Area Health Service (GSAHS) worked together with Palarang Council to undertake a Health Impact Assessment (HIA) of plans to accommodate population growth in the small town of Bungendore.

The report and recommendations from the HIA were submitted to Palarang Council to inform deliberations on land use planning in Bungendore, and these principles will also be used for the other

settlements within the Council area. This information will also feed into Palarang Council's new Local Environmental Plan and Social and Community Plan and will thus have long term influence over the built and social environment experienced by residents.

HIA is one approach that brings the broader social determinants of health to the attention of non-health agencies and allows these to be influenced while a proposal is still in the developmental phase.

This presentation will briefly describe the process used for the Bungendore project and report on the outcomes and lessons learnt.

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Health Impact Assessments and Structure Plans for Local Government*Penelope J Francis, City of Stonnington, Australia**Karen Watson, Australia*

Health Impact Assessments (HIAs) have the potential to influence better health outcomes when applied to Structure Plans/Master Plans for Activity Centres. HIA's can be an approach which can influence determinants of health when applied to the built environment.

HIAs when applied to a Structure Plan can aim to:

1. Identify the key social drivers affecting how activity centres and precincts should develop in the future
2. Identify the social impacts of proposals in the structure plan for three case study areas
3. Make recommendations on how health impacts can be either mitigated or enhanced
4. Identify indicators for monitoring and evaluation purposes
5. Provide a HIA framework for future applications and structure planning

Effective Integrated Planning should attempt to include HIAs and should be done parallel with other assessments such as economic and environmental assessments. Although applying HIAs at a structure planning level is a long term approach this process can ensure that the health and social impacts can be considered for the future. HIAs are a step in the right direction for better planning.

The process involved the following steps: identify what factors needed to be considered as part of the structure plan ie) consider environment, economics and sustainable transport principles. Once the structure plan was developed, the health impacts were identified via a HIA.

The HIA considered policy frameworks, indirect and direct impacts considering variables such as access to Local Movement, community character, rights to employment and education, access to community services, facilities and housing.

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Planning for Social Wellbeing: Using Social and Health Impact Assessment in Local Government

Jessica E McCormick, Monash University, Australia

Narelle L Algje, Department of Human Services, Australia

Vivienne Colmer, City of Greater Dandenong, Australia

Janet Keily, City of Greater Dandenong, Australia

Jo Patten, Frankston City Council, Australia

Batras Dimitri, Monash University, Australia

Keleher Helen, Monash University, Australia

Milner Sue, Department of Human Services, Australia

In recent years, there has been growing interest in the value and application of social and health impact assessment (S/HIA) within policy decision making processes. In Victoria, the application of S/HIA within the local government sector has been the focus of considerable research and practice. The potential for S/HIA to support integrated planning; to ensure that health is considered and planned for in decision-making processes; and provide leverage for achieving health outcomes are major drivers for its application within the local government sector.

This presentation will describe the experiences of two HIA demonstration projects undertaken in Victoria. The Department of Human Services - Southern Metropolitan Region, the HIA team at Monash University, the City of Greater Dandenong and Frankston City Council are working in partnership to build the capacity among two local governments in undertaking S/HIA. Co-presenters from Council will outline their case learnings, their early experiences of applying HIA, the challenges, the successes and the impacts it had for decision-making in Council.

An overview of the synthesised learnings derived from each of these practical experiences will also be provided. Exploration of the efficacy of a S/HIA approach; the contextual factors which enable or act as barriers to its use; and

the relevance of applying it in the local government sector will be explored. The development of practical tools or products that can assist in building organisational support and the longer term positioning of S/HIA within the sector is an anticipated deliverable of this project.

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Interjurisdictional Roundtable

Elizabeth Harris, University of New South Wales, Australia

The purpose of this roundtable discussion is to explore current approaches to the application of Health Impact Assessment to major polices and projects across jurisdictions (States, Territories and the Commonwealth) in Australia. Currently there is no uniform approach but interest in HIA as a tool for the development of Healthy Public Policy is emerging across the country. This discussion will allow researchers, policymakers and practitioners to outline current initiatives within their jurisdictions and explore opportunities for collaboration.

The roundtable will consist of a number of presentations from various jurisdictions to outline how HIA capacity is being built and the challenges being faced. This will be followed by general discussion which may focus on such issues as the role of HIA in Environmental, Social and Integrated Impact Assessment; balancing health protection and health promotion considerations within a generic HIA framework, building an easy to access evidence base of health impacts and discussion of the use of HIA as a regulatory or decision support tool.

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Outcome Mapping and Monitoring HIA Progress in Thailand

Decharut Sukkumnoed, Kasetsart University, Thailand

Rungthip Sukkumnoed, Healthy Public Policy Foundation, Thailand

Dunagjai Rungrojcharoenkij, Healthy Public Policy Foundation, Thailand

Thailand has 7 years of experiences in HIA development. Recently, all organizations involved in HIA have co-operatively developed Thailand's 5-years HIA development plan (2007-2011). However, since each organization has its own nature of implementation, monitoring the progress of overall HIA development is not an easy task. The concept of outcome mapping has been applied to monitoring the progress. Firstly, the 5-years HIA development plan has been translated into strategic map and progress markers

with the articulation of organizational practices. Through this stage, the HIA monitoring progress system has been designed. This includes the setting monitoring priorities, developing outcome strategic journals, the monitoring plan, and the dissemination of HIA monitoring through HIA newsletter and annual report. The experiences in applying outcome mapping will be presented and the lessons learnt from this attempt will be analyzed. Last, the recommendations for developing the monitoring system and outcome mapping will be share in this paper.

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A Policy Place for HIA

Dave Trudinger, Department of Human Services, Australia

Health impact assessment has often been identified as a tool that policy makers could use to prevent proposed policies having unintended adverse health and equity consequences. In making this claim, proponents often project uncritical assumptions about the way policy is made and the context in which HIA must be placed in order to influence decisions.

This paper will give consideration to inherent tensions in the placement of HIA in policy making. The paper will reflect on the conduct and results of a handful of (equity-focused) HIAs in NSW and Victoria. Emphasis will be given to 'within government' implications of the key questions of when, who and how HIA is conducted.

The purpose of the paper is to strengthen the utility of HIA in Australian jurisdictions by critically reflecting on practice.

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HIA: The Journey of a Thousand Miles Begins with one Step - Creating the Preconditions for Effective Uptake of HIA at the State Level

Danny M Broderick, Department of Health, Australia

Kevin Buckett, Department of Health, Australia

Within the South Australian context Health Impact Assessments have yet to find a formal place within the public policy development process. However through a strategic approach and through the development of collaborative relationships, as well as leveraging opportunities created by other state government initiatives, public health practitioners are now setting the scene for greater adoption of this methodology across government, local government and

the community more generally.

A particular focus of the presentation will be on engaging cross-sectoral partners in HIA and how to move beyond health sector dominance of the HIA process.

This presentation will explore how these opportunities are being developed, how national and international trends and contacts are assisting in this process, and examine what the barriers, challenges and ways forward are which ensure the highest level sustainable engagement with the political as well as bureaucratic echelons.

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Health Impact Assessment and Regeneration: Exploring Possibilities and Creating Opportunities

Jessica E McCormick, Monash University, Australia

Increasingly, the value of Health Impact Assessment (HIA) to sectors outside the health domain is being recognised, particularly where considerations of health are not traditionally a primary concern. The application of HIA to regeneration initiatives is one such policy platform where HIA has been used extensively in the UK. If one of the goals of regeneration-type schemes is to improve health outcomes then it is crucial that health be a point of focus within the whole scheme. One way of doing this is to use HIA.

This presentation describes the key lessons that have been learnt from a project undertaken in Victoria and outlines one model for using HIA within a regeneration context. The presentation draws upon work that was undertaken as part of a PhD exploring the practical utility of HIA in addressing issues associated with social exclusion, using the application of HIA to regeneration schemes as a platform for this exploration.

What has emerged from this study is a complex analysis of the practical dimensions of the application of HIA in a regeneration context and contextual considerations necessary when applying it within such initiatives. This presentation will focus on three key recommendations arising from the Victorian study – (i) strategic positioning and how HIA can be best utilised to achieve the strategic goals of regeneration; (ii) role and function, that is, the practicalities of the use of HIA across various regeneration sites; and (iii) resources and capacity within the sector to engage with HIA in the future.

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Fuelling the Revolution: HIA as a Cornerstone of Public Health Service Planning at Southern Health

Carol G Fountain, Southern Health, Australia

Emma J Bruce, Southern Health, Australia
Cinzia Theobald, Southern Health, Australia

Sandra Young, Southern Health, Australia

Claire A Murphy, Southern Health, Australia

Southern Health is the largest metropolitan health service in Victoria and provides comprehensive primary, secondary and tertiary healthcare services. Continuing Care is the largest sector, comprising sub-acute and rehabilitation services; aged services; and community and transitional services.

Continuing Care is pioneering application of HIA in the planning and evaluation of healthcare services, leading Victoria's public health sector. In 2006 Continuing Care embarked on an innovative project introducing a HIA process into the planning phase of all new service proposals. The process involved preliminary screening with progression to a rapid HIA if indicated. The project had two key goals:

1. To systematically assess unanticipated, potentially negative health impacts with a focus on equity of access, thus providing the ability to influence proposals prior to implementation
2. To develop a robust, effective process to embed the use of HIA in health services.

The project commenced with a pilot at Cardinia-Casey CHS, a major community health service. The pilot was driven by strong executive advocacy, involvement and organisational support, and was strategically implemented through application of targeted change management principles. Significant resources were invested in the engagement and upskilling of staff at all levels of executive and service management. Seminars and workshops were conducted by internal and external expert facilitators. Southern Health developed multimedia training, project management templates and a toolkit specifically for public health services, informed by international resources. Based on the results of the pilot, the use of HIA in all new service proposals will be replicated throughout Continuing Care's services.

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HIA's for Building Healthy Communities

Karen Gillham, Australia

Venessa Wells, Australia

Milly Licata, Australia

Anne Kempton, Australia

This paper describes the processes and outcomes of a Social Impact Assessment that was conducted on a major policy document released to guide and strategically direct how development will be managed in the Lower Hunter region of NSW, Australia. The policy document aims to identify how development in the region will be managed on a sustainable basis based on the potential population increase of up to 125,000 over 25 years. A strategy of this magnitude has the potential to influence the health and social well-being of the population and the equitable distribution of resource and services. In order to identify the potential social impacts arising from the proposed population increase, the Hunter Regional Coordination Management Group emphasised the need for, and completed a rapid, prospective equity-focused Social Impact Assessment (SIA) on the policy.

The SIA involved the use of an 'equity lens', to determine the impact of population in the proposed development areas. The SIA Working Group developed criterion for applying such a lens. Overall, 17 geographical sites were considered. A community profile and levels of vulnerability were established for each site. Both agency based data and census data were analysed to establish rates of vulnerability. Participating agencies reviewed current and future service capacity for each site and recommendations were forwarded to the Hunter Department of Planning.

The LHRS SIA offered an opportunity for decision makers to examine and ensure that choices they make today do not compromise people's wellbeing in the future and do not increase levels of inequity.

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Health Impact Assessment as a Tool for Fair Social Investment

Geoff Fougere, Public Health Advisory Committee, New Zealand

Margaret Earle, Public Health Advisory Committee, New Zealand

In 2006, the Prime Minister of New Zealand announced that Health Impact Assessment (HIA) will be carried out on new government policy and legislation. This followed two years of work by The Public Health Advisory Committee promoting and facilitating the use of HIA

in developing public policy and reviewing agency experience.

Health (and wellbeing) impact assessment provides policy makers with a useful process to predict whether a proposed legislative or policy change has the potential to achieve effective, fair and sustainable social investment, using health and wellbeing and its distribution as the indicator. Around nine HIAs were undertaken during the two years that the project ran, most being collaborations between local government and the public health sector, with participation by other key stakeholders. They focused on the potential impacts of proposals on the social determinants of health and wellbeing. The HIAs assessed proposals in urban design, an urban transport corridor, two energy scenarios for New Zealand, a regional land transport strategy, and others.

The experience of non-health agencies undertaking HIA was positive, especially for the way the process highlighted unanticipated effects on sub-populations and drew new groups into processes of active engagement with policy development. Agencies found that HIA introduced new information to the policy and improved the understanding and use of information already gathered. It was an effective means of engaging stakeholders and improved understanding of participating organisational roles and responsibilities. This paper will describe this experience in the context of ensuring effective, fair and sustainable social investment.

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Using Rapid Equity Focused HIA to Enhance the Consideration of Health Equity in Policy and Program Development

Ben Harris-Roxas, University of New South Wales, Australia

Patrick Harris, University of New South Wales, Australia

Elizabeth Harris, University of New South Wales, Australia

Lynn Kemp, University of New South Wales, Australia

Equity Focused HIA (EFHIA) has been developed to enhance the consideration of health equity throughout the assessment process. Though equity should ideally be considered in all HIAs, EFHIA may be useful in contexts where an explicit commitment to redressing health inequities doesn't exist. EFHIA provides a framework for considering health equity at each step of a HIA, from screening to evaluation and monitoring.

This presentation draws on the

experience of doing three rapid EFHIAs on policies and programs. The HIAs were all completed in less than one week due to time and resource constraints, with potential impacts primarily identified through expert workshops and literature reviews.

The rapid EFHIAs resulted in (i) health equity impacts being identified that had previously not been considered during needs assessment and/or planning, and (ii) the adoption of a number of health equity related recommendations. The extent to which this has resulted in changes to what is implemented remains unclear and will be investigated in the future.

Though necessarily hurried in nature, rapid EFHIA may be a useful for mechanism for ensuring that health equity issues are considered in pressured or ill-defined decision-making processes, such as policy development, where they might otherwise be forgotten or ignored. Further work in this area will be required if HIA is to be successful in shifting the rhetoric about health equity and healthy public policy into action.

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Improvement of Thai Local Government Planning after Introducing Health Impact Assessment

Uraivan Inmuong, Khon Kaen University, Thailand

Lertchai Charerntanyarak, Khon Kaen University, Thailand

Peter Furu, University of Copenhagen, Denmark

In June 2006, a participatory Health Impact Assessment (HIA) was introduced and applied to the Thai local government planning process in one of the local governments in northeast Thailand. Initially, at the level of Buengnium Sub-district Administrative Organization (SAO) HIA was introduced as a tool for assessing the existing three-year SAO rolling development plan (2007-2009), and subsequently a set of recommendations was established for improvement of the current plan in accordance with the healthy public policy (HPP) concept of the SAO future development plan (2008-2010). The HIA report was eventually submitted to the SAO Planning Committee for use as a resource document to be incorporated in the current SAO development planning process effective during May-July 2007. An introduction of HIA for the assessment of the SAO plan as well as the generation of recommendations for risk management used a participatory approach consisting of workshops, in-depth interviews and

focus group discussions addressing all key stakeholders involved in the SAO development planning process.

This paper presents benefits and limitations when applying the HIA tool assessing an SAO plan with the ultimate goal of increased HPP advocacy in the context of the Thai SAO. The contents of the improved plan associated with the HPP concept of the future development plan (2008-2010) are also highlighted.

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Health Impact Assessment: The Development of Tools to Support Decision Making at East Gippsland Shire Council

Jenny-Lynn L Potter, Deakin University, Australia

Mary Mahoney, University of Gloucestershire, United Kingdom

In early 2004, the East Gippsland Shire Council in Victoria participated as a case study in a 12 month research project funded by the Department of Human Services. The research project aimed to explore how Health Impact Assessment (HIA) could be positioned and applied within local government in Victoria. At the completion of this study they secured funding to develop specialist tools for integrating HIA into their core business.

Their intention was to increase the capacity of both council staff and councillors to make evidence-based decisions that consider, and are informed by, knowledge of their potential health, social and community impacts. Project aims included :

- Develop and customise a screening process appropriate to East Gippsland Shire Council's priorities which would enhance available information about the potential health impacts of their decisions and which would bring awareness of health and social factors to the fore;
- Develop specialist tools that could be used within the daily activities of the Council, and;
- Pilot these tools in appropriate program areas within the council.

The project achieved some very positive outcomes and provided some very valuable lessons for other councils who are seeking to embed these processes in their decision making. This presentation will explain the processes undertaken to achieve the objectives especially the experiences of developing the specialist tools. The outcomes of the project will be discussed in relation to the overall project goals and in regard to the experiences of the East Gippsland Shire Council itself.

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HIA through Health Assembly: Flood Problem Solution at Chiang Mai Province, Thailand

Surasak Buntain, National Health Commission Office, Thailand

During 2005 - 2006, Chiang Mai people were suffered from flooding. While different strategy in flood problem solution between government and people sector became a politic conflict, especially in concrete dam construction's project on Ping River for flood protection. For problem solving, Chiang Mai civil society group called for using participatory healthy public policy process (PHPPP) and applied HIA in the process of health assembly. The end of process show that (1) mechanism - people sector's network for flood problem solution were multiple linkage structure and acted both policy facilitator and policy actor, (2) policy process - HIA took the most important role in policy setting, policy formulate, policy proposal and policy decision making stages, with the combination of HIA and HA, (3) related factors - support factors were strength of leader/group/network organization, academic strengthen, local media and main media, while threaten factors were non-direction growth of Chiang Mai Province, and government tourism policy, (4) public communication - via local medias and main medias, (5) alliance networking - problem and solution form was introduced, follow by development of negotiation process to deliberative process, and then leveling up to be "policy development and follow up" and "policy watch and warm". After established such process, government sector reduced dam construction and maintained only in essential areas. Proposal of people sector was integrated with province plan for flood problem solution.

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The Impact of Local Government Plans on the Health of Australians Living in Coastal Areas

Susan Furber, South Eastern Sydney and Illawarra Area Health Service, Australia

Erica Gray, South Eastern Sydney and Illawarra Area Health Service, Australia

Leonie Neville, NSW Department of Health, Australia

Carolyn Dews, The Cancer Council, Australia

Ben Harris-Roxas, University of New South Wales, Australia

Sarah Thackway, NSW Department of Health, Australia

In Australia there is a growing increase in the number of people moving to coastal areas for lifestyle reasons. Local governments are responsible for providing adequate infrastructure to meet the increase in residents in coastal areas. South Eastern Sydney and Illawarra Health in collaboration with the relevant council have conducted a health impact assessment (HIA) of two local councils' foreshore development plans - the Shellharbour Foreshore Management Plan and the Wollongong Foreshore Precinct Project. A rapid HIA was conducted on the Wollongong plan while an intermediate HIA was conducted on the Shellharbour plan. The purpose of this presentation is to describe the HIA processes undertaken on both plans and to critique the different HIA approaches (ie rapid versus intermediate).

The councils' plans included a range of initiatives to improve their foreshore. Both HIAs explored the impact of the initiatives on physical activity and social cohesion, and in addition the HIA on the Wollongong plan explored access to healthy food. Findings from the two HIAs showed that both councils' plans had the potential to benefit the health of local residents and visitors to the foreshore by increasing physical activity and social cohesion. The HIA on the Wollongong plan found that the plan would most likely have a small impact on access to healthy food. Both councils considered the HIA process to be beneficial. The HIA process is a useful tool for ensuring that the potential impact of foreshore development plans on health is considered prior to the implementation of the plan.

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New Zealand as a Case Study for HIA Roll-out

Robert Quigley, Quigley and Watts Ltd, New Zealand

The development of HIA in New Zealand has made great progress in the last five years. From a base of close to zero, a team of people have developed HIA to a solid position from which much is expected. This is partly due to timing, and partly due to processes. These factors will be explored to outline the critical features of successful HIA roll-out, and the many barriers that still exist will be described. The workshop will involve participants in selecting key barrier and promotion factors.

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Health, Democracy and Human Rights

Daniel JM Tarantola, University of New South Wales, Australia

Examining public health through a human-rights lens means looking at policy, technical and operational aspects of public health interventions as well as at civil, political, economic, social, and cultural factors surrounding them. Empirical evidence and research have established that better health contributes to the realization of such human rights as equality, participation, education, employment and housing, and that promoting these and other human rights through democratic processes contributes to the advancement of health. Health Impact Assessment (HIA) aims at deciphering and forecasting the probable health outcome of public policy and programs. In 1994, Mann and Gostin proposed a framework for Human Rights Impact Assessment (HRIA) as a means to project and mitigate the "human rights burden" created by health policies and programs. Since then, there has been significant progress in the application of HIA and the understanding of the reciprocal interaction between health and human rights. An approach will be proposed for a combined Health and Human Rights Impact Assessment (HHRIA) whereby the outcome of policies and programs could be determined and eventually measured in relation to achieving the optimal balance between desirable health outcome and the fulfilment of human rights. As an example, the human right to participation, enshrined in the aspirational Universal Declaration of Human Rights and the legally binding International Covenant on Civil and Political Rights will be chosen. These documents and others that constitute the International Bill of Human Rights provide a normative content for democratic governance and stimulate interest in exploring avenues for HHRIA.

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HIA in Law: The First Step of HIA in Thailand

Amphon Jindawatthana, National Health Commission Office, Thailand

Somporn Pengkam, National Health Commission Office, Thailand

The ambitious of HIA development in Thailand is rights to health. It has started by public health commissioner of the senate. In 2000, they did national health system report and found many people sick and die from accident, criminal, pollution, AIDS, drug abuse, mental problem, chronic diseases, behavioral

problem etc. Health care system only focus on biomedical and cure diseases. It made system need more finance, ineffective, low quality and inequality. So, the report suggested to reform health system, drafting national health act as a tool for health system reform and mentioned HIA also.

The triangle to move the mountain is a crucial strategy which is a key success factor of drafting the act, including knowledge generation social movement and political linkage. We created collaboration, encouraged participatory learning process through collaborative practice and knowledge management. We had national and regional seminars that invited social leader, civil society, academic and politic sector got involve. Seminar recommendations were conceptual framework of Thais health system that provided a chance to participate in public policy process and create HIA for healthy public policy. The health system reform institute created program for HPP-HIA research and capacity building by doing. So, a cabinet and parliament had strong reasons for contain HIA in the national health act. HIA in law is a first step of HIA in Thailand. A big challenge is HIA institutionalization which public can use for rights to health, HPP, health equity and lead to well being of Thais.

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Tippling Points Creating Momentum for HIA

Jenny Hughes, NSW Department of Health, Australia

Joe Elias, Australia

Venessa Wells, Australia

The NSW Health Impact Assessment Project has aimed to integrate HIA into the NSW health system as a tool to improve internal planning and decision making, and as a way to engage external partners on initiatives that influence health outcomes. One of a number of project objectives has been to build the capacity of the health system to undertake HIA.

The Centre for Chronic Disease Prevention and Health Advancement (CCDPHA) has worked closely with the Centre for Health Equity, Research, Training and Evaluation (CHETRE) to achieve this outcome.

Capacity building strategies have been based on well-accepted theory¹ and have been implemented fairly and equally across all Area Health Services (AHS) in NSW.

So what accounts for observable differences in AHS capacity to do HIA? Is it differences in understanding of HIA? Is

it leaders and champions? Is it individual skills or organisational support at different levels? What has made such a difference in some locations and less in others? What is the ideal combination that creates capacity, momentum and energy?

The paper will examine the different strategies implemented within AHS and describe the differences that have led to a tipping point and a momentum for HIA.

1. NSW Department of Health (1999) A Framework for Building Capacity to Improve Health

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New Zealand's Health Impact Assessment Support Unit

Frances F Graham, Ministry of Health, New Zealand

Paula Hawley-Evans, Ministry of Health, New Zealand

Last year the New Zealand Government approved the establishment of a Health Impact Assessment (HIA) Support Unit within the Ministry of Health to work across central and local government.

The HIA Support Unit will provide advice, guidance and support, through for instance the provision of awareness raising presentations, training sessions (both within the Ministry as well as externally), promotion of the Whanau Ora HIA tool (NZ Maori Health Directorate), facilitation of rapid appraisals and support for new or other ongoing HIAs. The Unit will also provide assistance and advice with capacity building within organisations on policy and project level HIA. It will also have an important championing role.

This paper describes the background to setting up the HIA Support Unit in New Zealand as well as an update to the Ministry's proposed HIA work programme.

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Assessment of the Role of HIA in Sonla Hydropower Project in Vietnam

Doan Noan Ngoc, Ministry of Health, Vietnam

In past two, three decades, Vietnam has build many hydropower projects with scale from tens to thousands of MW such as Thac Mo, Hinh river, Ham Thuan, Tri An, Yaly, Hoa Binh and Sonla.

The advantage of these hydropower projects is great but the costs is not small too. Many dark side were happened of which displace to resettle become hot and complex issues a part from not fully recognition of the other side of the projects.

The Son La Hydropower Project is the largest and most complex dam project

ever built in Vietnam. The project will displace up to 91,000 ethnic minority people, requiring the largest resettlement in Vietnam's history. Most of these people will be moved between 50 to 100 kilometers away from their current homes and without access to the Da River-a source of livelihood for most of them.

The affected people include ten different ethnic groups, of which the Thai people comprise the majority. These people live mainly by the river and practice wet rice cultivation. One of the major concerns is a shortage of arable land for resettling the tens of thousands of displaced people.

In 2003, two pilot resettlement sites were established. Initially heralded by the Vietnamese government as model sites that would dramatically improve the lives of the resettled people, studies have shown the pilot project to be a failure. Resettlers lack adequate sources of livelihood in the new site and have difficulties maintaining cultural practices that were integrally linked to their former lands. People were moved from the river valleys to higher ground where there is no land for rice farming and where they have to learn new methods for growing tea, coffee or raising dairy cows. The change in farming practices has proven extremely difficult for them to adjust to.

According to one village headman, Tong A Ly, "More than two years has passed. The subsidy from the government is over, but we still struggle with how to live. The tea and coffee plants have not been successful, the cows died or were returned to the project. It will take a very long time for us to learn new things, but we understand that we have to learn, otherwise we cannot survive, because things are not like before."

According to law on environmental protection of Vietnam, all of hydropower projects were carried out Environmental Impact Assessment which including HIA before construction. However the role of HIA is not fully concerned consequence many benefits of HIA were not obtained.

In a study conducted by the Vietnam Union of Science and Technology Associations in late 2005 and early 2006, used an inter-disciplinary team of researchers to examine the socio-economic, cultural, environmental and health impacts of the Son La resettlement project. Field surveys were conducted by the study team in the two provinces of Son La and Lai Chau and included 5 districts, 11 communes and 25 villages. The study provides much-needed and new empirical data on how resettlement is impacting project-affected people - pre-resettlement, post-resettlement and in host communities.

Although this study is not complete

follow HIA procedures however some finding on positive aspects, problems and challenges of the resettlement program showed that HIA is important role in this project. In order to minimize negative impact and raise positive impact of the Sonla hydropower project, an assessment of the role of HIA is need to be carried out.

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Health Impact Assessment in Urban Design: Public Health and HIA in Auckland

Jennifer R Lamm, Auckland Regional Public Health Service, New Zealand

Auckland Regional Public Health Service ("ARPHS") is a stakeholder in the "Let's Beat Diabetes" campaign – a 20-year vision and strategy aimed at district-wide, long-term, sustainable change to prevent or delay the onset of Type 2 Diabetes in the Counties Manukau area of Auckland. The Let's Beat Diabetes strategy has been developed with and for the people of the district and goes far beyond the traditional boundaries of the health sector.

For its part, ARPHS undertook to commission a number of Health Impact Assessment to "assess a strategy, policy or project that focuses on urban development, with particular interest in how urban design might contribute to a reduction in obesity levels within the district". The first Health Impact Assessment focused on Manukau City Council's Mangere Growth Concept Plan - a plan linked with Auckland's Regional Growth Strategy. Key agencies including local government, the district health board, the State social housing provider and local community leaders and health workers were involved in the appraisal process, and contributed to the formulation of the recommendations contained in the final report.

A second Health Impact Assessment is underway in another area of Counties Manukau, and again focuses on urban design and physical activity/nutrition and other determinants of health.

This paper will examine the obstacles and outcomes attributable to the Health Impact Assessment process undertaken for Let's Beat Diabetes, and will make suggestions on how to engage the community in the HIA process.

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Health Impact Assessment of a Hospital Redevelopment

Michelle L Maxwell, Sydney South West Area Health Service, Australia

Sharon Peters, Sydney South West Area Health Service, Australia

In 2006, an intermediate Health Impact Assessment (HIA) was conducted on the construction phase of the redevelopment of a major tertiary referral hospital in the Sydney South West Region. The \$390 million redevelopment of Liverpool Hospital was planned to meet the current and projected service activity demands for the rapidly expanding regional metropolitan area, including new residents of the Sydney South West Growth Centre.

The screening phase and consideration of peer-reviewed and grey literature determined that the focus for the HIA would be the construction phase of the redevelopment. The expected outcomes of the HIA were a set of recommendations for the project proponents related to the potential health impacts of the redevelopment on patients, staff, visitors and the local community.

Four key issues were selected as the focus for the HIA – reduced parking for staff, patients and visitors; health and wellbeing of staff and the community; community and patient safety; and increased traffic. Three sources were used to collect information on the health impacts of construction and they were a literature search, a population profile and key informant interviews and consultation.

This paper will report on the outcomes of the HIA and the lessons learned during the conduct of the HIA. It will describe the value and key roles of the Steering Committee and the Project Team to the HIA and how commitment and capacity has been built within the Area Health service to conduct future HIAs.

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The Role of Stakeholders in HIA: Landfill Site and Housing Development in Mundijong Western Australia

Marie E Little, Curtin University, Australia

Jaya Earnest, Curtin University, Australia

Dianne Katscherian, Department of Health, Australia

Jeffery T Spickett, Curtin University, Australia

The use of Health Impact Assessment as a tool to identify and manage issues relating to health has not been widely adopted in Western Australia. Health Impact Assessment methodology was applied to two concurrent developments in the Shire of Serpentine Jarrahdale,

Western Australia. Potential health impacts of the expansion of a sanitary landfill adjacent to a proposed housing development were identified following a literature review and stakeholder interviews. Recommendations to assess the risk to the future community through quantitative analysis, and risk management strategies were provided to the Shire. The ability of an existing stakeholder group for the landfill, the South Cardup Landfill Stakeholder Consultative Group, to resolve concerns of the community relating to environmental and social issues was evaluated. Recommendations to improve collaborative decision making were provided to the Stakeholder Group using the Framework for Democratic Science. The outcomes of the HIA informed the Shire of potential health impacts to assist decision making during the development application process and the design of a local District Structure Plan.

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The Whanau Ora HIA: A Cross-sector Tool with an Indigenous Focus

Gabrielle Baker, Ministry of Health, New Zealand

The Whanau Ora Health Impact Assessment tool (published in April 2007) was developed at the New Zealand Ministry of Health. It was designed for use by policy-making agents outside the health sector, as a tool for evaluating the impact of their policies on Maori health outcomes and for generally addressing health inequalities. The Maori population experiences significantly poorer health outcomes than the rest of the New Zealand population, and this cross-sector tool was devised as part of the New Zealand government's strategic vision to improve this situation. The concept of "whanau ora" is central to this strategic vision; it can be loosely translated as "Maori families supported to achieve their maximum health and wellbeing". The presentation will describe the development and content of the tool, and it will address the importance of the tool's cross-sector design and its distinctive focus on an indigenous population. Included also will be an account of the tool's first pilot usage in 2006, when it was used to evaluate policy concerning drinking water supplies in small communities.

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A Conceptual Framework for Evaluating the Impact and Effectiveness of HIA

Ben Harris-Roxas, University of New South Wales, Australia

Vanessa Rose, Sydney South West Area Health Service, Australia

Judy Proudfoot, University of New South Wales, Australia

Lynn Kemp, University of New South Wales, Australia

Elizabeth Harris, University of New South Wales, Australia

A major challenge facing HIA is to demonstrate its impacts and effectiveness in influencing decision-making. Though recent models for evaluating HIA emphasise prediction, stakeholder engagement and informing decision-makers as the major domains of HIA's impact, they may not adequately reflect the full range of direct and indirect impacts.

This study was undertaken in order to develop a conceptual framework that reflects the range of impacts of HIA and the factors influencing its effectiveness. The study had two major elements: (i) a comprehensive review of the HIA and other impact assessment literature to identify the cited direct and indirect impacts of impact assessments, and (ii) a retrospective case study review of seven HIAs two years after they were commenced, involving document analysis and 20 semi-structured interviews.

This presentation puts forward a conceptual framework that was developed as a result of the study. It identifies contextual, process and impact-related factors that can influence HIAs and are in turn influenced by HIAs. A number of findings about the conditions under which HIAs may or may not have an impact on decision-making will also be presented.

The systematic adoption of HIA as a tool to aid decision-making will remain limited as long as questions relating to its impacts and effectiveness remain unanswered. This conceptual framework may be useful to HIA practitioners, not solely for evaluating the impact and effectiveness of their HIAs but also in helping to identify measures in advance that may enhance their HIAs' direct and indirect impacts.

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Gross National Happiness as a Framework for Health Impact Assessment

Michael W Pennock, Vancouver Island Health Authority, Canada

Dasho Karma Ura, Centre for Bhutan Studies, Bhutan

Ronald Colman, GPI Atlantic, Canada

Gross National Happiness (GNH) is a developmental framework which was developed in the Kingdom of Bhutan and which reflects the Buddhist culture of its origins. It posits a number of determinants of happiness and shares a number of similarities with western concepts of population health and well-being. The population health framework, which was initially developed in Canada, has proven to have limited impacts with respect to fostering cross-sector collaboration in all aspects of health planning, including health impact assessment. The concept of well-being has been suggested as a superior framework because of its ability to meaningfully incorporate the models and priorities of other sectors without allocating health to the dominant role. GNH shares this advantage. It shares many other characteristics with emerging wellbeing models but it also incorporates unique features which may increase its relevancy to non-western and non-industrialized applications. GNH therefore appears to be a promising framework for supporting health impact assessments.

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Translating Diverse Forms of Evidence - The Victorian Experience

Jessica E McCormick, Monash University, Australia

Necia Burford, Department of Human Services, Australia

Grace Blau, Monash University, Australia

Health Impact Assessment (HIA) is being used in policy decision-making in a diverse and rapidly increasing range of sectors. The value of HIA is that it can promote evidence-informed decision-making but 'evidence' remains a highly contested concept. Collecting, collating and assessing the quality of evidence is perceived to be time-consuming and an unfamiliar academic exercise for many professionals who work in demanding and pragmatic environments within local, regional or state governments. Further, HIA is a multi-disciplinary activity, thus the valuing of evidence and the judgments that are made about using it to assist decision-making can be points of disagreement.

The complexities of the contextual and

operational conditions needed for HIAs inclusion within the diverse tiers of government within Victoria have been the focus of several major studies. Increasingly, government staff are being asked to face substantial challenges on a daily basis, as they grapple with new ways of working intersectorally and new styles of planning that require a broader understanding of health. Unique ways of supporting staff to enable health to be considered and planned for in policy making, which is underpinned by the best available evidence, is thus needed.

Within Victoria, support for the translation of diverse forms of evidence within HIA is required. In light of this, Monash University and the Victorian Department of Human Services are developing a guide to using evidence in HIA. This presentation outlines the challenges in developing such a resource, the lessons learnt and its practical utility within regional and local government contexts.

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A Place for Health Professionals in Strategic Planning Processes

Paul M Brookfield, Griffith University, Australia

Darryl C Low Choy, Griffith University, Australia

Human wellbeing is dependant on the health of the global ecosystem. Success in sustaining healthy ecosystems results from effective management of the natural environment at the local level. Dynamics of environmental change, which occur during urbanisation processes, are recognised as having deleterious health effects as much as characteristics of cities themselves. Informed decision-making is central to forecasting likely impacts of urbanisation on the natural environment, and human health. Hence, besides understanding environmental change, incorporation of relevant information about contemporary health issues into urban planning processes is instrumental to advancing public health improvement.

Rather than concentrating solely on built environments, as is commonplace in planning and health research, emergent planning theory should underpin management of the relationship between natural environment, urbanisation processes and public health. A key challenge for health professionals is to understand elements of emergent planning and urban management theories if they are to effectively participate in planning processes, especially at local and regional scales.

This paper conceptualises a cyclic

process and presents principles to guide health professionals' participation in urban planning processes. It considers the dynamics of environmental change and the changing profile of human health to position participation of health professionals within a thesis of structural determinants of urbanisation. It employs adaptive management principles as basis for strategic collaboration between urban planners and health professionals in a flexible planning process which charts fundamental structures within and between complex and ever-changing natural and social systems. Additionally, it educates health professionals about impacts of urbanisation and changing natural environments.

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Urban Sprawl, Physical Activity and Obesity in Sydney, Australia

Frances L Garden, New South Wales Department of Health, Australia

Bin B Jalaludin, Centre for Research, Evidence Management and Surveillance, Australia

Background: There is increasing interest in the effects of urban sprawl on health.

Objective: To examine the association between urban sprawl and obesity, inadequate physical activity and the total number of minutes spent walking per week for recreation, exercise or to get to or from places among adults in metropolitan Sydney.

Methods: An urban sprawl index, at the local government area level, was calculated using the population density in census collection districts. Individual level health outcome data were obtained from the New South Wales Population Health Survey for 2002 and 2003. Multilevel linear and non-linear modeling was used to estimate associations between the sprawl index and health outcomes, controlling for covariates such as age, gender, education, ethnicity, diet, smoking and alcohol use. Results are presented for a 1 unit increase in the sprawl index.

Results: Data were available for 7,389 subjects, in 40 local government areas. The median sprawl index was 20.1 (IQR: 9.0 to 35.7; range: 0.9 to 83.5) with a higher sprawl index denoting a more spread out built environment. Urban sprawl increases the risk of being overweight or obese (OR=1.006, 95%CI: 1.002 to 1.011). Urban sprawl also increases the risk of inadequate physical activity (OR=1.007, 95%CI: 1.002 to 1.012) and decreases the average number of minutes spent walking per week (-0.41, 95%CI: -0.06 to -0.75).

Conclusion: There were small

associations between urban sprawl and overweight/obesity, inadequate physical activity and minutes spent walking, suggesting that we may be able to influence health status through urban design.

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Regional Cooperation on HIA for Developing Countries: The Thailand Experience

Decharut Sukkumnoed, Kasetsart University, Thailand

Wipawa Chuenchit, Healthy Public Policy Foundation, Thailand

Nuntana Sabrum, Healthy Public Policy Foundation, Thailand

This paper will review the past experiences of Thailand in developing the Cooperation Project on HIA for Developing Countries and the lessons learnt from it.

In addressing several health risks and impacts, HIA is found to be a useful tool for multi-sectors in Thai society to come and share their experiences, knowledge, and concerns and also to support a participatory, healthy public policy process. However, it has been manifest that some risks and impacts do not limit themselves only within a national boundary. Accordingly, there is the need for transboundary collaboration on the management of them.

In the realm of HIA, Thailand has developed the international cooperation through a)organizing and participating in conferences, workshops, and training courses b)publishing books, articles, and newsletters and c)awarding grants for HIA case studies. The aims of these are to strengthen the capacities, to share experiences and knowledge and to address common health issues, with the emphasis on the experiences of developing countries, where rapid and gradual socio-economic changes affecting the environment and people's health are multiplying and where HIA has just been introduced to predict and prevent those impacts.

The first-year collaboration was targeted at the neighboring countries of Thailand in Southeast Asia, while it is hoped to engage more from other regions in the next years. At the end of this paper will be proposed the future action plan for HIA development in developing countries.

This project is provided the financial support by the Thai-health Global Linkage Initiative Program, Thai Health Promotion Foundation.

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Building Capacity for HIA in the Greater Southern Area Health Service

Sabrina A Brown, Greater Southern Area Health Service, Australia

Andrew J Gow, Greater Southern Area Health Service, Australia

Developing strong networks and partnerships to address the social determinants of health is a focus for Greater Southern Area Health Service (GSAHS), Health Development. Increasing the capacity internally and externally for others to undertake Health Impact Assessment (HIA) is a strategy which addresses the social determinants of health through improved planning and decision making.

Nine staff of GSAHS had previously undertaken HIA training in Sydney conducted by the Centre for Health Equity Training, Research and Evaluation (CHETRE). To build on this capacity locally, invitations were extended to stakeholders from within and external to the GSAHS, to participate in HIA training.

The training combined theoretical and practical components, with participants exploring the Screening and Scoping steps of HIA. The aims of the training were to: embed HIA in the GSAHS; engage external partners; promote inter-sectoral collaboration and build knowledge and skills for HIA.

Thirty four participants attended the training, facilitated by CHETRE and supported by five members of the Health Development team who had previously undertaken HIA training. The training provided an opportunity for dialogue between sectors, establishing contacts and building a shared understanding of health.

Pre and post evaluations showed that participants had increased their knowledge of HIA. Post evaluations were positive, although several participants felt more time was needed to explore all the steps of HIA. There was expressed interest from health and local government to proceed with a HIA.

This presentation describes the process and outcomes of this capacity building strategy and future directions for supporting HIA in GSAHS.

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Building from the Ground Up: Five Years of HIA Capacity Building*Ben Harris-Roxas, University of New South Wales, Australia**Patrick Harris, University of New South Wales, Australia**Elizabeth Harris, University of New South Wales, Australia**Lynn Kemp, University of New South Wales, Australia*

Ensuring the long-term sustainable use of HIA is a critical challenge facing practitioners and governments, particularly in contexts where HIA is poorly resourced and marginally institutionalised. Experience from several countries suggests that concentrating HIA capacity may result in only sporadic use and leave it vulnerable to changes in policy direction. Building widespread capacity to undertake HIA plays an important role in embedding HIA.

The New South Wales Health Impact Assessment Project has been a five year capacity building project that sought to strengthen the ability of government to undertake HIAs on a range of proposals. A feature of the project has been a "learning by doing" approach, which has involved supporting partnerships between health and other sectors to undertake HIAs on policies, programs, plans and projects.

This presentation will detail a number of barriers, facilitators and strategies for embedding HIA, based on experience in New South Wales. These include:

- The type of practical support and resources required to successfully complete a HIA;
- How capacity to undertake, commission and appraise HIA can be spread more widely;
- Reconciling HIA's role in relation to other assessment processes;
- Methods that can be used for enhancing the effectiveness of communication strategies;
- The networks that are required in order for HIA to be more widely used;
- How to develop individual capacity beyond introductory knowledge to a quantum increase in HIA-related skills.

Many of the strategies identified will be useful for HIA capacity building work in other contexts.

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Health Impact Assessment - Capacity Building Towards Healthier Public Policy in Victoria*Necia Burford, State Government of Victoria, Australia**Jessica McCormick, Monash University, Australia*

In Victoria as part of phase 3 developments a capacity building program has been undertaken to support the use of health impact assessment as a tool for healthier public policy in the Department of Human Services Public Health Branch. It has been applied in the eight regions and across local governments in the state. The program has focused on 'learning by doing' with health promotion and public health workers as the key audience.

This presentation will provide an overview of the results of this program. Two key themes will be covered in these discussions: how HIA has made it possible for health promotion and local government (non-health sector) workers to collaborate and address the social determinants of health: and how the focused capacity building program fostered a participatory data collection approach and at the same time, social learning by practitioners.

The paper provides an opportunity to reflect on the utility of health impact assessment and to map its ongoing success in Victoria. HIA encourages participants and practitioners to think about the factors that influence their health and how they can increase control over these factors and to challenge accepted interpretations.

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Incorporating Health Impact Assessment into the Broader Impact Assessment Framework*Bryce Skarratt, GHD Pty Ltd, Australia*

An impact assessment study is the primary evaluation instrument for considering environmental, social and economic issues in the planning approvals process. In principle, the study should consider the holistic impacts and benefits, to allow assessment agencies to determine the net benefit or otherwise of a proposal. The scope of impact assessment studies has been gradually increasing, particularly the social elements, with community engagement and Social Impact Assessment becoming more prominent. Health Impact Assessment (HIA) is another aspect gaining greater standing.

The broadening of the assessment

scope has been in part driven by increased community awareness and activism. Community groups are more vocal and are prepared to drive the assessment process, particularly where there are perceived health implications. Communities now have greater access to both legitimate health impact literature as well as less reliable sources, particularly via the internet. The assessment author needs the tools to help assess the risks, implications and mitigation as they relate to health impacts.

For controversial projects, the HIA is often a critical component but one of the hardest to assess and make available to the community in a meaningful way. A lack of understanding as to how it fits into an impact assessment is a key issue. This paper explores some recent impact assessment examples and the difficulties in balancing emotions and science when incorporating HIA into an assessment framework. Suggestions as to how the two can be better integrated to deliver superior outcomes are discussed, including the need for statutory requirements.

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Incorporation HIA in the Thai EIA System*Yanyong Inmuong, Mahasarakham University, Thailand*

The current EIA system practiced in Thailand focuses mainly on assessment of the biophysical impacts possibly caused by any proposed development project. Four key assessment components guided by the Ministry of Natural Resource and Environment (MORE) are physical, biological, human-use value and quality of life (QOL), while required the EIA practitioners to follow. The health impact assessment (HIA) is being one of the QOL assessment topics, while later found not sufficiently documented. The current HIA practice within the Thai EIA system largely emphasizes profiling community health outcome status and services as well as occupational health and safety services during the construction period, while possible community health hazard-risk-health management plan due to the proposed project are not much addressed. During the past three years, many civic and impact groups living around the industrial sites were demonstrating and requesting the government to reform the country EIA system, aiming at the country EIA system revision to include sufficient health impact study within the EIA report. This paper explores key health assessment issues done by some of the past EIA

reports, as well as the likely missing of HIA meanings and methods. The current attempts of MONRE in development of HIA incorporated into the EIA system are also described.

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Drivers, Processes and Challenges Faced by the Private Sector when Developing and Implementing an Internationally Recognised HIA

Samantha McCrea, Environmental Resources Management Australia Pty Ltd, Australia

Analysis and management of health impacts associated with projects, be they oil and gas related or transport etc, has become as important as the management of environmental and social issues. A reflection of this is the growing recognition of health as a basic human right in recently published standards and guidelines, for example in the IFCs Performance Standards.

HIA provides a means to more informed decision making, investigating potential health outcomes of a project, delivering evidence based recommendations geared to informing the decision-making process as to practical ways in which to maximise health gains and reduce or remove negative impacts or inequalities.

In doing so HIA can support or enhance projects by identifying potential barriers, and facilitates greater integration and co-ordination across sectors by identifying new opportunities to protect and improve health. The growing trend in preventative health measures such as HIA is now seen not only as the most ethical means to good health and well-being, but also the most cost effective.

ERMs HIA experience is extensive, ranging from the world's first HIA of an Olympic Games bid through to major international oil and gas projects in Africa, the Middle East and Asia. ERMs practical project experience in HIAs has largely been associated with the private sector, primarily with clients in the oil and gas sector. Therefore ERMs presentation will provide an insight into the drivers, process and key challenges faced by the private sector when developing and implementing an internationally recognised HIA.

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Consideration of Health and Wellbeing in Environmental Impact Assessments in New South Wales, Australia

Patrick Harris, University of New South Wales, Australia

Elizabeth Harris, University of New South Wales, Australia

Susan Thompson, University of New South Wales, Australia

Ben Harris-Roxas, University of New South Wales, Australia

Lynn Kemp, University of New South Wales, Australia

Roger Lyle, University of New South Wales, Australia

Background:

Coverage of health within Environmental Impact Assessment is an area of increasing importance globally. Australia has been an international leader in assessing the potential health impacts of proposals for urban development through the production of Environmental Impact Assessments (EIAs). However evidence from other developed countries suggests that health is covered poorly in such Assessments.

This presentation will report on research findings, the first of their kind in Australia, that investigate how and to what extent health impacts have been considered in environmental assessments of major projects required under New South Wales legislation.

Approach and results:

The presentation will discuss:

- (i) the development and application of an audit tool to systematically assess consideration of health and wellbeing in EIAs
- (ii) the contribution of a cross disciplinary team from the health and planning sectors
- (iii) a comprehensive investigation of the extent to which health and well-being have been considered in environmental assessments of major projects in NSW between 2006-2007
- (iv) future cross-disciplinary research on the coverage of health and wellbeing issues within environmental impact assessments.

This presentation will provide a deeper understanding of what aspects of health are covered in Environmental Assessments of major projects in NSW, and offer strategies to better integrate health and wellbeing into such EIAs.

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Evaluation of Effect of Urban Air Pollution Due to Motor Vehicle on Community's Health and Recommendation of Intervention

Bao Nguyen Duy, National Institute of Occupational and Environmental Health, Vietnam

The project was conducted in Hanoi city where the air pollution due to motor vehicle became emerging problem. The severity of air pollution was evaluated in some busy roads and crossroads in term of dust, fumes, toxic gases, e.g. gasoline. The projects were carried out in 2004-2006 at hot and cold seasons. The contents were to determine urban air pollution levels and evaluate health impact on community through interview, health investigation, morbidity and mortality; clinical examination and test. Measures work out to protect environment and community's health based on study document.

The results showed that some factors such as dust (total, PM.10, PM.5), CO, SO₂, NO₂ exceeded 1,4-11 times of MAC, especially in hot season, the concentrations were higher than those in cold season. Noise exceeded 3,2-9,5 dBA of TLVs at the day and exceeded 25,6-26,5 dBA of TLVs at the night.

Air pollution due to motor vehicle that impact on health of community were manifested in the rate of symptoms on various compartments of the human body: respiratory injuries, central nervous system and vegetative nervous system, signs of cardio-vascular pathology, eye, nose, throat, skin in the study group was higher than control group with OR = 1,18-4,25; P<0,05 to P<0,001.

Some intervention measures were carried out. The total dust concentrations reduced 5,3 times; PM.5 reduced 3,7 times in the main road; 1,7 times and 1,8 times in the crossroad respective.

The authors recommended some preventive measures to minimize air pollution and maintain clean air in the Hanoi city.

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Reaching Men with IEC to Improve their Knowledge and Participation in Reproductive Health: Lessons Learned from Tribal Population of Central India

Kalyan Brata Saha, Regional Medical Research Centre for Tribals (ICMR), India
Arvind Pandey, National Institute Medical Statistics (ICMR), India

In a society like ours predominated by the males, declining sex ratio for females, increasing number of women with sexually transmitted infection including HIV, increasing unintended pregnancies and induced abortions including unsafe abortions, higher IMR, suggests that women bear the brunt and carry the burden of reproductive ill health which can be prevented to a certain extent by active participation of men. This issue of male involvement in reproductive health is strongly addressed in the ICPD conference in 1994 and also at Beijing conference, China in 1995. Though Government of India has endorsed the ICPD agenda and some attempt has been made to carry forward this agenda. However, male involvement in reproductive health is still a new concept for the planners. The study was undertaken among the Baiga tribe of Central India. Need based IEC strategy was designed and its intervention was made by adopting a before and after with control design. The estimated net intervention effect shows that there is progressive improvement of men's knowledge and awareness to RTI/STI/HIV, modern family planning and its use, antenatal care, government health services and its use. Thus it is evident that the IEC strategy adopted in the study does have an effect in improving the knowledge, attitude and utilization/participation of the male in the reproductive health and similar strategy may be replicated in other Baiga villages for wider male participation for improving reproductive health among the tribe.

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Sustainability and Health Impact of a Community-based Falls Prevention Program in Minority Communities

Meryl Lovarini, University of Sydney, Australia

Lindy Clemson, University of Sydney, Australia

Mark Mathews, University of Sydney, Australia

Cath Dean, University of Sydney, Australia

Sustaining the health and well being of older people is a key priority for the Australian Government. The population

of people aged 65 years and over will rise significantly in the future and with it a rise in the number of people at high-risk of falls and fall-related injuries. Falls prevention programs based on sound research evidence are needed. However, for these programs to be sustainable the health impact of these programs must be assessed.

To address these issues, a project that aims to develop the sustainability of a falls prevention program for community dwelling older people from disadvantaged and culturally and linguistically diverse (CALD) communities is currently underway in Western Sydney, Australia. Local organizations are being trained and supported to adopt, implement and sustain the Stepping On community-based falls prevention program in their communities. The efficacy of the Stepping On program has been established in a randomized trial which showed the program significantly reduced falls, increased confidence in mobility and the participants used more protective behaviours. This current project is assessing the implementation and sustainability of Stepping On in a variety of organizational contexts.

Evaluation is being conducted using the RE-AIM Framework, a systematic approach for the evaluation of public health impact and translatability of health interventions. Key features of the RE-AIM Framework are the assessment of health intervention Reach, Efficacy, Adoption, Implementation & Maintenance.

This presentation will describe the project, discuss the use of the RE-AIM Framework as a health impact assessment tool and provide preliminary results.

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Contraceptive Intention of Scheduled Tribe Women in Unmet Need: Experience from Reproductive and Child Health Survey at Madhya Pradesh

Uma Chatterjee Saha, Xavier Institute of Development Action and Studies (XIDAS), India

Kalyan Brata Saha, Indian Council of Medical Research, India

The family planning programme in India in spite of its good effort from the planners fail to achieve its target of arresting the population growth within stipulated time frame. One of the important reasons for the same is that people to a great extent could not maintain a consistency in reproductive intentions and their intentions to use contraceptives, result in such failure of the program. The paper explored the RCH data set (2004) and extracted the sample of 3015 Scheduled

tribe (ST) women in the state of Madhya Pradesh and estimated the unmet need for spacing and limiting among the Scheduled Tribe women in Madhya Pradesh. It further tried to assess the contraceptive intention and the method-wise awareness of contraception among them and finally to identify some important determinants of consistency in contraceptive intention among the women in unmet need for contraception in MP. The paper has its practical implication in success of family planning program to minimize the inconsistencies in contraceptive intention and consequent use among ST women in unmet need for family planning.

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Muddled Child Health in Indian Slums : An Integrated Model of its Sustainability

Digvijay Singh Rajput, Xavier Institute of Development Action and Studies, India

Gopal Prasad, Xavier Institute of Development Action and Studies, India

Health is one of the major concerns for a developing country like India. Realizing the fact the present paper tries to analyze the health of children in slum areas. It presents a vivid picture of the Central and western parts of India. It offers a model of sustainability for the health programs. The public and the private organizations working in this field may adopt this model for achieving sustainability of the program.

The main reason for the poor health condition of children in slums are lack of sanitation, child education and awareness of both the children and their parents, lack of healthy food and nutrition, hard and unhealthy work environment, propensity of getting trapped in bad habits, ignorance by parents. Beside, the poor policy formulation and implementation strategies of government lack of facilities and improper management in government hospitals, inadequate media support and isolation paradox has worsened the situation.

This paper has to offer an integrated analytical model which may provide a solution of the problem at various level viz. school, parents, society, and at large government, policy, media and civil society.

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Healthcare Assessment Methodology in Developing Country*Shambhu D Joshi, Nepal Medical College Teaching Hospital, Nepal**Rajan P Bhandari, Community Health and Environmental Society, Nepal**Suraj Sukla, All India Institute Of Medical Sciences, India**Kalpna Panday, Community Health and Environmental Society, Nepal*

ISSUES: Healthcare assessment system in Nepal is still take long time and high cost. Collection of data about prioritization of community health problems by the community is essential for planning and monitoring of programs and interventions for improving community health status. Scientific Rapid Community Health Assessment(RCHA)Methodology needs to be validated in rural community developing country like Nepal which is economic and less time consuming.

METHODS

STUDY AREA: 14 Villages of rural areas.
STUDY POPULATION: 34 Primary School Teachers from 10 randomly selected Primary Schools in above villages.

(One Teacher each from Class I to V, in each School). **VALIDATION:** Heads of households from 500 Households (50 per village, systematically sampled). **DATA COLLECTION TECHNIQUE:** Self-Administered Questionnaires for Teachers, Interview-Schedules for Heads of Households. **DATA ANALYSIS:** with the help of EPI info program.

RESULTS: There was significant correlation between the responses of the school-teachers and heads of households on community health problems viz., (a) the prioritization of ten village problems ($r=+0.77$, $p<0.02$), (b) prioritization of utilization of services of various health functionaries for treatment of and advice for children's illnesses ($r=+0.75$, $p<0.05$), and (c) prioritization of households using water from different sources ($r=+0.975$, $p<0.02$). The method was also found to be more rapid (3.3 times) and less costly (6.3 times) compared to the traditional household survey method.

CONCLUSION: This methodology for prioritization of community health problems in a rural community is validated. The information thus obtained can be utilized for purposes of health policy and program planning, monitoring and evaluation. This is especially relevant for micro planning of child health services in developing countries.

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Health Impact Assessment of Corporate Activities*Yoshihisa Fujino, University of Occupational and Environmental Health, Japan**Koji Mori, University of Occupational and Environmental Health, Japan**Shigeyuki Kajiki, University of Occupational and Environmental Health, Japan**Naomi Kuroki, University of Occupational and Environmental Health, Japan**Shinya Matsuda, University of Occupational and Environmental Health, Japan*

Japanese firms have been encouraged to undergo transformation in response to prolonged economic depression and globalization since the 1990's. For example, business societies have experienced business consolidation, restructuring and job cuts more often than they did before. Recently, many companies have terminated the practice of lifelong employment and seniority-based promotions which are traditional in the Japanese employment practices; in contrast, the performance-based pay system has become more common. A number of corporate activities may have a significant impact on the health of employees, their families and the community. However, these activities are generally implemented based on business objectives, rather than for health and safety reasons. In addition, very few opportunities exist even for occupational health professionals to implement business-related health issues.

Targeting business-related issues which potentially affect the health of people including workers, their families and communities, this project intends to introduce the concept of health impact assessment (HIA) into the business area. This project aims to recognize the health impacts resulting from the corporate activities and to develop a screening tool for these activities.

Initially, we interviewed occupational physicians and, through their experiences, collected information on corporate activities which affect the health of workers and a more general population. Several issues arose at this stage, including business consolidation, employment policy, a change in the promotion system, working hour regulation, factory closure, restructuring and job cut. We will examine the ability of HIA to facilitate the management of these corporate activities that potentially affect the health of people.

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Development of Training Model and Capacity Building for Health Impact Assessment; Case study on Agriculture Chemical in Thailand*Kornwipa Punnasiri, Ministry of Public Health, Thailand*

The objectives of this project were to establish a capacity building in HIA using the model developed to strengthen the skill of all participants, to increase their knowledge and enable them to effectively participate through a problem-based learning process using a pilot project. The HIA training model was particularly designed for related personnel including academia, health officers, local authorities, agricultural officers, university faculties, and others interested in HIA. It followed by the step of HIA process (Screening, Scoping, Appraisal, Decision-making and monitoring and evaluation) and consisted of 2 parts: Theoretical and practical part which was developed in suitable process for the Thai context.

The pilot project examined the use of agriculture chemicals in orange farming which was an important problem in many areas in Thailand. The aim is to make recommendations to prevent problems from occurring in the future by encouraging multi-sector participation from relevant sectors including the health sector, agricultural sector, local organizations, education sector, NGOs and public sector. The training workshop was follow the step of training model process, carried out through a problem-based learning process using a pilot project designed to be performed by the workshop participants.

The recommendations of this project were should to develop a various training model that appropriate in different levels (Community, Local, Regional and Central level) and to maintain ongoing capacity building in HIA process within different level in Thailand.

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Health Impact Assessment of Kwaenoi Dam in Phitsanulok, Thailand*Piyamaporn Duangmontri, Ministry of Public Health, Thailand*

Although dams have beneficial effects, they are also as having serious health impact if are not properly managed.

The objective of this work was to assess the impact of the Kwaenoi Dam (construction phase) in Phitsanulok, Thailand on the health of people in 6 villages and dam worker living near a head of dam site. The communicable disease, non-communicable disease, injury and life style were measured with

questionnaire and specimens analysis. The results showed that the health risks of people and dam worker were infected to communicate disease such as malaria, diarrhea and worm disease. The total particle was increased which maybe leads to non-communicable disease. The traffic and occupation was caused of death and injury of people and dam workers. The life style of people in community was changed to comfortable due to civilization. This study, we recommended that the source of infectious disease and safety should be first priory management for dam construction.

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The Coffs Harbour 'Our Living City' Settlement Strategy – A Health Impact Assessment (HIA)

Andrew M Tugwell, North Coast Area Health Service, Australia

Pam Johnson, Australia

The North Coast Area Health Service (NCAHS) is participating in Phase 3 of the NSW HIA Project 2005 -2007 being rolled out by the Centre of Health Equity Training, Research and Evaluation (CHETRE), based at the University of New South Wales. NCAHS Health Promotion and the Coffs Harbour City Council will be conducting an HIA on the Coffs Harbour City Council's 'Our Living City Settlement Strategy'. Screening and scoping meetings will be occurring in July and August. The steering committee will review the Strategy and make a decision identifying 3 key areas to focus the HIA work. The HIA is being conducted as a rapid HIA so the aim is to focus on a limited number of identified issues. Issues discussed at the initial introductory meeting held between the NCAHS team, the Coffs Harbour City Council team and representatives from CHETRE included, the role of public transport, future settlement patterns and access issues in relation to health services. As a result of HIA process it is anticipated that a set of evidence based concise and action orientated recommendations are made that may assist in adding to the positive health impacts from the Strategy and reducing or eliminating the unintended negative health impacts.

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Status of Health Impact Assessment in Korea

Young Soo Lee, Korea Environment Institute, Korea

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Korea has its own EA(Environmental Assessment) system, that is PERS(Preliminary Environmental Review System) and EIA(Environmental Impact Assessment). But consideration of health in PERS and EIA has not been taken seriously. So, in order to investigate and minimize adverse impacts on health resulted from the implementation of plan and project systematically, Ministry of Environment(MoE) of Korea recently promulgated Environmental Health Act. In this Act, there is a clause related to implementation of Health Impact Assessment(HIA) in 2010. Additionally, it is expected that the target projects of HIA will be chosen among those of PERS and EIA. And for the efficient HIA implementation, MoE has launched a research project focused on implementation method as well as discovery of demerits weakening HIA implementation. To find out efficient implementation method, two scenarios(adoption of new HIA act and integration of HIA into existing EA) were scrutinized. Finally, we concluded that, at this time, integration of HIA into existing EA was more efficient than adoption of new HIA act. Furthermore, we did HIA for landfill site extension, waste incinerator construction and industrial complex development as a pilot study to measure possibility of HIA implementation and to identify weak points such as lack of data, methodology, etc. The weak points identified are that there are few data for quantitative analysis like RfC or RfD of hazardous air/water pollutants, dose-response relation for sound etc. for Korean people. To develop proper data and methodology for HIA, MoE will start another research project concerned with power plant etc.

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Effects of Different Bed Media on Nitrogen Removal in Constructed Wetlands Treating Faecal Sludge

Hoa Thai Nguyen, Asian Institute of Technology, Vietnam

The faecal sludge disposal situation in urban areas in many developing countries is dramatic. Beside that, faecal sludge management has been received little attention. Being low-cost and low-technology system, eco-technology approaches like "constructed wetland" are now standing as potential alternative for the treatment of wastewater as well as faecal sludge. In a constructed wetland, substrata are the essential components in supporting of growth of emergent plants, attached-growth microorganisms and in the hydraulic conductivity. Expenditure on conventional constructing materials such as conventional ones are soil, sand and gravel contributes as a major part of the total cost for construction of the investment of a constructed wetland. Hence, in order to reduce the cost of the construction, five lab-scale constructed wetlands were installed with different substrates such as gravel, uniform-shape plastic, broken brick, plastic fragment and charcoal in this study. The experiments have been conducted by using five constructed wetlands planted with cattail (*Typha augustifolia*) and operating in a vertical-flow mode. Nitrogen (N) transformation was determine in these 5 constructed wetland units based on measuring TN, TKN, NH₃-N, NO₂-N, NO₃-N in raw faecal sludge and the effluent, nitrification/denitrification rate and N mass balance. Related microbial communities (ammonia-oxidizing bacteria, nitrobacter and denitrifier) were also analysed by using Fluorescence In situ Hybridization (FISH) method. Faecal sludge has been feed with solids loading rate of 250 kg TS/m².yr and 7-day percolate impoundment. Constructed wetlands were found which not only used low-cost substrate but also could achieve high N removal efficiency.

