Overview of HIA Development in the Western Pacific Region

Hisashi Ogawa
WHO Western Pacific Regional Office
History of WHO Support, 1980-2000: From EIA to EHIA

Development of EIA systems in developing countries, 1980s-early 1990s

ADB’s HIA guidelines, Nov. 1992

WHO Regional Workshop on EHIA, Nov. 1993

WHO/Com Sec EHIA workshop, 1995

Country workshops, 1994-1997:

National guidelines on EHIA, 1995-2000:
   Malaysia, Papua New Guinea, Philippines

National guidelines on EHIA, 1995-2000: Malaysia, Papua New Guinea, Philippines

National guidelines on EHIA, 1995-2000: Malaysia, Papua New Guinea, Philippines
History of WHO Support, 2000-2010: From EHIA to HIA

- Conducting HIA of environmental hazards*, 2000-2005: China, Fiji, Lao PDR, Malaysia, Mongolia, Philippines, Viet Nam
- Global HIA of Environmental and Occupational Risks**, WHR 2002
- WHO Regional Workshop on HIA of Environmental Hazards, Aug. 2003
- Regional Forum on Environment and Health in Southeast and East Asian Countries, 2004-Present
- Environmental Burden of Disease estimates**, 2006
- Asia-Pacific HIA Conference, 2007-Present
- Development of national capacity and policy for HIA, 2003-Present: Cambodia; Lao PDR; Mongolia; Viet Nam
- Regional Forum’s Thematic Working Group on HIA, 2010
- National strategy for EHIA, Solomon Islands, 2009
HIA of Priority Environmental Hazards in Countries

• China, 2001 – Environment and People’s Health (urban air pollution; water pollution; and pollution from small industries)

• Fiji, 2003 – An Assessment of Health Impacts from Environmental Hazards (water supply; air pollution; and chemical and hazardous waste)

• Mongolia, 2003 – Assessment of Health Impacts from Environmental Hazards (air pollution, water contamination)
HIA of Specific Environmental Hazards

- Malaysia, 2004 – A Study of Health Impact and Risk Assessment of Air Pollution in Klang Valley
- Mongolia, 2004 – Health Risk Assessment of Indoor Air Pollution in Ulaanbaatar
- Philippines, 2004 – Public Health Monitoring (A Study under the Metro Manila Air Quality Improvement Sector Development Programme)
- China, 2005 – Climate Change, Climate Variability and Health
- Lao PDR, 2007 – Investigation of Indoor Air Pollution and Relationship to Housing Characteristics and Health Effects
HIA of Environmental Hazards in Development Sectors

- Regional EST (Environmentally Sustainable Transport) Forum, 2004 onwards
  - Providing inputs on public health concerns
  - Supporting the health sector participation in national and regional EST forums
  - Environmentally Sustainable and Healthy Urban Transport (ESHUT) since 2009
- China, 2005 - Transport and Health (traffic-related air pollution; noise; road traffic injuries; and physical activity)
- Viet Nam, 2005 – Health and Environmental Impacts of Pesticide Application
- Regional Workshop on Health and Environment Linkages (HELI) in Agriculture, 2006
Global Estimates of Health Impacts from Specific Environmental Risks

- Published in “World Health Report 2002: Reducing Risks, Promoting Healthy Life”
- Estimated mortality and DALYs attributable to specific environmental and occupational risks by region and sex
  - Environmental risks - unsafe water, sanitation and hygiene; urban air pollution; indoor smoke from solid fuels; lead exposure; climate change;
  - Occupational risks - risk factors for injury; occupational carcinogens; air borne particulates; ergonomic stressors; noise
- Method used – Comparative quantification of health risks (exposure-based)
Environmental burden of disease estimates

• Published in “Preventing Disease through Healthy Environments, 2006”
• Estimated mortality and DALYs attributable to all environmental risks by region and disease (acute respiratory infection, diarrhoeal diseases, cancer, COPD, etc.)
• Country profiles

## New Zealand

Population: 4 mio  
GNI/capita: 26340 US$  
% urbanization: 80%  
% people living in cities greater than 100,000 inhabitants: 70%  
Population below the poverty line (national): NA  
Population below the poverty line (international, <$1/day): NA  
Life expectancy: 80 years (2006)

### Environmental burden of disease for selected risk factors, per year

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Exposure</th>
<th>Deaths /year</th>
<th>DALYs/1000 cap /year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water, sanitation and hygiene (diarrhoea only)</td>
<td>Improved water: NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Improved sanitation: NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor air</td>
<td>SFU: % households: &lt;5%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Outdoor air</td>
<td>Mean urban PM10: 16 μg/m3</td>
<td>&lt;100</td>
<td>0.0</td>
</tr>
<tr>
<td>Main malaria vectors</td>
<td>No transmission</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Main other vectors</td>
<td>None</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

### Environmental burden of disease (preliminary), per year

<table>
<thead>
<tr>
<th>DALYs/1000 cap</th>
<th>Deaths</th>
<th>% of total burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World - lowest: 13, highest: 264)</td>
<td>4600</td>
<td>14%</td>
</tr>
</tbody>
</table>

### Environmental burden by disease category (DALYs/1000 capita), per year

<table>
<thead>
<tr>
<th>Disease group</th>
<th>World's lowest country rate</th>
<th>Country rate</th>
<th>World's highest country rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhoea</td>
<td>0.2</td>
<td>0.2</td>
<td>107</td>
</tr>
<tr>
<td>Respiratory infections</td>
<td>0.1</td>
<td>0.1</td>
<td>71</td>
</tr>
<tr>
<td>Malaria</td>
<td>0.0</td>
<td>-</td>
<td>34</td>
</tr>
<tr>
<td>Other vector-borne diseases</td>
<td>0.0</td>
<td>-</td>
<td>4.9</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>0.0</td>
<td>0.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Other cancers</td>
<td>0.3</td>
<td>2.3</td>
<td>4.1</td>
</tr>
<tr>
<td>Neuropsychiatric disorders</td>
<td>1.4</td>
<td>1.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>1.4</td>
<td>2.6</td>
<td>14</td>
</tr>
<tr>
<td>COPD</td>
<td>0.0</td>
<td>2.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Asthma</td>
<td>0.3</td>
<td>1.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Musculoskeletal diseases</td>
<td>0.5</td>
<td>0.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Road traffic injuries</td>
<td>0.3</td>
<td>0.6</td>
<td>15</td>
</tr>
<tr>
<td>Other unintentional injuries</td>
<td>0.6</td>
<td>1.6</td>
<td>30</td>
</tr>
<tr>
<td>Intentional injuries</td>
<td>0.0</td>
<td>0.7</td>
<td>7.5</td>
</tr>
</tbody>
</table>

### Other indicators

- Use of leaded gasoline: No (2008)
- Overcrowding: 1% (2001)
- Malnutrition (% stunting): NA
Use and Benefits of HIA of Environmental Hazards and EBD

• HIA of environmental hazards provides information for prioritizing environmental health problems and locations of the problems in the country, the Region, the area, or the development sector assessed.

• It, therefore, supports the arguments for recommending policy options.
Sustainable Development and Health

Economic

Environmental

Social

Health Impact
Institution and Policy Development

• EHIA Division of EHS in the Philippine DOH in 1993
• HIA Unit in MOH, New Zealand
• HIA Division in MoPH, Thailand
• National Policy on HIA in Lao PDR, 2006
• National Policy and Strategy on HIA in Cambodia and Viet Nam
• Proposed HIA Act in Republic of Korea
Way Forward

- Develop systems and strengthen capacity for EHIA (HIA in EIA) for some developing countries (e.g. Pacific island countries)
- Develop capacity for HIA of priority environmental hazards, including HIA of development sectors, in developing countries
- Further develop HIA of social and economic determinants
- Further develop HIA policies and institutions in countries of the Region