Integrated Programme for Better Air Quality in Asia (IBAQ Programme)

CITY SOLUTIONS TOOLKIT:

INTER-AGENCY COLLABORATION FOR HEALTH IMPACTS ASSESSMENT

BACKGROUND INFORMATION

In air quality management (AQM), a Health Impacts Assessment (HIA) is a process of assessing to what extent an event, scenario, intervention, or control measure related to air pollution affects health. Conducting an HIA involves AQM practitioners as well as medical and public health experts, and uses different approaches and tool/s which facilitate the process (see modules on Stages and types of health impacts assessment for cities and Health impacts assessment tools for cities).

With the aid of tools and technical expertise of a dedicated working group, executing an HIA analysis may not require the involvement of a significant number of stakeholders. However, the input data required to feed into the analysis involves several entities. In assessing the health impacts of air pollution to the public, the minimum requirement for a technically sound analysis would be information on the occurrence of death (mortality) or diseases (morbidities) in the study area, which can be derived from the National or City Health Office. Another key data input would be air quality data and emissions data, which can be obtained from the National or City Environment Office. If economic impacts due to health costs are to be considered, local data from the National Economic or Development Agency would also be helpful.

Since the protection of public health is a priority in all national and local governments, heads of agencies and decision makers also play a key role in integrating the HIA outcomes in their decision making process or policy development. An HIA requires the engagement of several agencies to ensure efficient collection of data for analysis. All agencies involved have key roles in implementing actions to reduce air pollution for the benefit of public health (See module on Step-by-step guide for cities to develop clean air action plans).

This module highlights inter-agency collaboration especially in conducting an HIA. The ability to link health and environmental data to understand relationships between levels of exposure and health outcomes is vital in managing the impacts of poor air quality on health. With this document, AQM practitioners and relevant stakeholders would learn the advantages of collaboration in conducting an HIA. Processes and examples of inter-agency interactions towards HIA development are presented, together with a summary of challenges and suggested solutions that can guide AQM decision makers and their teams in preparing for a successful interagency collaboration for HIA.

Although a seamless inter-agency collaboration is not readily expected, it is equally important to look at the working dynamics between groups which can be improved through time as the HIA progresses. A case

study is presented on the dynamics of inter-agency engagement and multi-sectoral interactions which aims to shed light on the value of HIA as a driving force towards community building and healthy policy making.

TIMEFRAME AND RESOURCES NEEDED

The time that it takes for an HIA to be accomplished is from six months to one year. This may vary however depending on the availability of the data and the efficacy of the various groups to meet and collaborate.

The resources needed for an HIA are detailed in modules mentioned above. The goal of collaboration is to overall decrease the time and resources needed. Data communication and sharing is of utmost importance. The various groups should be able to share and communicate effectively. Proper venues should exist so that workshops and meetings can occur smoothly. Technology that facilitates communication would improve relations like phones, access to the Internet, and documentation systems. During meetings, proper moderation of meetings and activities for good relationship building, including well-planned logistics (e.g., meeting venue, food, transport) are all beneficial so that the working group can function effectively.

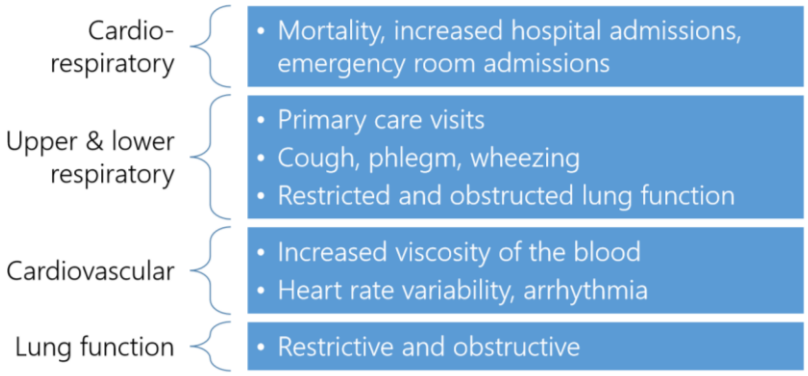
THE METHODOLOGY (STAKEHOLDER ENGAGEMENT)

For cities who are yet to conduct an HIA, this module can provide guidance on the importance of a multidisciplinary approach to aid in the planning and execution processes. Cities who have conducted an HIA but not through an inter-agency approach can also learn on how to maximize the partnership to save on time, resources, and efforts.

The following discussion will focus on how the sectors/agencies are involved with the data and what they do as they interact with other groups during the progress of an HIA.

Government departments and agencies working on health

Data needs for an HIA is defined by the type of assessment to be conducted. In order to understand health effects due to poor air quality for short term studies, the type of data needed are (Clean Air Asia and UN Environment, 2019):



Acute lower respiratory infections are the main category of illness considered when dealing with health effects due to poor air quality. Since this data is gathered primarily from local health centers, the city must ensure provision of necessary funding and manpower to this sector so that proper documentation is maintained. Once data is needed for HIAs, the local government can then easily request for the said data from the supported health offices.

For health effects associated with long-term exposure to air pollution, the academe and research institutions can be additional sources of detailed data, aside from national health agencies. Long term research on the following subject contribute to another type of HIA which ultimately can be used to change policies. The data needed are:

- Adult mortality
- Infant mortality, sudden infant death syndrome (SIDS), pre-term birth, low birth weight (LBW)
- Permanent reduction in lung function
- Chronic respiratory ailments
- Lung cancer

Other engagements through HIAs

Other needed data for HIAs are listed below with associated agencies/groups that are responsible for data availability and access:

- Input for the HIA tool – epidemiological studies (Academe, Research Institutes, Government)
- Population data (census, estimates or projections) – Government, City hall, municipal centers
- Air quality data (measured or modelled) – Atmospheric Bureaus, Academe, Environment Department of the government.
- Health data – Baseline rates of health outcomes in the population studied (recorded or projections) – (Health departments and Ministries of Health)

These agencies and groups thus must collaborate to conduct the HIA. Through this collaboration, data compilation is expected to be facilitated since national/local governments would have access to most of the data, while other sectors can be requested to provide additional information and other needs.

CASE STUDIES

The stages and types of HIAs for cities, together with a discussion on health risk assessment, are elaborately discussed in the module on Stages and types of health impacts assessment for cities. In the case studies below, the general process of doing an HIA through stakeholder participation and inter-agency collaboration is presented.

Case Study: Rapid HIA of the Master Plan for Aegi-Neung Waterside Park in Gwang Myeong City, Korea (Kang et al, 2011)

In Korea, the Aegi-Neung Waterside Park has been used for fishing activities which pollutes the body of water with trash and paste baits. Located in a good ecological zone, a project planned to make the reservoir to be the center of the city's greenspace, ecological learning and leisure. The park underwent a rapid HIA, which is the simplest type of assessment done when time and resources are limited. A rapid HIA normally takes only 6 to 12 weeks, and below is the summary of events which led to the completion of the HIA.

Event 1: A participatory stakeholders' workshop was conducted for a day (can also be done in half a day) to provide participants an opportunity to discuss health impacts that they value.

Event 2: A screening process was performed and the city selected the park to undergo the HIA. Since the project involved a significant area and had political importance, an academic research institution applied their expertise using a pre-screening tool. The city's screening includes steps such as: (1) shortlisting a priority projects list based on its political importance and size; and (2) further review and independent screening from a health and social affairs institution and community health center.

Event 3: The results from Event 2 was discussed with the Community Health Center controlled by the local government. Before moving on to the scoping stage, a preliminary meeting took place among the researchers, the civil servants from the community center, and the department agency handling parks. The objective of the meeting is to introduce the principles of HIA to the Department of Parks and Greenspace, and to request data needed for the HIA.

Here we see the initial collaboration of local government, civil society and a research institute representing the academe.

Event 4: At the scoping stage, the HIA working group now has the capacity to decide on what type of HIA to do. A number of other topics were discussed in the meeting:

- ✓ Preliminary positive and negative health impacts of the park plan
- ✓ Assessment methods and required data
- ✓ The range of the participants and their roles at the participatory workshop

Although led by expert opinion, the positive and negative health impacts that were assessed using a comprehensive health impact checklist allowed even those new to HIA to effectively envision the HIA outputs.

Event 5: In the appraisal stage, a participatory workshop was held with the stakeholders from several sectors to overview the literature-reviewed health impacts and their evidence.

Event 6: Finally, a report was written by the researchers from the academe. This report was first submitted to the Community Health Center and then to the department agency handling the park as an official document.

Conclusion:

The above events show that the various sectors collaborate through the progression of the HIA. A similar progression occurs for inter-agency interactions. Although this study examined only one case, it shows the potential usefulness of HIA as avenue for health and non-health sectors to participate and consider health in decision making. However, to sustain intersectoral collaborations on HIA, the recommended actions must be put in place:

- ✓ Include HIA as legal obligation;
- ✓ Institutionalize an HIA committee within the government;
- ✓ Build capacity of different sectors on HIA implementation; and
- ✓ Develop a Monitoring and Evaluation plan for Intersectoral Collaboration on HIA

Case Study: UN support for Inter-agency collaboration for air pollution HIA

The United Nations Environment Programme has supported several countries in Asia Pacific in order to perform air quality assessments for health and environment policies. Described below are the supported countries that worked on air pollution HIAs through the participation of government agencies. Each country engaged their Health and Environment Ministries/Departments for the collaboration (UN Environment, 2019).

Mongolia

Ten-year data on pollution, meteorological conditions, and health data, were gathered and analyzed by experts from the academe. Here is the breakdown of contributions of this data:

- The daily air quality and meteorological data were provided by the National Agency for Meteorology and Environmental Monitoring.
- Health-related data was obtained from statistical offices of all six secondary level hospitals, and three tertiary level hospitals in the capital city

A stakeholder consultation workshop for the project was organized where initial results of assessment were presented. International experience for reducing air pollution and health damages were shared.

The project has been successful in supporting data sharing among the environment and health sectors for their HIA. Eventually the data sharing linkage is being institutionalized with the approval of the Government.

Mongolia's National Center for Public Health (NCPH) is the regulatory institution responsible for the collection and development of air quality and health data. Air quality and health data exchange are done through weekly email exchange among relevant stakeholders. Data sharing on air quality and health data are available online through many websites. The final assessment results will be used as baseline data for an environmental health surveillance system currently being developed in Mongolia. Further, the data will also be used for recommendations on health advise during periods of poor air quality.

Sri Lanka

Challenges on using air quality and health evidence for policy development were determined to be mostly in the theme of communication and data availability. The issues were raised, and several points of actions came from the various agencies, suggesting how to improve communication and to ensure data sharing.

The working group identified the following as key health data sources:

- Morbidity and mortality registry
- Data from registrar general department
- Demographic and health survey and income and expenditure survey from National Surveys

Agencies such as the National Building Research Organization, and Department of Census and Statistics agreed to share data and add protocols to their processes so that HIAs can be effectively done. Monitoring equipment has also been purchased by the government. Sri Lanka is using the HIA results to review air quality standards, in line with their Clean Air 2025 Action Plan.

Thailand

Thailand has been doing several HIA studies even prior to the support of the UN, especially with the government working closely with several air quality and health experts in the country. Using BenMAP (see module on Health impacts assessment tools for cities for more information), economic valuation which will link the cost of pollution to policy is being done. The data will be provided by its national partners, and these will be used as well in the revision of Thailand's ambient air quality standards. In close coordination with the health ministry, Thailand has also officially acknowledged air pollution as one of the causes of Non-Communicable Diseases (NCDs). The involved agencies are the Chulabhorn Research Institute, Pollution Control Department with Center of Excellence on Environmental Health and Toxicology, and the Department of Health.

Case Study: Improving HIAs in the USA (National Research Council, 2011)

In the USA, HIAs have been used in all levels of government historically. Most often the application of assessments is on local communities and focuses on policies and programs associated with land-use, housing, and transportation planning. Other stakeholders come from local public health and planning agencies, nonprofit organizations, and the academe. Scaling up to federal level in the US, we see developments in terms of legislation. The use of HIAs has been for the National Environmental Policy Act (NEPA), which requires federal agencies to evaluate the health effects of proposed federal actions.

In a sample development of a committee, experts in HIA were convened from the environmental impact assessment, public health, epidemiology, urban planning, social sciences, economics, and decision and risk analysis spheres. It is suggested that similar mix of individuals be created for work

on HIAs. Multiple agencies of the government can provide the experts and representatives for such a group.

Also presented are limitations experienced when using HIAs in policymaking. Make sure these considerations are integrated in the institutional and enabling structures setup to conduct HIAs:

- Existence of a mandate or funding to address health issues and assess the health impacts of planned policies and decisions.

- Tackling structural and administrative barriers to collaboration among public-health, planning, and environmental-health professionals (example professional accreditation and license to be able to work)

- Consistency and coherence among government structures for example, planning decisions about transport use can be made under local governments however public-health decisions, standards and transport laws are made at a higher level such as per region, state or national.

- The absence of inclusive and participatory mechanisms and processes for systematically integrating planning, public health, and environmental-health promotion in decision-making.

- Implementation and enforcement of existing regulations and laws may be lacking which may lead to inaccuracies in the assessment policies, programs, projects, and plans

Ultimately a new paradigm for productive collaboration is presented below. The main lessons and benefits are that collaboration provides opportunities:

- for scientists and the academe to be involved in the application of the science to improve public health and to have more experience on what type of knowledge is needed for policy decisions
- for agencies and groups to identify new data sources and designs needed to answer important scientific and policy-relevant questions. More knowledge sharing breeds innovation of thought
- for policymakers to improve their ability in considering health implications of their decisions and improve understanding of the links between policies and health
- for active participation of community members and other agencies in decision-making. As more collaborations occur, there will be an increase in access to information.

As a leader in local government, it is possible to mobilize various agencies that can be effective in applying health impacts assessments for policies and projects in air quality management.

CHALLENGES AND SOLUTIONS

Even with the participation of several agencies, there are several challenges that national and local governments face in doing a comprehensive air pollution related HIA, especially in developing countries.

These are summarized below, together with suggested ways to overcome them, based on discussions in this module and Clean Air Asia's work with cities and national governments.

Challenges in HIA	Suggested solutions
Commitment to HIA roles • Although verbal commitments in 'helping' in the process is easy to expect from agencies, the actual execution of tasks may not be a priority if it seems like ad-hoc or additional work	✓ Formalization of the collaboration through a formation of an Interagency Task Force ✓ Capacity mapping and clear consultation of realistic task assignments before finalization
Collaboration issues • Miscommunication and misinterpretation of ideas and suggestions given the variety of disciplines that participating individuals come from	✓ Creating venues for open discussions and learning sessions to understand expertise of one another ✓ Strong presence of a moderator or leader with experience with multidisciplinary (government) collaboration, who can bridge gaps among collaborators
Data access and sharing (AQ data, health incidences, demographics, economics data, etc.) • Absence of data • Access to data	✓ Complete data availability mapping and identification of ways how to generate them ✓ Development of guidelines on how to streamline data sharing and storage, with inclusion of privacy considerations (for health)

Regular communication and channels to openly discuss these challenges must be facilitated. These can bring together air quality and health experts with the relevant policymakers, groups, sectors, and agencies. Such discussion can help in setting expectations, as well as identifying and fulfilling roles of the many stakeholders for the project. Ultimately, this can mean ensuring success of the HIA process execution and the use of the results for actions.

CONCLUSIONS AND WAY FORWARD

In performing an HIA where interagency collaboration plays a key role, it is important to look at organization dynamics and how groups work and interact. The key output is meeting the objectives of effective collaboration:

- ✓ Effective data sharing and data availability
- ✓ Proper venues and experience for collaboration
- ✓ Open communication among agencies and groups

While these are general outcomes, any conflict should be resolved while keeping in mind the above objectives. All technical issues for conducting an HIA can be addressed with the advice of local experts, and external assistance can also be requested from other cities or countries. Interagency collaboration should always try to improve service to the public more effectively.

In some cases, working groups that formed from various groups and backgrounds sometimes don't work smoothly. This can be attributed to individuals' perception of incapacity in engaging with agency representatives due to their lack of technical expertise and experience. Language can also be an issue while conducting meetings and workshops. Moving forward, building the capacity of all groups, and achieving common ground with regards to effective communication are priority issues aside from the obvious technical and data concerns in doing an HIA.

In trying to advance HIA outcomes as part of policy development, collaboration is key. Significant interagency collaboration at the city or local community, state or regional, and all the way to federal or national levels, are integral to ensure that the HIA is done more efficiently and that its results are used for the improvement of public health.

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