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Enhancing benefits in health impact assessment through stakeholder consultation

Ame-Lia Tamburrini, Kim Gilhuly and Ben Harris-Roxas

Stakeholder consultation is a key mechanism in impact assessment. It not only helps identify what benefits may occur, but the process of consultation itself may also generate positive outcomes. This paper presents three case studies of stakeholder engagement in health impact assessment (HIA) conducted in Australia and the USA, between 2004 and 2008, that led to the enhancement of positive impacts: improved relations between diverse stakeholders, development of working relationships among unlikely partners, greater acceptance of recommendations by proponents, and empowerment of community residents to become involved in political decisions that impact their lives and livelihoods. Regulatory requirements and improved guidance are suggested to improve stakeholder engagement and enhance positive outcomes in impact assessment.

Keywords: health impact assessment (HIA), stakeholder engagement, enhancement, positive impacts, public participation, international case studies

IMPACT ASSESSMENT IN GENERAL, and health impact assessment specifically, has often been accused of focusing on risks to the exclusion of potential benefits that may arise from proposed projects, programs or policies (Harris *et al.*, 2009;

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For acknowledgements see page 203.

Kasperson, 1983; Vanclay, 2002). Methods used to assess the environmental impacts of development projects do not usually include overall impact ratings for positive impacts (Bekker *et al.*, 2005; Elliott and Francis, 2005; Simpson, 1990; Wernham, 2007). This could be because development-related disturbances to the biophysical environment rarely do bring about positive impacts. However, more likely, this is principally because regulatory approvals in most jurisdictions do not require the exploration of positive effects, and in practice laws and regulations heavily influence what is examined within impact assessments.

Health impact assessment (HIA) has partly evolved from EIA practice, but is not necessarily as tied to the regulatory approval process (Harris-Roxas and Harris, 2011). In most places HIA is still conducted voluntarily rather than because of a legislative or regulatory mandate, and is still gaining approval in many government and corporate arenas. The differing contexts from which HIA stems (Mahoney *et al.*, 2007) along with this need to gain acceptance has led, in some ways, to a wider exploration of impacts within HIAs. A focus on positive impacts is one way that HIA stands apart from

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health risk assessments that are routinely undertaken (Ahmad, 2004; Manson-Siddle, 2004; Miller and Hurley, 2003).

This paper argues that stakeholder engagement is a key mechanism for enhancing positive effects in impact assessment. The paper starts by discussing the benefits of engaging stakeholders. It then provides examples of how HIA has enhanced positive impacts in several case studies and finally discusses possible improvements to the overall process. The paper focuses on the field of HIA because that is the area of expertise of the authors; however, it is recognized that examination of positive impacts and stakeholder engagement is common to all forms of impact assessment and therefore this discussion is relevant for all impact assessment practitioners.

Stakeholder engagement

Stakeholder engagement is a key component of any impact assessment (Becker *et al*, 2003; Cameron *et al*, 2011); however, methods for engaging stakeholders may differ considerably among and within disciplines. Public participation is a required element of impact assessments in many jurisdictions. This participation often occurs in a format where expert agencies and their consultants undertake technical analyses, announce initial findings in draft documents, and either defend or modify their analysis following the submission of oral or written comments by organizations or members of the public (Innes, 1996; Petts, 1999). Community input is rarely given as a distinct source of evidence (Harris, 2005). The aforementioned method for public participation has been dubbed the 'decide-announce-defend model' and has long been criticized as being a poor model of engagement (Arnstein, 1969; Duncan, 2003). Impact assessments, however, do not have to be tied to non-participatory methods, especially when proponent support encourages more deliberate participatory approaches (Karkkainen, 2002).

Gaining stakeholder support or opposition can be an important factor in determining the success or failure of a project or policy. Within the field of HIA, documentation shows that engaged and active stakeholders provide knowledge of community concerns and visions, political realities, and help HIA practitioners reach diverse audiences (Mittelmark,

2001; Scott-Samuel *et al*, 1998). HIA practice standards advise involving a wide variety of stakeholders in informing HIA at each of its stages (North American HIA Practice Standards Working Group, 2010) and recognize democracy as a key value in HIA practice (European Centre for Health Policy, 1999).

While there has been some debate about the feasibility of meaningfully engaging communities while ensuring timely input to decision-making processes (Kearney, 2004; Parry and Wright, 2003), overall, engaging a wide variety of stakeholders is recognized as an important tool to inform HIAs, expand good practice, and increase the feasibility and acceptability of final recommendations (Mahoney *et al*, 2007). Principally, engagement of stakeholders provides information for the assessment that could be overlooked through technocratic analyses, provides expertise in context or local impact modifiers, and helps to democratize the assessment process.

Stakeholders comprise an array of people from various government, non-government and community sectors and they can be involved meaningfully throughout the impact assessment process. Table 1 summarizes recommended practice standards that relate to stakeholder engagement at each stage of HIA. These standards are applicable to any impact assessment situation.

How engagement is carried out in each HIA is still very dependent on the practitioners and the environment in which the HIA is conducted. To illustrate what is meant by stakeholder engagement, this paper analyses three case studies that exemplify the ways in which diverse groups can be brought together in a way that is meaningful to the participants and informs the HIA scope and recommendations, and, ultimately, leads to beneficial changes for the affected populations.

In the field of HIA, positive impacts could include changes to determinants of health, alterations to design plans or improved relations between organizations. Long-term measurable health outcomes are not the only indicator of importance and in fact are rarely measured or monitored. This is because a myriad of factors impact on health and health changes can take a long time to eventuate, making them difficult to track over time. Positive impacts could include:

- Increasing employment opportunities to benefit underemployed population groups (Rio Tinto, 2011);
- Greening of public spaces to provide for recreation activities and to increase perceptions of safety (Health Scotland *et al*, 2008); and
- Developing relations between agencies or departments that would not usually collaborate or even diffusing a long-term stand-off between parties (Hay and Kitcher, 2004).

Many of the examples provided in this paper illustrate impacts to the social determinants of health,

Gaining stakeholder support or opposition can be an important factor in determining the success or failure of a project or policy

Table 1. North American HIA practice standards relating to stakeholder engagement

Stage	What practitioners should do
Minimum Standard	Accept and utilize input
General Standard	Have a specific engagement and participation approach that utilizes available participatory or deliberative methods suitable to the needs of stakeholders and context
Screening	Utilize stakeholder concerns to determine health effects Identify and notify stakeholders of decision to conduct an HIA
Scoping	Use input from multiple perspectives to inform pathways Use multiple avenues to solicit input (from stakeholders, affected communities, decision-makers) Ensure a mechanism to incorporate new feedback from stakeholders in the scope
Assessment	Use local knowledge as part of the evidence base
Recommendations	Use expert guidance to ensure recommendations reflect effective practices
Reporting & Communication	Summarize primary findings and recommendations to allow for stakeholder understanding, evaluation and response Document stakeholder participation throughout the process in the full report Make an inclusive accounting of stakeholder values as part of determining recommendations Allow for and formally respond to critical review Make the report publicly accessible
Monitoring	Plan should address reporting outcomes to decision-makers Monitoring methods and results should be made available to the public

Source: Modified from the North American HIA Practice Standards Working Group (2010)

very similar to that done in social impact assessment (SIA). The difference between SIA and HIA often relates to the extension of impacts from the social determinants out to health outcomes. The case studies selected attempt to make this connection.

Case studies on positive health effects due to stakeholder engagement

This section illustrates how stakeholder engagement can lead to the enhancement of positive health impacts in the affected populations. The first three detailed case studies provide examples of stakeholder engagement in HIA, while the last three brief case studies demonstrate that enhancement of positive health impacts is also possible in non-HIA cases that have used good stakeholder engagement.

The first three case studies were selected because they exemplify desired stakeholder engagement practices and because they are based on topic areas that are subject to the impact assessment process around the world: resource development and urban planning. It is important to note that the specific regulatory context of the countries may limit how much the examples can be generalized to other regions. The means by which stakeholders became involved in each example are diverse, as is the group of stakeholders in each example. The specific case studies take place in the USA and Australia. The authors were either involved in the original HIA process or have recently become indirectly involved in these HIAs. In addition, discussions were carried out with key players involved in each case example. The

stakeholder engagement process and positive impacts for each case study are summarized in Table 2.

The three case studies outlined in Table 2 (and analyzed in detail in the sub-sections below) demonstrate how HIA has brought about enhancement in three very different contexts. The Alaska Oil Exploration HIA (North Slope Borough, Alaska) showcases how engagement within a regulatory EIA process can occur meaningfully and lead to enhanced working relationships. This project resulted in a partnership between a primarily Native governance structure and a federal government institution, which will help ensure that Native communities are invited to participate in future decision-making processes about their land and water resources. The HIA of the Shellharbour Foreshore Management Plan (NSW, Australia) demonstrated that engagement practices in HIA can bring about improved inter-sectoral collaboration among government agencies and improved integration of planning and assessment activities. The Eastern Neighborhoods Community Health Impact Assessment (ENCHIA) Project (San Francisco, USA) resulted in empowering the community with a process that allowed their concerns to be considered in a meaningful way. The resulting Healthy Development Measurement Tool (HDMT) will also have future positive impacts for this inner-city community.

HIA of Alaska North Slope Oil Exploration, North Slope Borough, USA, 2007

In 2004, the US Federal Administration announced plans to expand leasing to oil and gas activities in

Table 2. Stakeholder engagement and key benefits of the three HIA case studies

Case study	Brief description	Stakeholders involved HIA	Methods/forms stakeholder engagement	Approx. no. people participated HIA	Summary of benefits of engagement in HIA
HIA of Alaska North Slope Oil Exploration, USA, 2007	Assessment of health impacts of oil exploration leasing plans on the North Slope of Alaska	<ul style="list-style-type: none"> • Bureau of Land Management (BLM) • North Slope Borough (NSB) • Alaska Inter-Tribal Council • Public health professionals • Wildlife experts • NEPA analysts • The public 	<ul style="list-style-type: none"> • Public meetings (i.e. hearings) • Review of transcribed public testimony from supplemental EIS • Key informant interviews • Involvement of NSB in every stage of HIA through in person meetings; including scoping issues, editing reports and development of recommendations 	<ul style="list-style-type: none"> • Public scoping comments from dozens of individuals from 21 agencies/ organizations • Dozens of written and verbal comments on draft supplemental EIS • Review of thousands of public and agency comments on previous amended EIS • Numerous representatives from NSB, public health agencies, wildlife experts and NEPA analysts 	<ul style="list-style-type: none"> • Elevation and consideration of Native population impacts • Improved collaboration between national regulating agency and Native government • Agreements reached and exploration moved forward • Precedent-setting incorporation of HIA into NEPA • Inception of ongoing collaboration
HIA of Shellharbour Foreshore Management Plan, New South Wales, Australia, 2004	HIA of a plan to develop local government infrastructure and public assets in a foreshore area	<ul style="list-style-type: none"> • Illawara Health • Shellharbour City Council: <ul style="list-style-type: none"> ○ Environment and Recreation Dept ○ Community Services and Development Dept • The public • Key stakeholders from the following groups: <ul style="list-style-type: none"> ○ Local residents ○ Visitors to the foreshore ○ Shellharbour Village Ratepayers Action Group ○ Youth and community development ○ Women ○ Researchers of physical activity and the environment 	<ul style="list-style-type: none"> • Structured feedback forms and request for comments from community members • Key informant interviews • Steering committee meetings (bringing local government and health agencies together) 	<ul style="list-style-type: none"> • 23 feedback forms and 11 written comments from community members • 2 petitions (110 and 24 signatures respectively) • 4 key informants • A steering committee comprised of 8 members that met regularly to discuss HIA 	<ul style="list-style-type: none"> • Consideration of community impacts formerly not assessed • Greater inter-organizational collaboration • Greater cooperation between health departments and local government • Future consideration of health in other planning processes
HIA of Eastern Neighborhoods Community, San Francisco, California, USA, 2004	HIA of a major rezoning initiative in a highly populated city	<ul style="list-style-type: none"> • 39 community-based organizations, service delivery organizations, and private businesses • San Francisco Planning Dept • San Francisco Redevelopment Agency • San Francisco Police Dept • Board of Supervisors • San Francisco Parks and Recreation Dept • Municipal Transportation Authority • 10 technical advisors 	<ul style="list-style-type: none"> • Formation of Community Council to oversee 18 month-long HIA process • Regularly held meetings to develop vision, select indicators of healthy development, brainstorm data sources, review HIA materials, and contribute to dissemination of results • One-on-one interviews • Focus groups • Community Council presented to other stakeholders not in the Council 	<ul style="list-style-type: none"> • 63 participants in original HIA process • Thousands of ongoing users of the HDMT nationally and internationally 	<ul style="list-style-type: none"> • Incorporation of community vision and policy within neighborhood plans • Creation and dissemination of a tool (HDMT) for assessing all development in the city from a health point of view • Uptake of this tool in other cities • Greater collaboration between health, planning, and other city departments

Key: EIS, environmental impact statement; HDMT, Healthy Development Measurement Tool; HIA, health impact assessment; NEPA, National Environmental Policy Act.

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the Alaskan arctic. These plans triggered the US National Environmental Policy Act (NEPA) requirements for an environmental impact statement (EIS). This plan, issued by the US Department of the Interior's Bureau of Land Management (BLM), would have opened previously protected areas in the National Petroleum Reserve, Alaska. This area serves as habitat for caribou, migratory waterfowl and many species of fish and is an important traditional area for harvesting fish and game for local Alaska Native communities who depend on this region for food (Wernham, 2007).

Following the announcement to expand oil and gas leasing activities, the BLM amended a previous EIS to include these protected areas, but subsequent litigation by environmental groups resulted in a federal court decision that overturned the EIS in 2006. Pursuant to that decision, the BLM announced plans to complete a 'supplemental EIS' to address the deficiencies in the previous document. The HIA was undertaken as part of this Northeast National Petroleum Reserve Alaska Supplemental EIS process (US Department of the Interior Bureau of Land Management, 2007).

The BLM invited the regional government (the North Slope Borough, NSB) to become a cooperating agency, and the NSB accepted. The NSB is a largely Alaskan Native government; the Mayor is a whaling captain and subsistence hunter and many agency staff hunt, fish and harvest whale in the area. Consequently, local residents appeared comfortable with the notion that the NSB was representing their interests in the EIS process. The cooperating agency role allowed the NSB to view confidential pre-publication drafts and data from other sub-sections of the EIS such as air quality and socio-economic impacts, and to use these data to draft the HIA. Moreover, it afforded the NSB an opportunity for almost daily conversations with agency leadership throughout the EIS process, many of which were focused on conveying community priorities and concerns. The BLM also collaborated on the HIA with a tribal non-profit organization, the Alaska Inter-Tribal Council, which represents the interests of member tribes in the region.

The benefits observed from this HIA revolve around better partnerships between Aboriginal governing bodies and government agencies responsible for regulating the land and water that the mainly subsistent Native populations live on and around (see Box 1). This HIA has resulted in setting a precedent for the NEPA process in the US in terms of stakeholder engagement and a more thorough examination of health impacts within the NEPA EIS process. It is hoped that the benefit of establishing a partnership with the BLM will continue to be beneficial as future HIAs are conducted on this leasing plan and on the pursuant oil and gas development projects. The benefits observed in this HIA could have nationwide repercussions for indigenous and other misrepresented population groups (Wernham, 2007).

Box 1. Benefits resulting from the HIA of the Alaska North Slope Oil Exploration

- The NSB and Alaska Inter-Tribal Council's efforts resulted in the first formally integrated federal HIA/EIS in the USA, meaning that for possibly the first time there was a broad consideration of health impacts included in this process (Wernham, 2007).
- The HIA addressed a comprehensive range of physical and psychological issues as well as general well-being and changes in health determinants. Importantly, after several years of public testimony regarding potential health effects of other oil and gas projects, this EIS was finally able to address long-standing community concerns (Wernham, 2007).
- Close collaboration with BLM ensured that community concerns were better addressed than they had been previously, resulting in:
 - an improved relationship between the BLM and the community; and
 - a decision not to sue the BLM.
- A new collaboration with BLM, which has since invited the NSB to be a cooperating agency and prepare another HIA.
- Increased awareness of and commitment to addressing health issues in its NEPA work on the part of BLM (Wernham, 2007), which has since:
 - participated in a working group to develop guidance for HIA in the NEPA process;
 - counseled other agencies to use HIA in their NEPA documents; and
 - agreed to address health issues in future projects in the region.

Key: BLM, Bureau of Land Management; EIS, environmental impact statement; HIA, health impact assessment; NEPA, National Environmental Policy Act; NSB, North Slope.

It is important to note that the recommendations from this EIS resulted in the decision to stop the leasing, for the next 10 years, of the very sensitive lands around Teshekpuk Lake. This was a major accomplishment of this process as those particular lands are rich in natural resources and also extremely important to the Native people for subsistence activities. It is unknown whether this decision will be upheld under the current federal administration. Another EIS is being conducted on leasing plans on an extended area of land and the NSB is once again a cooperating agency in this process.

HIA of Shellharbour Foreshore Management Plan, NSW, Australia, 2004

The Shellharbour Foreshore HIA was a voluntary decision-support HIA (Harris-Roxas and Harris, 2011) conducted in the state of New South Wales in Australia in 2004 on a local government area management plan (Neville *et al*, 2005; Thackway *et al*, 2005). The plan aimed to develop local government infrastructure and public assets in a foreshore area while fostering greater use of the area. The Illawarra Area Health Service undertook an HIA on the plan with the involvement and support of the local government and received training and support through

the New South Wales HIA Project (Harris, 2006; Harris-Roxas and Simpson, 2005; Neville *et al.*, 2004).

The HIA was conducted by staff from several different departments within the Shellharbour local government as well as a number of staff specializing in population health from the local area health service. Community engagement was done purposefully through the assessment. Interviews with local community members were treated as a form of evidence for the assessment and triangulated with other forms of data that had been collected. The HIA involved conducting a community demographic profile, a literature review, a policy review, a recreational environment audit, and interviews with community participants. Differential impacts on population subgroups were considered.

The community engagement in this HIA was limited, with only 34 submitted comments received from community members and two petitions, but it enabled consideration of potential impacts that had been under-considered, such as reduced accessibility to the foreshore area and changes to the character of the local area. Information from consultations also helped the local government to identify and prioritize the most beneficial activities such as the construction of a bike track along the foreshore area.

The engagement of staff from different sections of the council in the HIA also enabled greater intra-organizational collaboration. This highlights that broader engagement can lead to more integrated planning and assessment among professionals involved, and that engagement in impact assessment is not simply relevant to members of the public. This HIA enabled greater collaboration between health and local government agencies, as well as further HIAs with other local governments on related proposals (Furber *et al.*, 2007).

*HIA of Eastern Neighborhoods Community,
San Francisco, California, USA, 2004*

In 2004, the San Francisco Department of Public Health (SFDPH) initiated the Eastern Neighborhoods Community Health Impact Assessment (ENCHIA) in collaboration with a wide range of stakeholders. The San Francisco Bay Area, like many urban areas, experienced a dramatic demand for housing that accompanied the dot-com boom. In response to this and other demands to manage growth, the City and County of San Francisco began a process to revise the permitted uses of land (i.e. 'rezoned') in its 'Eastern Neighborhoods' in order to accommodate the changing neighborhood landscape. It proposed rezoning broad expanses of land historically allocated for industrial use into residential, commercial and mixed uses. Many stakeholders in these neighborhoods viewed the planning process as unresponsive to concerns about affordable housing, residential and job displacement, gentrification, public safety and inadequate open space. SFDPH had

worked with community organizations around land use and planning issues previously, and decided to lead a community HIA of the Eastern Neighborhoods rezoning in an effort to be responsive to community concerns and address health impacts (Farhang *et al.*, 2008).

The Environmental Health Division at SFDPH was the lead organization conducting the HIA (SFDPH, 2008). Twenty-five community, private and government organizations joined the ENCHIA Community Council to guide the HIA process and content. The Council represented broad interests such as community planning and design, economic and neighborhood development, environmental justice, homelessness, open space, housing, sustainable transportation, food systems, childcare and childhood development, small business, low-wage and union workers, non-profit and private developers, property owners and architects. City agencies participated to provide the Council with planning and assessment data, and to be available to answer questions.

The process involved screening the Eastern Neighborhoods rezoning process to ensure that applying HIA would be feasible and valuable. The scoping process was extensive and highly participatory, and included developing a vision of a healthy city, developing and prioritizing 30 tangible objectives to reach that vision, and identifying indicators to measure those objectives. The assessment phase involved gathering existing conditions data on over a hundred indicators, then developing policy and design recommendations to aid the Eastern Neighborhoods rezoning process in achieving the objectives. The recommendations also included a set of development targets or benchmarks to advance healthy development.

Ultimately, the ENCHIA process did not evaluate the specific rezoning plans due to delays in releasing the plans. Rather, the Council decided to create a stand-alone assessment tool that could be applied to wider planning processes. This tool would enable community residents, developers, city staff and others to have the ability and data to evaluate the health impacts of land use development proposals beyond just the Eastern Neighborhoods Plans. Today, the Healthy Development Measurement Tool (HDMT) represents the product of this process (SFDPH, 2006). Importantly, though the ENCHIA process had formally ended, in keeping with the original goal of the process, SFDPH applied the HDMT to the Eastern Neighborhoods Area Plans in 2008 (SFDPH, 2008).

The ENCHIA process had heavy stakeholder participation, and the collaboration resulted in multiple benefits for community organizations, city planners, elected officials and developers (see Box 2). Stakeholders, specifically community organizations, were empowered to make decisions around area plan priorities and recommendations, which were communicated directly to the Planning Department through

Box 2. Benefits resulting from the HIA of the Eastern Neighborhoods Community

- The final set of Eastern Neighborhoods Area Plans incorporated many ENCHIA policy and design recommendations and standards targeting housing, transportation, parks, safety, access to retail goods, and access to community services.
- The HDMT was created and publicly disseminated. The HDMT is a widely accessible web-based tool that diverse stakeholders can use to assess the health impacts of land use proposals. Since being released, it has been applied to a number of development proposals in San Francisco (SFDPH, 2011a).
- The City and County Planning Department and the Department of Public Health began to work together to proactively ensure that developers consider how projects will impact community health. City agencies, including Planning, Transportation and Housing, consult with SFDPH on projects and plans in order to incorporate healthy design elements.
- Other municipalities across the USA have adapted the HDMT to their own local contexts and use it as a tool to assess development proposals (SFDPH, 2011b).

Key: ENCHIA, Eastern Neighborhood Community Health Impact Assessment; HDMT, Healthy Development Measurement Tool; HIA, health impact assessment; SFDPH, San Francisco Department of Public Health.

the Department of Public Health. Through the HIA process, participants learned about land use planning and zoning processes and their relationships to health, which deepened the knowledge required through typical planning processes into a process that truly engaged and empowered residents (Farhang *et al.*, 2008).

Other non-HIA examples with positive health effects due to stakeholder consultation

The above case studies discussed three examples of HIAs that resulted in positive health effects as a result of stakeholder engagement. However, it is important to recognize that there are a variety of other non-HIA cases that illustrate how land use and development projects have increased benefits to human health as a result of having diverse stakeholders involved. The three examples presented in Box 3 cover these different approaches: housing impact assessment, Social Environmental Impact Assessment (SEIA) and Socio-Economic Monitoring Agreement (SEMA).

There is broad recognition that changes to the socio-economic environment, whether through land use planning, housing, employment or education, influence health (Adler and Newman, 2002; Commission on Social Determinants of Health, 2008). These social determinants of health (e.g. education, income, employment) are often thoroughly addressed through community engagement in alternate assessment strategies, like SIA. While HIA assesses many of the same indicators as SIA, it differs in focus. The ultimate goal of HIA is to consider the physical and

mental health consequences of changes to these indicators and to better inform decision-makers and communities about how to protect and improve population health. In addition, HIA can help emphasize

Box 3. Other non-HIA examples of enhancing positive health effects**Housing impact assessment of an urban development project in California**

This housing impact assessment recommended the Planning Department adopt a county-wide inclusionary zoning ordinance which resulted in increasing the amount of affordable housing planned in a rural county in California. Inclusionary zoning ordinances require that a predefined percentage of the entire number of units built will be priced at 'below market rate' and thus affordable to those making less than the average median income for the area. The Planning Department and the Board of Supervisors were influenced by the Public Health Department, advocacy groups and many citizens who disseminated the housing impact assessment results (Human Impact Partners *et al.*, 2008). Providing affordable housing in an area that has low-income population groups can have many positive health effects including improved mental health (Bhatia and Guzman, 2004).

Social Environmental Impact Assessment (SEIA) of the Sakhalin Energy Project in Russia

This energy project is a multidisciplinary oil and gas development project that had a comprehensive SEIA completed. Extensive consultation between Sakhalin Energy Investment Company and Sakhalin Island's Indigenous Peoples in Russia led to the creation of the Sakhalin Indigenous Minorities Development Plan (SIMDP). Although it is believed that this partnership did not result directly from the SEIA it is a good example of enhancing positive impacts in a resource development scenario. The SIMDP not only aims to mitigate negative effects on the Indigenous Minorities residing close to the project area, it also aims to share project benefits with the Indigenous Minorities through programs related to economic development, health, education, culture and training. The Sakhalin Energy website makes clear that one of the intended purposes of these plans is to protect the health of the local Indigenous Peoples (Sakhalin Energy, 2011). The SIMDP launched in 2006 and has a five-year financial commitment from the company (Sakhalin Energy, 2011; Guildin, 2010).

Socio-Economic Monitoring Agreement (SEMA) of Diavik Diamond mines in Canada

There was a commitment to very strict employment agreements with Aboriginal population groups living near the project area. Through SEMA the company committed to employing 40% northern population during construction with half being Aboriginal, and employing a 66% northern population during operations with 40% being Aboriginal. Along with these employment numbers, the company has committed to employing Aboriginal Peoples at all levels of the company and has graduated 50 Aboriginal employees from the Aboriginal Development Program, a program providing management and leadership skills to support this goal. The program has reported increased levels of self-esteem and confidence amongst some trainees (Rio Tinto, 2011). Although the project did not make explicit the impacts that the SEMA may have on health, the links between employment, education and health are well established (Public Health Agency of Canada, 2003; Adler and Newman, 2002). Engaging the community has led to this commitment from the company which has positively benefited the Aboriginal Peoples in the area and goes beyond simple mitigation measures (Rio Tinto, 2011).

the importance of trying to incorporate the social determinants of health into environmental planning (see for example Corburn and Bhatia, 2007).

Discussion

Engagement of stakeholders is important to all types of impact assessments and there exists a lot of guidance on how to meaningfully involve diverse stakeholder groups throughout the impact assessment process. Although engagement practices do occur in the field of impact assessment, the methods used and the level of engagement differs widely. HIA is recognized as having incorporated methods of engagement that provide for meaningful opportunities for stakeholder input and collaboration.

The case studies illustrate how stakeholder engagement has led to enhancement of positive impacts in HIA both in the USA and in Australia. The case studies also illustrate the broad definition of positive impacts in HIA, which can include not only health impacts but also:

- Impacts related to improved relations between diverse stakeholders;
- Development of working relationships among unlikely partners potentially resulting in future collaborations;
- Greater acceptance of recommendations by proponents; and
- Empowerment of community residents to become involved in political decisions that impact their lives and livelihoods.

Although this paper provides examples of how positive impacts were enhanced in HIA, it is important to consider approaches to further improve practice. It was evident from the review of the literature that many HIAs still tended to focus on mitigation measures aimed at reducing negative impacts. Although this aspect in assessments is vital, focusing only on mitigation misses an opportunity for maximum benefits to accrue as a result of development.

This trend could be due to several factors. One is that HIA is often guided by EIA regulatory procedures. In cases where HIAs are conducted as part of EIA/EIS or as integrated assessment, it can be challenging for HIA practitioners to explore positive impacts when assessment methodologies are structured around mitigation. Secondly, there could be a lack of creativity and willingness to propose enhancement measures among HIA practitioners. Mitigation is seen as a necessary step in the impact assessment process, while enhancement of positive impacts may be seen by both the practitioners and the proponent as being a tertiary or even unnecessary goal. Vague regulatory guidance may also contribute to the lack of effort made in this area.

Stakeholder engagement, although seen as particularly meaningful in HIA, could also improve in its

consistency and methods used. Also, while many impact assessment practitioners prioritize stakeholder engagement, it is still practiced with varying degrees of success (Kearney, 2004; Parry and Wright, 2003; Wright *et al.*, 2005). The benefits of proper stakeholder engagement to multinational companies, urban developers and governments can be immense, and can include (Birley, 2005; Greig *et al.*, 2004):

- Gaining project approvals;
- Staying on timelines;
- Gaining acceptance in the project community;
- Reducing tension and conflicts;
- Reducing costs by appropriately mitigating negative health and social impacts; and
- Cost-benefits occurring when positive impacts are enhanced.

Engagement of indigenous populations in development projects has gained special attention globally. Since a significant proportion of resource development projects around the world impact indigenous populations there is an increasing need to involve indigenous groups in a meaningful way in project planning and development. With a recent report by James Anaya, UN Special Rapporteur on Indigenous Issues, attention is being drawn to the shortcomings of previous engagement plans in development projects (Anaya, 2009: 18):

In many instances, consultation procedures are not effective and do not enjoy the confidence of indigenous peoples, because the indigenous peoples were not adequately included in discussions leading to the design and implementation of the consultation procedures.

The Alaska North Slope Oil Exploration's HIA-EIS integrated process (the first of its kind in the USA) is a good example of meaningful consultation resulting in long-term partnership between an indigenous governing body and a government agency responsible for overseeing land use development.

It is important to examine how HIA and other impact assessment practitioners can improve on engaging stakeholders to better enhance benefits of projects. In North America, the HIA of the Americas Stakeholder Engagement subcommittee is drafting a best practice document to guide new and experienced practitioners in methods and principles of stakeholder engagement. In-depth research on successful methodologies in stakeholder engagement, including research involving primary pre- and post-data collection on HIAs being practiced, could inform not only HIA practitioners but other impact assessment practitioners to improve democracy and transparency. As well, practitioners can gain direction from internationally recognized guidance documents on stakeholder engagement (e.g. see IFC, 2007).

Conclusions and recommendations

The dearth of literature discussing enhancement of positive impacts in impact assessment warrants that enhancement of positive impacts be further explored (hence this special issue). Guidelines and principles published for SIA have also given attention to the need to expand the exploration of positive impacts (Vanclay, 2003, 2006). This paper proposes the following as potentially beneficial routes forward: (1) that regulatory processes explicitly stipulate that enhancement of positive impacts be considered in impact assessments and (2) that HIA and impact assessment guidebooks and reference material be expanded to explain how enhancement of positive impacts can occur in a project. This explanation may also include clarification of what constitutes a positive impact because, as it was illustrated in this paper, the definition can be broad.

Impact assessments have the potential to enhance the lives of impacted populations. Stakeholder engagement is a good tool for making positive impacts a reality in all types of impact assessment, benefiting not only populations but also project proponents. This paper illustrated the different types of positive impacts that have been brought forth through engagement practices in HIA in urban and resource development projects. Benefits, identified by the authors involved in these case studies, have been in the way of having diverse stakeholders work together, resolving conflicts, gaining better acceptance of recommendations, identifying impacts that would not have been identified, and empowering citizens. These benefits occurred in country-specific regulatory settings and, although the specific methods for engagement may not directly apply to all regions across the world, the positive impacts achieved could still be sought after. Although HIA practitioners do focus on positive impacts, as illustrated in the case studies, there are always ways to improve the practice. Regulatory requirements and better guidance are two ways in which this field can be moved forward. It is hoped that all impact assessment practices can benefit from this continued discussion.

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