Healthy Decisions:
The Development of Analytical Frameworks in Thailand and The Netherlands

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Abstract

In the past decade HIA has developed as a tool for supporting healthy policy-making. It has been applied as stand-alone exercises or integrated impact assessments to public policy-making at the project and policy level. However, as its impacts on public policy-making have hardly been evaluated before, it remains unclear to what extent HIA actually brings about healthy public policy. This paper aims to combine two theoretical approaches of the relation between HIA and the policy process that have been developed separately in the Netherlands and Thailand. Both approaches focus on policy analysis in order to understand how policy comes about and how HIA may contribute to that process. In addition, both are currently being applied to evaluate policy processes in which a HIA was involved.

Basically, both approaches acknowledge that policy-makers are highly influenced by their institutional and social context, which certainly affects how information, including HIA, would be used in the decision making process. The framework developed by the Thai Health Systems Research Institute focuses on core values of HIA information and the four main components in participating in the public policy process. The Dutch Institute for Health Policy and Management focuses on four possible dimensions of policy-making: cognitive; social; institutional and cultural aspects may shape the way in which policy-makers use HIA. The model assumes that if the policy and the HIA come about in separate arenas it will be very hard to bridge the differences in those four dimensions, thus HIA should be very close to the policy-makers.

There are interesting similarities in these models but also some differences in emphasis that need to be discussed in a broader setting. These involve among other things the different institutional setting of HIA in the Netherlands and Thailand. This suggests that one model for (H)IA cannot be applied in general and in all situations but must be adjusted to local circumstances.

Key Words: Health Impact Assessment, Decision Making, Public Policy
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Healthy keys to the black box of decision-making.
The Development of Analytical Frameworks in Thailand and The Netherlands

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1. Introduction
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5. Discussion: what can we learn from this comparison?

1. Introduction

In the past decade HIA has developed as a tool for supporting healthy policy-making. It has been applied as stand-alone exercises or integrated impact assessments to public policy-making at the project and policy level. However, as its impacts on public policy-making have hardly been evaluated before, it remains unclear to what extent HIA actually brings about healthy public policy.

This paper aims to combine two analytical frameworks of the relation between HIA and the policy process that have been developed separately in the Netherlands and Thailand. The model developers met at last year's IAIA conference and decided to compare their models as these were both addressing the policy process of which HIA is part, whereas most HIA models were looking inward at the methodolgy of assessing impacts instead of outward at influencing decision-making. Both approaches focus on policy analysis in order to understand how policy comes about and how HIA may contribute to that process. In addition, both are currently being applied to evaluate policy processes in which a HIA was involved.

In order to be able to compare both approaches, we will describe them separately by answering the following questions. First of all, why, how and when has the framework been developed and what is the content? Secondly, what does the practice of HIA in each country look like? Who are the HIA commissioners? Where do the HIA resources come from? How is HIA itself practiced (methods, techniques)? Who is involved in the HIA? What is the role of the project manager or policy maker in the HIA? What does the institutional context of HIA look like? What is usually done with HIA outcomes?

We will then describe the similarities and differences between the HIA frameworks and practices in Thailand and in the Netherlands. Finally, we draw some lessons for future application of both frameworks to HIA practices.

2. HIA Framework and Practice in Thailand

HIA was firstly introduced in Thailand in 2000 during the process of formulation of the core concepts of the National Health Act, which aims to be the engine and tool for National health system reform. HIA development in Thailand is aimed as a 'social learning process', without legal requirements, towards the development of healthy public policy. In other words, HIA in Thailand does not exactly participate in the formal decision-making process, therefore, its contribution to decision-making mainly depends on its own values in each policy arena or decision-making.

2.1. HIA Core Values

To support the development of healthy public policy, three core values of HIA have been presented; namely Value, Evidence, and Resource. It is a modified version of Ison (2000). In the Thai version, HIA can contribute to healthy public policy formulation and more democratic decision-making, if these three core values have been implemented (Sukkumnoed et al. 2002).

1. Value: HIA should place value of health in public and stakeholder concerns. It should also bring different social values of health into the public discussion, aiming to understand and greatly respect different values of health from different stakeholders. Therefore, the decision-making will be paid higher attention to health aspect, as well as, more equitable for all stakeholders due to the understanding and respectability of their values.

2. Evidence: HIA should have a capacity to present clear and sound evidence on various dimensions of health impacts, based on the social values of the stakeholders. This clear and sound evidence will significantly assist or force the decision-makers and stakeholders to make the decision in favour of healthier solutions.

3. Resource: As a learning process, HIA should aim to mobilize the resources of all stakeholders and the resources within the society towards healthier solutions. This can be achieved, if the public awareness and consciousness, in self-organizing collective units to protect and promote human health, has been raised during the HIA process. It is also important that HIA should assist stakeholders to realize the available and potential resources within society, which can be redirected towards healthier direction.

These three core values have strong influences in HIA development in Thailand in three main ways. First, the evidence is not only top priority for any HIA assessors, since the social values and resources are now taken into account in the same level. Second, the main evidence presented and discussed in HIA process has to go hand in hand with the social values behind it. This leads to an improvement in HIA methodology, since it needs a broad perspective on health to be applied. Third, since the word 'resources within the society' implies much more than state or governmental resources, it stresses the importance of the 'real' public policy, as the directions or frameworks guided by and for society as a whole, rather than a previous focus on formal declaration of governmental policy.

Therefore, these three components are really crucial for the direction of HIA development in Thailand towards a broader perspective, more inclusive and open to public participation, and more active in public policy participation. Clearly, HIA in Thailand now aims to be a process, '*which facilitates democratic discussion and decision-making in favor of healthier solutions, with a set of recommendations based on agreed social values, sound evidence, and available and potential resources within the society*'. However, the concepts alone cannot make the thing go through, operational knowledge is required, and will determine the success of HIA development under this concept.

2.2. HIA and Public Policy Process

Although the second step of HIA idea formulation has paved the way for healthy public policy formulation, a road map or conceptual framework for searching new ways was not available. This caused some problems in implementing HIA, especially with the targets to policy changes during 2002 (Can you clarify). Therefore, in 2003, the first version of the conceptual framework has also been developed, with the influences on two main theories of the public policy process; namely, the Multiple-Stream Framework (Kingdon, year), and the Advocacy Coalition Framework (Sabatier, year). According to the framework, the policy changes comprise four main streams, which are moving independently or interdependently with others. These four streams are described as followed;

1. Problem Stream: The problem stream refers to increasing public awareness on health impacts from policy. Since public and politicians have quite limited attention to one specific issue, therefore, the problem presentation should be clear, sound, and reliable. The problem stream also has to find appropriate approach and timing in identifying and pose the problem into the society, depended very much on socio-economic situations, shock issues, and social values and perception.

2. Partner Stream: Since the policy change is not decided by one person, but based on bargaining and learning through debate within the society, therefore, the partner stream is very important to articulate ideas and formulate policy proposal. This process can lead to a concrete and socially attractive policy proposal, as well as create a political sound environment for decision-making. The learning process within partnership building as well as within coalition competition should be emphasized, because only a learning process can shift and change partnership bloc, and public perception in favor of healthier solutions.

3. Policy Stream: The public policy process cannot reach a satisfactory end without a strong policy proposal on what should be the best alternatives of society based on social values, available and potential resources, and sound evidence. The success in this policy stream is not determined only within this stream alone. The good relations to hot social issues in the problem stream, the strong collaboration in the partner stream, and the appropriate tactics in the political stream are equally important to the success within this policy stream.

4. Political Stream: The political process is an important precondition for the success of the public policy process, since the political stream can determine a) the public regulation which can frame the behavior of and empower to different actors, and b) the reallocation of state resources towards healthier solutions. It can also influence social perception of problem identification and public discussion on socially desirable solutions. Although politicians are regard as the main actors in this stream, public responses and voice can also influence the directions within this stream. Therefore, any changes in political process can possibly lead to the desirable political outcomes. However, the political process is completely uncertain and almost unpredictable. The window of opportunity in the political stream always opens and closes very fast. The success of healthy public policy advocacy in this stream is, therefore, determined by the perfect combination of the opportunity and deliberative preparation.

Here the concept policy entrepreneur was firstly introduced. In general, policy entrepreneurs, who can be politicians, bureaucrats, analysts, consultants, or NGOs, mobilize opinions and institutions and they try to ensure the idea does not fall of the agenda. Since the policy process in open-end process and mission of policy entrepreneurs is quite ambitious, in reality, not all HIA practitioners can act as a policy entrepreneur. This stresses the importance of strong relationship or networking between HIA practitioners and policy entrepreneurs in each policy sector.

National Health Assembly process has been aimed and planned to fulfill this job, by providing the institutional mechanism of such policy co-operation between policy entrepreneurs, health promotion networks, civil society, and HIA practitioners. At the same time, HIA is still expected to be the process, which provides the information on values, evidence, and resources, as well as, the opportunities for informed and democratic discussion within National Health Assembly. Recently, National Health Assembly in 2003 has started testing this model.

The main progress in this step is to bridge all levels of core values of HIA and healthy public policy together. The three core values of HIA; namely value, evidence, and resource, will be the focal points of investigation and communication in order to facilitate the desirable movement within four main streams of public policy process, through the co-ordination and co-operation of policy entrepreneurs and National Health Assembly. Overall conceptual framework of HIA core values and its participation in public policy is presented in *Figure 1.*

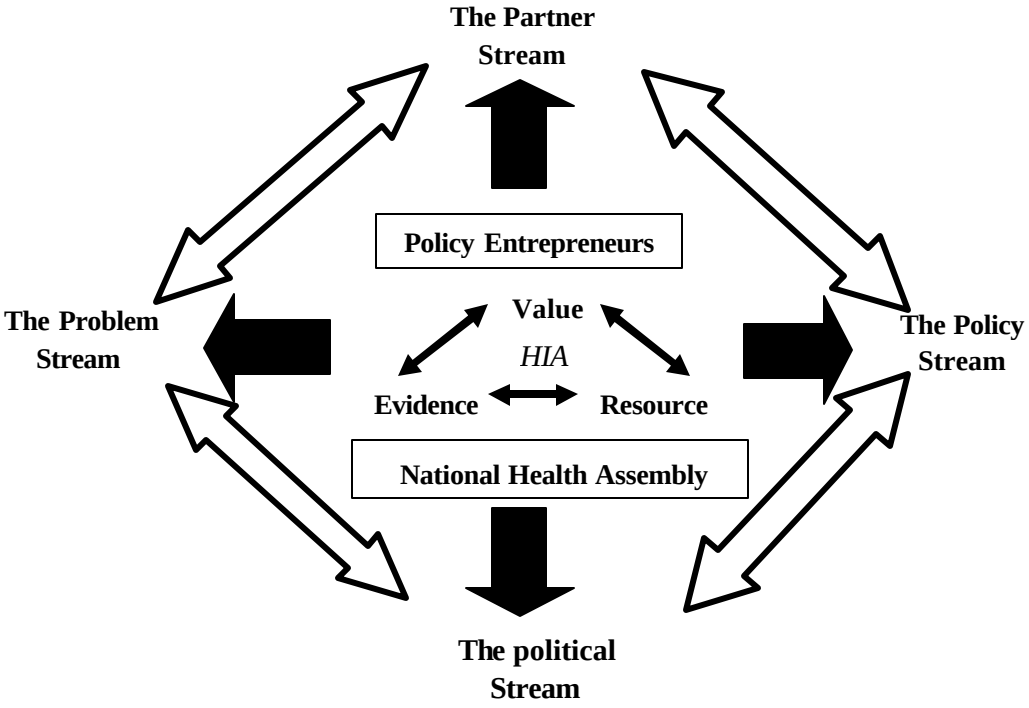


Figure 1 Conceptual Framework of HIA Core Value and HIA Participation in Healthy Public Policy Process.

2.3. Observations on HIA Participation in Healthy Public Policy Process

This part aims to provide some observations on how HIA actually participates in formulating healthy public policy in Thai contexts. The first part will concentrate on the implementation of three core values and its contribution to healthy public policy. The second part will provide the observation on the participation of HIA in public policy process. Then, the progress in strengthening policy entrepreneurs and National Health Assembly will be observed.

1. Implementation core values

- *High Priority for Social Value*

By observation from various cases, it can be seen that Thai version of HIA development has paid high attention in social values and evidence. The emphasizing on social values links to more inclusive policy discussion both in terms of wider stakeholders and broader perspective of health and health determinants. Unsurprisingly, HIA development in Thailand has received warm welcome from civil society. However, in practice, to fulfill this impressive value-driven HIA case study successfully, it also needs innovative methodology to cover and present evidence from all aspects of values, which will be discussed later.

- *Need for Innovative Methodology for Sound Evidence*

The analytical frameworks and methodologies for searching and verifying evidence have been continuously developed, especially in terms of participatory research approach with strong collaboration with local community. However, when these frameworks and methodologies links to agreed social values in HIA process, in some cases, they reach some certain limit. This is because, some social values, like spiritual health, are difficult to measure or even strictly identify, with old paradigm framework and methodology. Consequently, some important values within these HIA case studies are offset by narrow and mechanistic views of quantitative measurement and specified evidence. Therefore, the innovative, or possibly radical, methodological improvement should be recommended as the top priority for further HIA development in Thailand.

- *Require Better Focusing on Resource*

In practice, focusing on resource as a core value of HIA receives quite less attention compared to the former two core values. This implies that, in many cases, HIA in Thailand are still looking and discussing only health consequences of one specific proposal, left alone other possibilities within the society. However, there is a clear tendency in focusing more on resource as a HIA core value. The results from few HIA case studies show that, the better understanding on resources, the more choices available for society, and, then, the more interesting and creative discussion in HIA process. This also implies the more effective partnership and the more attractive alternative policy proposal in public policy process.

2. Participation of HIA in public policy process

- *Problem Stream: Clear but not Enough*

Obviously, from various cases, HIA can provide more insightful and comprehensive on health impacts, based on social values and various types of evidence, leading to higher public awareness on health impacts from development policies and activities, as well as, higher demand for healthy public policy. However, only clear problem stream is not sufficient to move policy arena. The improvement has been done in two main relating ways. First, it needs the linkage with other problems in the problem stream, such as economic, social, or political aspects, within each specific case. Second, it should link to other three streams and search for window of opportunity to be open.

- *Partner Stream: Strength and Challenge*

The importance of partner stream has been stressed clearly. Therefore, HIA case studies have paid much higher attention to this stream. Presently, HPP-HIA networks can play a leading role in some thematic policies. The partner stream now seems to be the most powerful stream within these four streams of Thailand's healthy public policy. However, the strong partnership also does not always ensure the success in healthy public policy formulation. The weakest links might occur in moving to develop and present alternative policy proposal to the whole society, as well as, to get support within the political process. Therefore, the strengthening the links between the partner and other streams should be the real challenge.

- *Policy Stream: The Weakest Link, But Still High Potential*

Although the problem and the partner streams are quite strong in Thailand, the policy proposals from HPP-HIA network putting forward to society are still not strong enough to convincingly move the policy direction. Generally, proposals posed to the society today are still more on reactive rather than proactive. They mainly present opinions or options to encounter health risk problems, but they cannot provide concrete plans or road maps with comprehensive assessment of what will happen within the society in terms of health and others, if the alternative policies will be chosen and implemented. This situation leads to higher risks in political ignorance, socially confusion, and political abuses by symbolic interaction, as seen in some HIA case studies.

Political Stream: Discover the Black Box
In Thailand, the political process is quite similar to black box without publicly known information and insight, and, then, without academic knowledge and recommendation. This norm certainly has some adverse effects in HPP-HIA development. There are only few cases, which are quite successful in political participation, leading to clear political decision in favor of healthy public policy. Although some successes are still based on personnel styles, connections, and special occasions, it can, to some extent, generalize and share among the HPP-HIA network, as an insight information, and, possibly in future, as a knowledge for moving the political stream. The attempts to systematize this information and knowledge should be regarded as one of the top priorities for HIA development in Thailand.

3. Policy Entrepreneurs and National Health Assembly
Concurrently, HIA development can also help policy entrepreneurs in deciphering the health evidence, then better understanding in the problem stream, as well as, provide the forum in which they can form their partnership, advocate for healthier policy proposals, and mobilize political supports. These mutual benefits can be seen also in working together between HIA development and National Health Assembly. Presently, National Health Assembly becomes the main policy forum for HPP-HIA network to develop their partnership, discuss problem identification and policy proposals, as well as, search for political supports.

2.4. Conclusion

Within the three years of HIA development, Thailand has developed and provided the core values for HIA implementation, as well as, the framework for participating in public policy process. The observation suggests that, these core values and frameworks can be used as a roadmap to continue further HIA development. Furthermore, HIA development in Thailand have succeed in (a) raising public awareness through stronger evidence (b) opening value-oriented forum for peaceful decision-making, (c) accumulation of social capital through partnership and strengthening of policy entrepreneurs, and (d) possibility of knowledge advancement in the undiscovered fields, such as policy process and political stream.

However, there are at least four crucial points, which should be paid much higher attention and well planned. These four areas are (a) the development of methodology with the new holistic health paradigm (b) better focusing on resources with stronger link to improve the performance in the policy stream, (c) strategy for long-term relationship between policy entrepreneurs, National Health Assembly, and HIA development, and (d) deliberative forethought and knowledge accumulation in participation in the political stream.

3. HIA Framework and Practice in the Netherlands

3.1 Background

The framework developed in the Netherlands[1] has been developed for a joint research project in the Netherlands on Health Impact Assessment (HIA), in which two perspectives are combined. An epidemiological research is aimed at developing instruments to quantify potential health impacts from policy. A policy research, of which this paper is a product, is aimed at designing instruments for process management of HIA to contribute to healthy

[1] This framework is thus not formally used by Dutch HIA practitioners and policy makers, but rather is a model for analysis in this particular research. For the sake of reference it is easier to compare between the 'Thai' model and the 'Dutch' model.

decisions. The combination of both perspectives should gain insight into the relation between knowledge and policy-making. The project will result in a handbook for HIA and two dissertations on HIA by the end of 2006.

This research directly follows some of the recommendations given in previous research on HIA (Banken, 2001; Kemm, 2001) and is a follow-up on an exploratory research of the political-administrative perspective on HIA in the Netherlands (Putters, 1996). Currently, there is a growing need for evaluation and follow up (Bekker, Putters, & Van der Grinten, 2004). To begin with, the growing diversity in HIA tools and methodologies makes it hard to compare different kinds of HIA and their outcomes. Moreover policy-makers wonder about the extent to which HIA actually impacts on the policy and whether the time investment outweighs the benefits. Several public health experts in the Netherlands and abroad recognize the difficulties of influencing policy-makers to actually make policies health sensitive[2]. The research should thus contribute to identifying the conditions for healthy decisions and improving the decision support provided by HIA. Moreover, the exchange of the medical-epidemiological and the political-administrative discipline will contribute to the scientific discourse on ontology and epistemology, and consequently on methodology.

The scientific relevance of this research is in providing a thorough explanation for the extent and ways in which policy-makers utilize HIA outcome, and testing instruments for process and knowledge management of HIA to improve outcome utilization. The framework of analysis consists of concepts from the Knowledge Utilization studies, which rely on policy analysis tools, Science and Technology studies, which highlight the 'boundary work' and interaction between HIA and the policy/project, and the discipline of organizational learning and knowledge management, which provides more detailed concepts at the level of research and policy exchange.

3.2 The framework for analysis

The framework consists of the following concepts:

1. *Knowledge Utilization studies: individual and institutional level policy analysis*

(Hanney, Gonzalez-Block, Buxton, & Kogan, 2003; Weiss, 1991, 1977)

- Policy network analysis: distinguish between an HIA arena, a policy/project arena, and a policy implementation arena, in which different combinations of actors and stakeholders are involved, who are interdependent for resources.
- Individual level concepts: cognitive problem perceptions and solution preferences in the policy/project process; competencies and capabilities
- Institutional level concepts: formal rules and procedures regarding dominant repertoire (ideas and beliefs on the subject); positions, rewards/sanctions; and accessibility of arenas/networks and association in interactions.
- Interactions among and between individuals and institutions in a sociocultural context

These concepts reveal four dimensions of decision-making (and knowledge utilization): they have cognitive, social, cultural and institutional elements. These concepts remain rather broad and need to be focussed at the research-policy link in more detail.

The instruments that Knowledge Utilization studies recommend to coordinate the link between research and policy are oriented at process management; make the research process fit the policy/project process. Tools are network management (maintenance); network constitution (pro-active inviting new actors into the network, changing the network compilation); developing health policy performance indicators, such as DALY's[3]; institutional representation in different arenas (De Bruijn, Ten Heuvelhof, & In 't Veld, 2002).

[2] (Banken, 2001; M.P.M. Bekker, 2003; Den Broeder & Bekker, 2002; Putters, 1996; Putters & Van der Grinten, 1998)

[3] Disability Adjusted Life Years lost or gained with certain policy intervention.

2. Science and Technology studies: boundary work

S&T argues that there is no clear distinction between the social processes underlying knowledge production and decision-making (Jasanoff, Markle, Petersen, & Pinch, 1995). Science is not value-free and therefore many decisions in the research process are as normative as in policy processes. The boundaries that demarcate science from non-science with international academic standards, i.e. peer reviewed publications, have been created and are characterized by their own culture, language, rules for behaviour etc (Gieryn, 1983; Hoppe, 2002). These boundaries can be functional, as conflicts in societal activities (like policy making) can be referred to science to be clarified. Yet, within science there are also conflicts that may be solved in society, for instance 'the precautionary principle' in policy choice (Bal, 1998).

In addition, there is a contextual difference between 'research science', appealing to international scientific standards to legitimate the research, and 'regulatory science', which appeals to additional resources to legitimate the research (Jasanoff, 1990). Examples are National Advisory Councils to the government, who work in close relation with policy makers to incorporate the policy dynamics into the research and create national fora for debate (Bal, Bijker, & Hendriks, 2002). This is called 'boundary work' (Gieryn, 1983), creating a zone in which representatives of both perspectives, or cultures, can interact and exchange their interpretations of the policy problem and solution. Boundary work consists of coordination by 'boundary objects'. In essence, boundary objects exchange empirical observations or predictions and normative considerations on the policy.

HIA can also be seen as 'regulatory science' that needs boundary work for the outcome to be accepted and turned into action by decision-makers. One may even consider HIA to be a 'boundary object' itself, a means to connect the public health perspective with the other policy perspective(s), which is/are subject in HIA (Jasanoff, 1990).

Instruments for coordination are for instance environmental standards for acceptable risks; but also selection of research institute, research themes, data collection, and uncertainty limits; an advisory board: membership, objectives, procedures; a public draft report on which stakeholders may comment, or the complex roles of public officials in supporting the research. Officials may take the role of policy maker (HIA commissioner), supervisor or inspector, support staff, expert or employer. The more roles are involved in the research, the more we may expect commitment or even a sense of ownership (Bal, 1998).

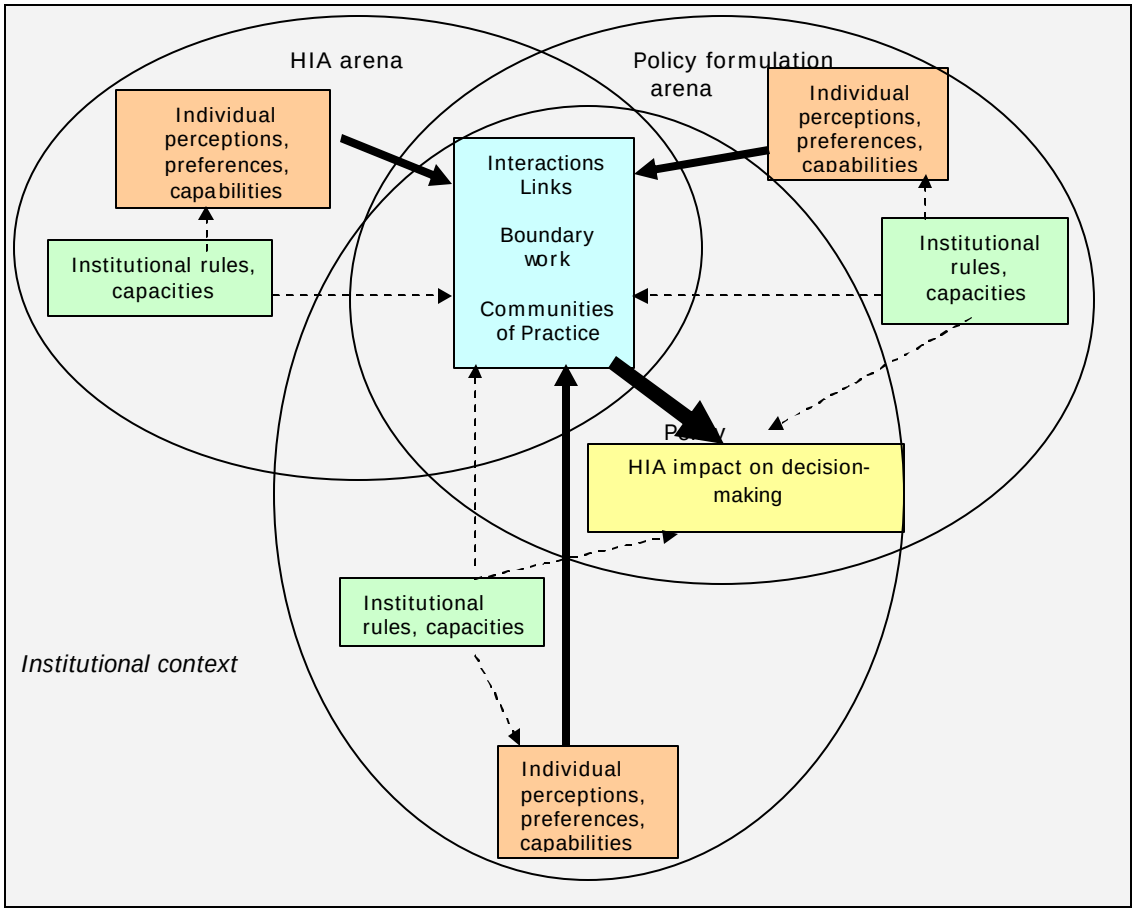
3. *Organizational learning and knowledge management: capacities and communities*

Sub discipline that have fed into organizational learning are organizational psychology, sociology, economics, and information and communication technology. Basic ideas are that organizational learning takes place in social interactions, although the receiver does not copy the sender's messages in the exact same format (Dewey). The formal message is explicit knowledge, which is distinct from tacit knowledge as personal, consciously or unconsciously unarticulated knowledge within an organization (Polyani). Another important feature of organizational learning is double loop learning (Cyert and March, 1963), allowing organizations to translate the society's response to organizational output into new organizational rules or procedures (Easterby-Smith & Lyles, 2003).

Key concepts are absorptive capacity, organizational capabilities, and communities of practice. Absorptive capacity is the organizational ability to recognize the value of new external knowledge, assimilate it, and apply it to commercial ends (Cohen and Levinthal, 1990). Antecedents are the prior level of related knowledge and organizational capabilities, outcomes are expectation formation (perception) and exploitation (action). Organizational capabilities are dynamic learning strategies, characterized by (tacit) experience accumulation (i.e. team building); knowledge articulation; and knowledge codification in operational procedures and routines. These can be facilitated by cross-or even interorganizational Communities of Practice (CoPs), in which members participate on the basis of a 'sense of responsibility and a passion for practice', as opposed to reasons of accountability in hierarchical communities or learning of a specific skills or interest in learning communities. Purpose of CoPs is to enhance a common understanding (intersubjectivity) of the main

practice by creating a shared history through stable membership (Easterby-Smith & Lyles, 2003).

Utilization of HIA outcomes may be enhanced by creating such an interorganizational CoP, in which researchers, decision- makers, implementors and other stakeholders reflect on how to integrate health considerations into their daily practice instead of merely learning about potential health impacts form policy.



For a description of this framework: see IAIA 2004 paper 'Improving assessment impacts on decision-making'(Bekker).

In what way does this framework relate to HIA practice in the Netherlands? This will be described in the next section.

3.3 HIA Practice in the Netherlands

From the STS studies we recognize the technocratic and critical approaches in impact assessment. As for Health Impact Assessment, HIA has been developed in two scientific sub disciplines: risk analysis and environmental protection studies on the one hand, and social medicine and public health on the other (Birley, 2002). Risk analysis and environmental hygiene researchers reveal a technocratic orientation on 'facts' as they produce a quantified retrospective evidence base of mainly physical health determinants, and deduct predictions to reduce exposure to potentially damaging policy interventions. This is called 'tight scope HIA'

(Kemm, 2001). Social medicine and public health researchers, on the other hand, additionally pay attention to socio-economic health determinants and lifestyle and aim for health promotion in addition to risk prevention. They reveal a technocratic approach in epidemiological research (tight scope HIA), as well as a critical orientation on 'values' in qualitative, participatory research. The latter is called 'broad scope HIA' (Kemm, 2001).

In the Netherlands, national policy HIAs for the most part have a technocratic orientation, and are mostly based on expert opinion and literature study. Exceptions are two HIAs based on quantitative modeling and simulation for predictions (on tobacco policy and on dental care insurance provisions). Two exceptions to the technocratic dominance are the HIA on National Housing policy and the very first HIA on the 'Ecotax'[4] and the impacts on the health of the handicapped and elderly. The HIA on National Housing policy considers the experienced opportunities for physical exercise, by secondary analysis of a 1998 survey database. The other three parts of this HIA are technically oriented towards traffic safety, social safety and accidents in and around the house. Only the HIA on the 'ecotax' was more 'participative' by telephone interviews held with representants of the affected population. Finally, the local level HIA on Cities and Environment, which was especially developed for Dutch experimental policy on developmental and construction projects that will exceed environmental standards (Fast, 1996), is a technocratic procedure, though citizens often participate in a reference committee to the HIA (M. P. M. Bekker, 2003).

One possible explanation for the Dutch dominance of the technocratic orientation may be that expert judgement in the Netherlands is still very much valued as opposed to i.e. the USA (Bal, 1996). As a result, there is less need for experts to build coalitions to be heard. Another explanation may be, that up till now there have not been many local project level HIAs in the Netherlands, which are less suitable for quantitative population-based research but particularly suitable for public participation. A third explanation might be that the Netherlands, in comparison with Anglo-Saxon countries, have a much less developed civil society and as a result, the public health tradition is much less community oriented with hardly any private initiatives. Health issues seem to be a less straightforward reason for Dutch citizens to demand participation in decision making than environmental or safety issues.

Besides the technocratic research orientation, the Dutch practice of HIA is characterized by limited commitment from the official authorities and thus, limited leadership at the national level, combined with institutional arrangements that seem to limit rather than facilitate the opportunities for HIA. National HIAs have been conducted by a government agency of public health, which need the ministry's permission for new HIAs or related activities. In addition, the ministry is involved in formulating the research themes and problem. Moreover, the HIA is reported to the ministry only, who usually puts an embrago on dissemination and publication for several months. In most HIA cases, it is hard to determine how the HIA may have contributed to the ministry's policy decisions and interventions.

At the local level, HIA methodology is currently being developed[5] for municipal health services as proposed practitioners, in addition to the already mentioned HIA on Cities and Environment. These are local government agencies, and thus subject to the authority as well. Up till now, ther have been about 14 local projects with an HIA-like research on health impacts from projects exceeding environmental standards. The outcomes have not been evaluated (only the products: Fast, 2002), but the impression is that it is a difficult process to bring health to the attention of other policy makers. In some cases, the HIA has contributed to healthy decisions (Akkersdijk, 2003).

[4] Ecotax: extra taxes paid for energy saving
[5] (see IAIA 2004 abstracts Penris)

4. Similarities and differences

If we compare the two models, both display a pro-active attitude to improve HIA contribution to public policy making. Building partnerships, facilitating and creating networks are proposed in both models. The difference is that the Thai model seems to recommend a more politicized approach through policy entrepreneurs, whereas the Dutch model seems to work up to consensus building and pacifying the different interests. The streams model suggests that policy comes about when the different streams of problem, solution (policy) and participants (polity) coincide, which is called a window of opportunity or policy window. These are rare. The problem stream seems to depend on political consensus on the problem, which in the case of HIA would be their acceptance of potential health impacts. In addition, the policy stream seems to presuppose that knowledge on the solution of the problem is available, and moreover based on scientific consensus. As we have seen in the Dutch model, this is also very rare. Both models recognize, however, possibilities to create or enhance the conditions for such a policy window.

In this respect, the models are additional to each other. The Thai model describes how the core values should be developed (as an HIA internal assignment), and that links should be brought about between the different streams. The Dutch model may provide suggestions on how exactly to facilitate these links. For instance, there are several activities that could be undertaken by for instance the HIA commissioners (in the Netherlands, these are policy makers) to select research institutes with a specific tradition, or by HIA managers to maintain and develop networks in which new stakeholders are introduced (not only the public but also policy or project implementing officers). In addition, specific tools can be developed to enhance decision-making capacity (a tool by which different health impacts and even other considerations can be weighed against each other, valued and decided upon); or to enhance policymaking by policy alternatives that translate the potential health impacts into healthy juridical, economic or communicative policy measures. At the organizational level, capacity can be enhanced by mobilizing prior related knowledge in the organization, allocate resources to incorporate HIA outcome in policy measures, and developing HIA programmes, all to better account for why HIAs are done.

As for methodology, the Thai evidence value is described as limited because of an old paradigm of narrow and mechanistic views of quantitative measurement and specified evidence. The Dutch model addresses this issue in the Sociology of the Sciences, where a new 'critical' approach is looking for additional sources of knowledge legitimacy by participative methodology. It states that a paradigm shift is necessary from technocratic, positivist assumptions to more constructivist assumptions of reality in order to understand why the participatory method would be valuable.

The two models have been developed for different purposes. The Thai model is explicitly aimed at providing a scope for HIA in healthy public policy practice, whereas the framework developed in the Netherlands is more theoretical, aimed at describing and explaining HIA outcome. Both purposes are observable in the expression of the Thai HIA core values and the absence of expressed values in the Dutch framework. The 'social values' and the 'evidence' values will hardly be questioned, but the third 'resources' value (mobilizing stakeholder resources and public participation) would be debated in the Netherlands, where, as we have seen, the technocratic expert opinion is still dominant. From the Sociology of Science perspective in the Dutch framework, this expression of values is a valid and functional way of facilitating 'boundary work' between the HIA and the policy. This way it is clear to policymakers and stakeholders what they can and cannot expect from the HIA practitioners. These values should however not be interpreted dogmatically. In that case one provides little opportunities to exchange opinions on different interests in relation to health, because health is considered the most important one, always and everywhere.

Furthermore, we can identify different institutional opportunities and threats to the HIA in Thailand and in the Netherlands. In Thailand, the HIA conducting institution seems to be placed at more distance from the Health Ministry than the Dutch institutions, even though the resources in both cases come from the government. The Thai institution seems to conduct the HIAs whereas the Dutch institution at the national level has a 'clearing house' function: it coordinates the research done by independent research institutes. As a result it becomes more difficult to manage the HIA methods and outcomes. The Thai National Health Assembly plays an important role, whereas in the Netherlands we do not (yet) have such an institution. Recently the Ministry announced a temporarily National Platform on Health, but this is still in its infancy. In Thailand thematic and regional networks have been set up to facilitate and support the development of HIA. In the Netherlands there are no formal networks. There is an informal HIA network of practitioners and interested officials. There is hardly any support for 'early' practitioners, though a tool is in the development phase for municipalities.

In another way, HIA may pose threats or opportunities to the policy process. The Thai model extensively describes public participation and resource mobilization as opportunities, although these may just as well pose threats, if the government has different priorities, or non-public health lobby groups in society have a strong influence on policy-makers, with adverse implications for health. In Thailand one government consideration might be that to obtain loans from the World Bank, it has to prove how to protect environmental, health and biodiversity issues in development projects. This is not the case in the Netherlands, where there is neither external nor internal financial stimulus to protect public health.

5. Discussion

What can we learn from this comparison?
The Thai model suggests that HIA should link up with the four components of decision-making, so HIA should work inside the policy arena. The Dutch model observes a general distance between the HIA arena and the policy arena, which makes it necessary for HIA to bridge this distance. The Thai model makes the underlying substantial values explicit, thus providing criteria for quality of the HIA. The Dutch model refers procedural academically developed instruments to bridge this distance between HIA and the policy.

A question that arises is whether a focus on linking the HIA arena and the policy arena is sufficient for influencing decision-making? Both models suggest that an analysis of the full policy process is needed to have HIA impact on decision-making. Then we would have to adjust the HIA to the policy process, even under conditions of uncertainty. The question is, how can we reflect on and adjust the HIA in a valid and legitimate way?

In order to reflect on this question, we need evaluation of HIA outcomes, related to the public decisions made. This will be provided by both researches in the next two years. For now, we need to keep in mind that we may develop a general framework for HIA and its link to the policy process, but still it needs to be adjusted to the national or even local situation because there are different institutional arrangements.

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