

RESEARCH

Open Access



Global partnerships for local impact: Strengthening HTA capacity in Asia and Africa through collaborative experiences

Lapad Pongcharoenyong¹, Brandon Wen Bing Chua¹, Shiela Marie Gines Selisana-Chaipanya^{1*}, Inthira Sua², Leslie Ong², Saudamini Vishwanath Dabak¹ and Yot Teerawattananon¹

Abstract

Background Health technology assessment (HTA) is recognized as a critical tool for informing health policy decisions and advancing sustainable universal health coverage (UHC). For over a decade, the Health Intervention and Technology Assessment Program Foundation (HITAP) has undertaken systematic efforts to strengthen HTA capacity across Asia and Africa. This study reviews HITAP's experience in capacity strengthening to inform strategies for effective international collaboration and capacity-building in low- and middle-income countries.

Methods A document review of HITAP's capacity-strengthening initiatives from 2010 to mid-2025 was conducted using HITAP's internal documentation. Initiatives were categorized according to the Individual, Node, Network and Environment (INNE) framework and by activity type, with data analyzed descriptively. In addition, key informant interviews (KII) were conducted with key HTA decision-makers from 7 countries who had prior engagement with HITAP, and thematic analysis was applied to the KII data.

Results A total of 278 HTA capacity-strengthening activities across 25 countries were identified from 2010 to mid-2025. The majority of the initiatives ($n = 151$) were with countries in Asia, were programmatic ($n = 128$) instead of ad hoc and involved mostly knowledge sharing (26%) and research and project collaborations (21%). Out of 11 countries in Africa, only 3 had programmatic engagements with HITAP ($n = 30$), involving mostly advising and mentoring (30%). Analysis of annual activity frequency shows that, in the post-pandemic period (2022 onwards), multi-country engagements have increased as collaborative activities have transitioned to include a larger number of countries within a single event. KII participants reported that these collaborations enhanced awareness and recognition of HTA among key stakeholders including policy-makers, strengthened technical capacity within the Ministry of Health and partner organizations, and generated outputs such as HTA guidelines, publications, dedicated HTA units, a Memorandum of Understanding and institutional or regulatory reforms at all 4 INNE levels.

Conclusions Collaborations for strengthening capacity for HTA are critical and will shape the next decades as countries strive to achieve and sustain UHC. Contextual approaches, underpinned by a multi-pronged approach, with an emphasis on joint initiatives across countries, are needed to ensure HTA remains relevant and responsive to evolving priorities in the changing international context.

Keywords Health technology assessment, Capacity-building, Capacity strengthening, International collaboration, Health policy, Health systems, Low- and middle-income countries, Universal health coverage

*Correspondence:

Shiela Marie Gines Selisana-Chaipanya
shiela.m@hitap.net

Full list of author information is available at the end of the article



© The Author(s) 2026. **Open Access** This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, which permits any non-commercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if you modified the licensed material. You do not have permission under this licence to share adapted material derived from this article or parts of it. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

Background

Countries have made a global commitment to achieve universal health coverage (UHC) by 2030 and ensure equitable access to quality healthcare services without financial hardship as part of the Sustainable Development Goals (SDGs). Achieving this target is essential for advancing progress across all 17 SDGs, from poverty elimination to climate action [1]. Diverse approaches to priority-setting for UHC have been adopted by countries, depending on the context of health systems. Countries have implemented health technology assessment (HTA), a transparent and participatory approach [2], using a systematic process to incorporate multidisciplinary perspectives and explicit criteria to assess the value of health technologies for implementation in health systems [3]. With HTA, evidence-informed decisions can be made, facilitating prioritization of limited resources to support more efficient and equitable health spending and resource allocation while promoting the sustainability of the health system. This is especially critical considering the evolving global health financing landscape that has seen a rapid decline in international aid [4], with a shift towards calls for domestic resource mobilization by countries [5, 6]. For decades, HTA has been widely adopted by many countries worldwide for pricing and reimbursement decisions. In Asia, HTA was introduced in the 1990s and has been growing over the past few decades [7–9]. In other regions, such as sub-Saharan Africa, there is a growing interest in HTA [10, 11]. However, awareness of HTA remains limited, and HTA activities have not been fully integrated into policy-making processes. Nevertheless, countries do not need to reinvent the wheel, as the lessons learned from experiences of countries that have gone through this process, such as linking the use of evidence to policy, provide valuable insights for strengthening HTA in those at an early stage of establishment. For example, common challenges such as limited resources, technical capacity and stakeholder engagement can benefit from having platforms for exchanging knowledge and joint problem-solving, highlighting the role of cross-country learning in advancing HTA development in diverse contexts [12, 13].

Recognizing the value of international collaboration, the Health Intervention and Technology Assessment Program Foundation (HITAP) supports health decision-making in the context of UHC in Thailand and has partnered with several international initiatives, each with their distinct yet complementary purposes [14]. HITAP was established as a semi-autonomous research unit under the Thai Ministry of Public Health in 2007 [15]. It has employed multiple strategies to collaborate with regional and global HTA communities through active engagement in international networks and partnerships

[14]. These include the International Decision Support Initiative (iDSI), a global network of priority-setting institutions that sought to support the use of evidence to inform policy, and was implemented in 3 phases (iDSI 1, iDSI 2 and iDSI Plus) over 10 years [16]; HTA-siaLink, a regional network of HTA agencies in Asia that seek to strengthen capacity and share knowledge [17, 18]; the Access and Delivery Partnership (ADP), led by the United Nations Development Programme (UNDP), which supports the use of HTA to improve access to health technologies [19]; and the Prince Mahidol Award Conference (PMAC), an annual global health conference that takes place in Bangkok, Thailand, and brings together practitioners and policy-makers in health [20]. In addition, support from the national government, such as the Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B), Thailand, has also provided support to build networks with countries [21]. Such collaborations may serve to increase efficiency and quality of assessments, share knowledge and expertise and improve the timeliness of evaluation through collective efforts [22]. This is critical, especially with the rapid emergence of innovative health technologies that may require more complex evaluation methods [23].

This study aims to review the experience of HITAP in collaborating with partners internationally, across government, academia, international organizations and networks to strengthen capacities for HTA and, more broadly, evidence-informed health policy-making. The findings are expected to provide insights into the challenges and opportunities associated with building and institutionalizing HTA capacity through collaborations. Additionally, the findings are expected to inform future directions for supporting efforts to advance evidence-informed decision-making in health by international agencies. The lessons may extend beyond the HTA community and be relevant to other organizations working to strengthen technical and institutional capacity for the use of evidence for policy in health.

Methods

The study draws on the collective and firsthand experiences of the authors, a few of whom have been involved in HITAP's international collaborations since its inception in 2010. The study was conducted in 2 stages, through document review and key informant interviews (KIIs).

Document review

A document review of HITAP's activities from 2010 to mid-2025 was conducted using materials available on HITAP's website, internal databases and

publicly accessible reports (for example, proceedings, publications, policy briefs). Information from the document review was organized into country-specific tables detailing the year, key activities, outputs/outcomes and stakeholders. Activities were categorized by type of country partnership, such as (1) programmatic, based on support provided, or (2) ad hoc or commissioned. A programmatic engagement involves activities over multiple years and at different levels [as defined by the Individual, Node, Network and Environment (INNE) framework below]; this approach was either by design or through evolution from ad hoc collaborations. In addition, activities were grouped by region: (1) Asia, (2) Africa, or (3) multi-country. Multi-country activities involve partners from more than one country. The term “country” should be understood to refer to countries and areas and does not imply the expression of any opinion whatsoever on the part of the authors concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries [24].

Subsequently, the activities were organized according to the INNE framework, which is a structured approach used to characterize capacity-strengthening initiatives across 4 distinct levels: Individual, Node, Network and Environment [25]. The specifics of the defined levels of the INNE framework for this paper are shown in Table 1.

Applying this framework to the analysis of past and existing capacity-strengthening efforts facilitates the identification of targeted areas for improvement to drive more effective and impactful capacity-strengthening initiatives.

Descriptive analysis was employed to summarize the number and type of activities undertaken by countries and regions. The type of activities were grouped as follows: (1) technical training, which includes skill-based capacity-strengthening initiatives such as webinars, workshops and pre-conference sessions; (2) advising

and mentoring, which encompasses technical assistance activities, including the provision of expert comments and inputs, as well as internships and mentorship programs; (3) research and project collaboration, which refers to joint research initiatives and projects, particularly those where HITAP has served as a co-author; (4) convening stakeholder processes, which involves activities aimed at facilitating policy dialogue or institutional development within country, such as the formulation of HTA guidelines or the establishment of memoranda of understanding (MoUs); (5) study visit, which involves in-country or cross-country learning exchanges, often incorporating multiple activities within Thailand or partner countries; (6) resource sharing, which includes the dissemination or joint use of public goods such as datasets, tools and methodologies; (7) knowledge sharing, which refers to the exchange of information through mechanisms such as webinars or conferences; and (8) scoping activities, which includes landscape analysis and meetings with various partners. An activity may fall under different levels of the INNE framework, depending on its intended purpose and audience. Activities were recorded if they had documentation associated with them. For activities that were held over multiple years, the final year of the activity was recorded. In the case of multi-country activities, knowledge products with links to country collaborations were included.

Key informant interviews (KIIs)

KIIs were conducted to supplement the information gathered from the document review and gain deeper insights into stakeholders' experiences and perspectives. Individuals who had previously collaborated with HITAP on HTA capacity-strengthening activities or had experience in evidence use for health policy decisions were purposively invited for the interview. The interviews explored the broader international support received by these partners, including, but not limited to

Table 1 Description of INNE framework levels for capacity-building (Adapted from Li et al., 2017)

INNE domain	Remarks
Individual	Individual-level engagements focus on the professional development of specific individuals within organizations. By enhancing technical skills and knowledge in HTA, individuals can better fulfil their roles, emerge as leaders and make meaningful contributions to organizational processes for HTA.
Node	“Node” refers to specific organizations, departments or units that emerged or been established to conduct HTA. Capacity strengthening at this level focuses on strengthening the organizational infrastructure to conduct HTA effectively.
Network	Network-level activities foster collaborative efforts among stakeholders involved in decision-making processes. Building strong networks enables the exchange of knowledge, experiences and resources, which can enhance overall capacity across different stakeholder groups, from individual to global and national key opinion leaders.
Environment	The Environment level encompasses the broader context that can influence the uptake of HTA and its impact on health policy and practice. Capacity-strengthening efforts at this level can create a supportive environment for HTA and evidence-informed decision-making.

their collaborations with HITAP. Potential participants were invited to participate via email with information on the study. Informed consent was obtained before the interviews. A semistructured interview guide, consisting of 5 sections, shown in Additional file 1, was used to conduct the interview. Briefly, these sections cover topics related to previous and current collaborations for HTA capacity strengthening, lessons learned and strategies for advancing collaboration and HTA implementation. The interviews were conducted using Microsoft Teams (Redmond, WA) and recorded to facilitate the analysis process. Of 18 participants invited, 11 participants from Bhutan, Ghana, India, Indonesia, Kenya, Lao People's Democratic Republic (PDR) and the Philippines agreed to participate in the interview. The interviews were conducted between 17 April and 22 May 2025 and ranged from 25 to 61 minutes.

Data from the interviews were analyzed using Dedoose version 9.2.22 (Los Angeles, CA). The six-step Braun and Clark process of inductive thematic analysis was adopted [26]. First, familiarization with the data set was done by the L.P., S.M.G.S-C and B.W.B.C by reading the data at least twice within Dedoose. Next, initial codes were generated systematically across the dataset. Data interpretation was conducted by L.P., S.M.G.S-C, B.W.B.C and S.V.D. to minimize bias, blind spots and errors. Subsequently, patterns within the codes were reviewed and collated into initial themes. Lastly, the initial themes were further refined by re-examining the coherence of codes within each theme. Quotations from participants, where relevant, were identified to support study findings.

Results

Findings integrate evidence from document review and KIIs with 11 participants from 7 long-standing programmatic countries (Bhutan, Ghana, Indonesia, India, Kenya, Lao PDR and the Philippines). Participants represented diverse institutions, including international funding agencies, government bodies, research institutions and universities, and had substantial experience in HTA within their respective countries. A summary of the key themes and subthemes emerging from the interviews is presented in Additional file 2. The results are organized into 3 sections: (1) patterns of international collaborations, (2) geographical distribution of collaborations and (3) factors influencing capacity strengthening for HTA. These sections provide a progression from an overview of HITAP's collaboration activities and partnerships to how these efforts vary across settings and, finally, to insights into the factors shaping capacity strengthening, drawing on lessons from partner country experiences.

Patterns of international collaborations

Types of activities

Between 2010 and mid-2025, HITAP had a total of 278 collaborative activities in 25 countries across Asia and Africa (Figs. 1 and 2). Of these, 151 activities were conducted in Asia across 14 countries, and 55 in Africa across 11 countries. A further 72 activities involved multiple countries. The comprehensive list of activities, categorized according to the INNE framework, is provided in the supplementary materials: Additional file 3 (programmatic) and Additional file 4 (ad hoc) for engagements in Asia, Additional file 5 (programmatic) and Additional file 6 (ad hoc) for engagements in Africa and Additional file 7 for multi-country activities.

Collaborative activities were distributed across all levels of the INNE framework, with the majority occurring at the Network (122 of 278, 44%) and Individual (74 of 278, 27%) levels, followed by Node (60 of 278, 22%) and Environment (22 of 278, 8%) levels. The categorization of individual activity within the INNE framework is shown in Fig. 3.

Individual-level activities include trainings among others. HITAP has conducted both introductory and advanced training on HTA, as well as other topics of interest such as vaccinology and policy communication, at national and regional levels. There has been a growing interest in communicating with policy-makers, and HITAP conducted sessions on policy briefs with partners in Ghana, India and Vietnam [27, 28]. In the short to medium term, internships provide participants with on-the-job training and capacity-strengthening opportunities through placements at HITAP, thereby reinforcing country-level engagements. By design, interns at HITAP were required to provide endorsements from their institution or supervisor and were expected to return to their home countries to support HTA development [29]. Typically, interns work on a topic of policy relevance in their home country so that the findings could apply to their country context. In addition, supervising interns who are completing their master's or doctoral programs offers an opportunity to build long-term growth [30].

The Node level serves as a coordinating mechanism to build foundational systems needed for sustainable HTA integration. Common outputs of Node-level engagements include policy-relevant studies; the development or revision of HTA process guidelines, frameworks and costing databases; the establishment of dedicated units or working groups; and the creation of methodological tools [31]. These outputs not only helped standardize practice but also act as an indicator that HTA is becoming part of health policy and decision-making.

At the Network level, knowledge exchange through platforms such as HTAsiaLink were actively used.

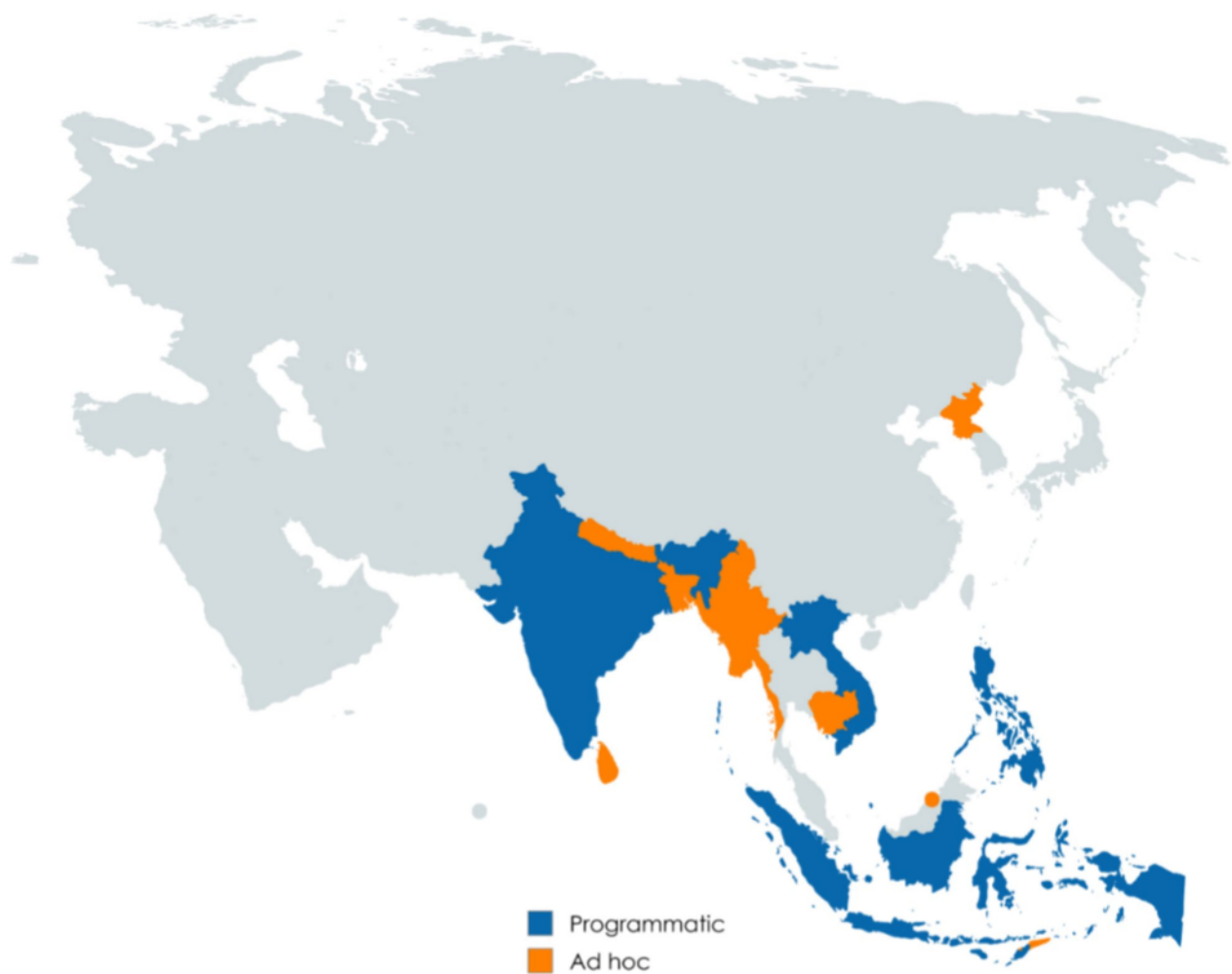


Fig. 1 Collaborations between HITAP and partners in Asia (created using MapChart.net). Disclaimer: The map is indicative of partnerships and is not intended to represent the borders of countries. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the authors concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Lines on the map represent approximate border lines for which there may not yet be full agreement

HTAsiaLink brings together HTA institutions and activities are specifically geared towards HTA researchers from member organizations in Asia-Pacific region; it is based on a self-governing and resourcing model which allows hosts to showcase HTA to broader stakeholders in their own country [18]. In addition, knowledge products such as the Guide to Health Economic Analysis and Research (GEAR), an open-access online platform for health economic guidelines and resources to address common challenges faced by researchers in low- and middle-income countries (LMICs), were developed [32]. Other knowledge products include conducting a study on the factors associated with the development of HTA in Asia as well

as unpacking what are considered “Best buys, wasted buys and contestable buys” [33–35].

Activities at the Environment level have taken the form of MoUs at the bilateral level, for example, with Kenya, which gave high-level commitment [36]. Global health and knowledge-sharing platforms such as PMAC are influential venues for linking HTA to the broader health system [37, 38]. Participation of senior leaders, such as the Director-General or Ministers of Health, at a global platform such as PMAC has also facilitated partnerships and contributed to the momentum for HTA development, as observed in Indonesia, India and Kenya. In one instance, documenting Thailand’s experience with UHC



Created with mapchart.net

Fig. 2 Collaborations between HITAP and partners in Africa (created using MapChart.net). Disclaimer: The map is indicative of partnerships and is not intended to represent the borders of countries. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the authors concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Lines on the map represent approximate border lines for which there may not yet be full agreement

beyond HTA was undertaken at a time when India was launching its UHC program, responding to topics of interest to policy-makers in the country. Scoping activities such as one in Brunei, where senior members from HITAP and its board visited and met with stakeholders and senior members of the Ministry of Health, were also conducted [39, 40].

Types of partnerships

Based on the document review, collaborations primarily involved national-level institutions, particularly ministries of health [for example, the Indonesian Health

Technology Assessment Committee (InaHTAC)] and allied research or academic bodies [for example, the Health Strategy and Policy Institute in Vietnam and the Postgraduate Institute for Medical Education and Research (PGIMER) in India]. These actors either serve as evidence generators or interlocutors between generators and users of evidence. In some countries, managers of the public health insurance program (for example, the National Health Insurance Fund in Kenya) and a broader set of stakeholders (for example, the National Institution for Transforming India, NITI Aayog, in India) were engaged.

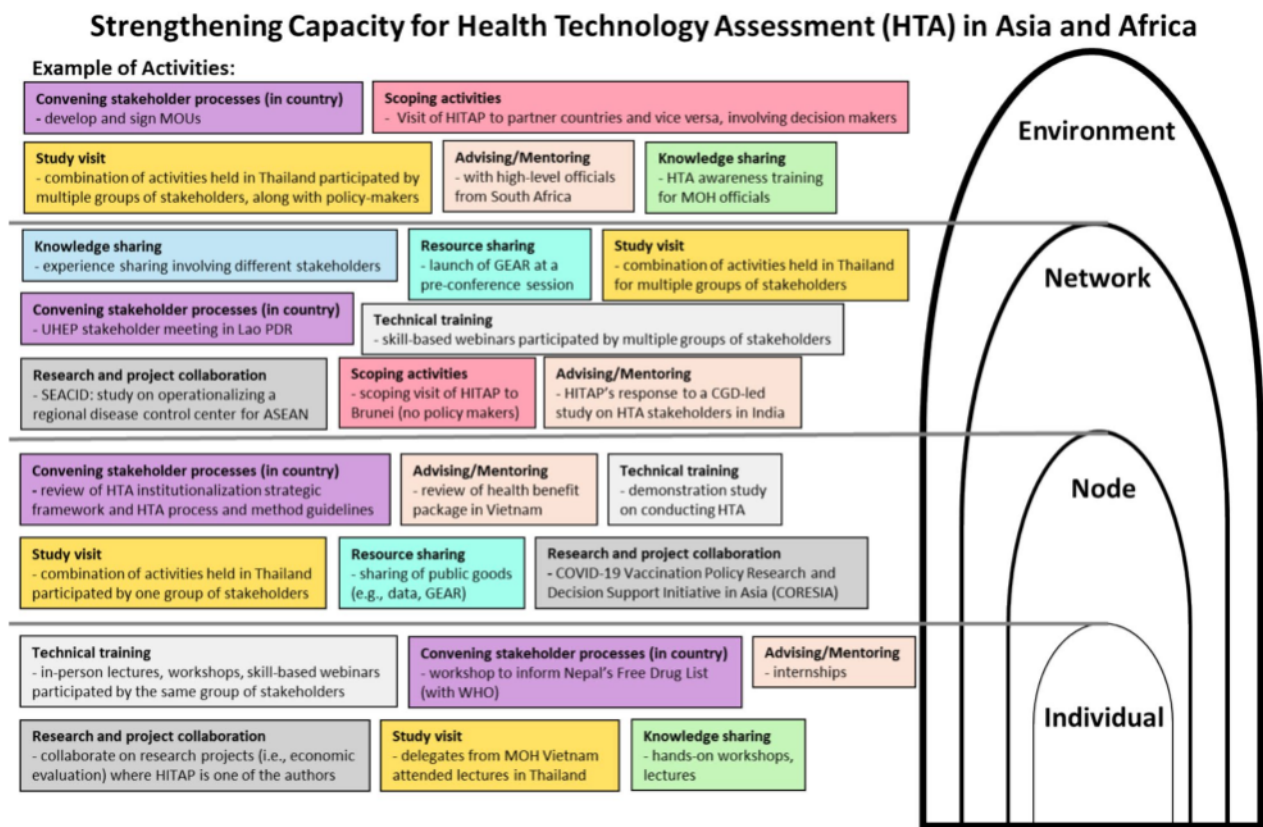


Fig. 3 Mapping capacity-strengthening activities in the INNE framework. Figure adapted from Li et al. (2017)

In addition to domestic partners, collaborations involved a wide range of international actors. Multi-lateral agencies such as the WHO were involved at the country, regional or global levels. Bilateral agencies such as the Japan International Cooperation Agency (JICA) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) were involved in engagements in Senegal and India, respectively. International nongovernmental organizations such as the Clinton Health Initiative (CHAI) and the Program for Appropriate Technology in Health (PATH) were involved in Lao PDR and Bhutan, respectively.

Beyond direct collaborations with HITAP, interview participants reported engaging with a range of international partners, including research institutions, universities, government agencies and international organizations. Key collaborators include Mahidol University, Imperial College London, the University of York, the National University of Singapore (NUS), the Center for Global Development (CGD), the UK's National Institute for Health and Care Excellence (NICE), WHO, World Bank, US Agency for International Development (USAID) and UNDP.

The collaborations were also facilitated through regional and global networks and initiatives, such as iDSI, HTAsiaLink, the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) and the Health Technology Assessment International (HTAi). These engagements typically involved technical assistance, grant funding and trainings. Global platforms such as PMAC attract practitioners and policy-makers who operate primarily at the Environment level of HTA. In addition, the Association of Southeast Asian Nations (ASEAN) Health Cluster 3 platform has been used to strengthen HTA capacity through a baseline analysis of capacity in the region, trainings for ASEAN Member States and engagement with those currently not involved in regional activities on HTA.

Geographical distribution of collaborations

To contextualize variation in collaboration patterns across regions by INNE, Table 2 summarizes characteristics of long-standing programmatic partner countries in Asia and Africa.

Table 2 Contextual characteristics of programmatic partner countries

Country	Year collaboration with HITAP began	Selected collaborators ^a [9]	Legislative mandate for HTA ^b [9, 41]
Asia			
Bhutan	2014	Health Intervention and Technology Assessment Division [HITAD; formerly Essential Medicines and Technology Division (EMTD)], Ministry of Health	No
India	2012	Health Technology Assessment India (HTAI)	No
Indonesia	2015	Indonesian Health Technology Assessment Committee (InaHTAC), Ministry of Health	No
Lao PDR	2018	Unit for Health Evidence and Policy (UHEP), University of Health Sciences and Lao-Oxford-Mahosot Hospital Wellcome Trust Research Unit	Yes
Philippines	2014	Department of Health's Health Technology Assessment Unit (HTAU)	Yes
Vietnam	2024	Health Strategy and Policy Institute (HSPi)	No
Africa			
Ghana	2014	Ministry of Health and National Health Insurance Agency-led HTA functions	No
Kenya	2018	Ministry of Health, Health Economics Research Unit at the Kenya Medical Research Institute (KEMRI) Wellcome Trust Research Programme (KWTRP) and Center for Epidemiological Modelling and Analysis (CEMA), University of Nairobi	Yes
Senegal	2021	Agence de la Couverture Maladie Universelle (ACMU)	No

^a“Collaborators” refers to organizations undertaking HTA functions

^b Refers to the current status of HTA legislation in countries; legislative mandate indicates whether HTA is required by law for decision-making

Asia

Of the 278 recorded activities, 128 were conducted in countries with established programmatic relationships, including Bhutan, India, Indonesia, Lao PDR, the Philippines and Vietnam (Fig. 1). Most of these countries were initially supported through iDSI, an international network which aimed to strengthen evidence-informed decision-making to advance UHC in LMICs. iDSI was implemented in 3 phases: (1) 2013–2015, (2) 2016–2019 and (3) 2019–2023 [16]. Under Phases 1 and 2, early programmatic relationships were developed with Indonesia and Vietnam, and later, with India. In 2019, a formal partnership with the Philippines was launched under the iDSI Plus initiative. During the same period, partnerships with Bhutan and Lao PDR began as ad hoc engagements and gradually evolved into a programmatic engagement over time.

India reported the highest number of activities, totaling 39 (Fig. 4a). This is followed by 26 activities in Indonesia and 17 activities in Vietnam. In these countries, most activities fall under the Network level, primarily focusing on knowledge-sharing initiatives. In contrast, Node-level activities were most prominent in Indonesia, while India recorded the highest number of Individual-level engagements. Bhutan's activities were more evenly distributed across the Individual, Node and Network levels. Across most programmatic countries, at least one activity was classified under the Environment level of the INNE framework, typically involving engagement with policy-makers.

In terms of activity types, India was primarily engaged in technical training and knowledge sharing initiatives (Additional file 3), while Indonesia focused more on research and project collaborations. Vietnam's activities were mostly centered on knowledge sharing. Other forms of engagement, such as stakeholder convening and study visits, were relatively evenly distributed across all countries.

A total of 23 ad hoc activities were identified between 2011 and mid-2025 across 8 countries in Asia, namely Bangladesh, Brunei, Cambodia, Democratic People's Republic of Korea (DPRK), Myanmar, Nepal, Sri Lanka and Timor Leste (Additional file 4). Figure 4a shows that the activities were mostly classified under the Node and Network levels of the INNE framework, with a total of 8–10 activities recorded under each category. Engagement levels varied from 2–4 activities per country, with Nepal, Brunei and Myanmar demonstrating the highest levels of participation, each accounting for 4 activities. Notably, Brunei was the only country to engage across all 4 INNE levels. Generally, the majority of engagements in Asia were knowledge sharing activities (39 of 151, 26%) and research and project collaborations (32 of 151, 21%). No resource sharing activities were recorded across all ad hoc countries (Fig. 4b).

An analysis of annual activity frequency indicates that engagement levels in Asia peaked between 2018 and 2019, with 20–21 activities conducted annually (Fig. 4c). However, following the onset of the coronavirus disease 2019 (COVID-19) pandemic, activity levels

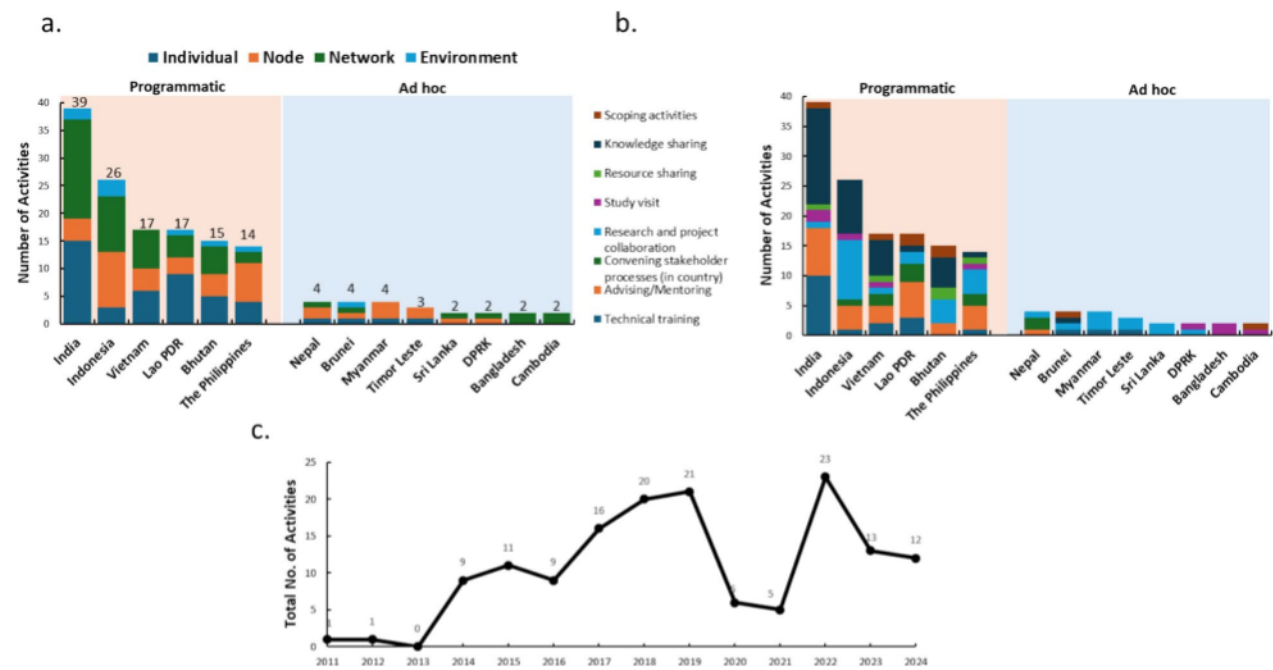


Fig. 4 Number and INNE categories (a), classification (b) and yearly distribution (c) of engagements in Asia

declined sharply, with only 6 activities recorded in 2020 and 5 in 2021. Although there was a notable rebound in 2022, with 23 recorded activities, the overall engagement has gradually declined since then.

Africa
In Africa, programmatic partnerships were established in only 3 countries (Kenya, Ghana and Senegal) accounting for a total of 30 activities (Fig. 5a). Notably, Kenya recorded the highest level of engagement with HITAP, with a total of 15 activities, and the only programmatic

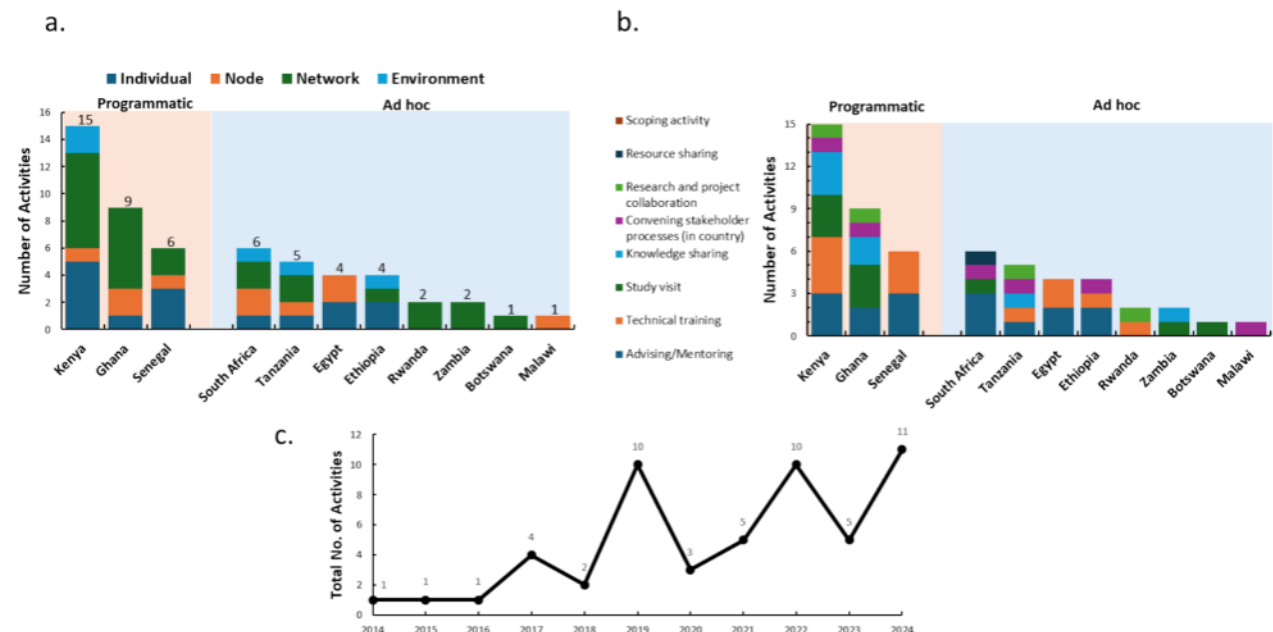


Fig. 5 Number and INNE categories (a), classification (b) and yearly distribution (c) of engagements in Africa

country to engage in Environment-level activities. Most programmatic activities were classified under the Network level, accounting for 15 activities, followed by 9 under the Individual level. Kenya and Ghana primarily engaged in Network-level activities, which were largely focused on knowledge-sharing initiatives and study visits (Additional file 4). Meanwhile, Senegal was more actively involved in an Individual-level activity such as a technical training. Ghana and Senegal demonstrated more frequent engagement with HITAP from 2021 onwards.

Beginning in 2015, a total of 25 ad hoc or commissioned activities were conducted across Northern Africa (Egypt), Southern Africa (Botswana, Malawi, South Africa, Zambia) and Eastern Africa (Ethiopia, Rwanda, Tanzania). Figure 5a shows that South Africa recorded the highest number of engagements among ad hoc partnerships, with 6 collaborative activities, and has participated in activities spanning all 4 levels of the INNE framework. Botswana participated in only one Network-level activity. Likewise, Malawi engaged in one Node-level activity.

Additional file 6 shows that 10 of 25 (40%) ad hoc activities were carried out at the Network level, followed by 6 initiatives at both the Individual and Node levels. In terms of specific activities, these countries were engaged mostly in advising and mentoring (16 of 55, 29%) (Fig. 5b). Only one resource-sharing activity was recorded in Johannesburg in 2017, which was the launch of GEAR.

Overall, the yearly distribution of activities in Africa followed the same trend as that in Asia, peaking in the pre-pandemic period (10 activities in 2019), followed by a steep decline during the pandemic with only 3–5 activities, and a rebound in 2022 with 10 activities (Fig. 5c).

Multi-country collaborations

Since 2011, a total of 72 multi-country activities, involving partners from more than one country, have been recorded. While the number of engagements remained relatively low in the early years, there was a sharp peak in 2019, just before the COVID-19 pandemic (Fig. 6a). Despite a slight decline during the pandemic, activity

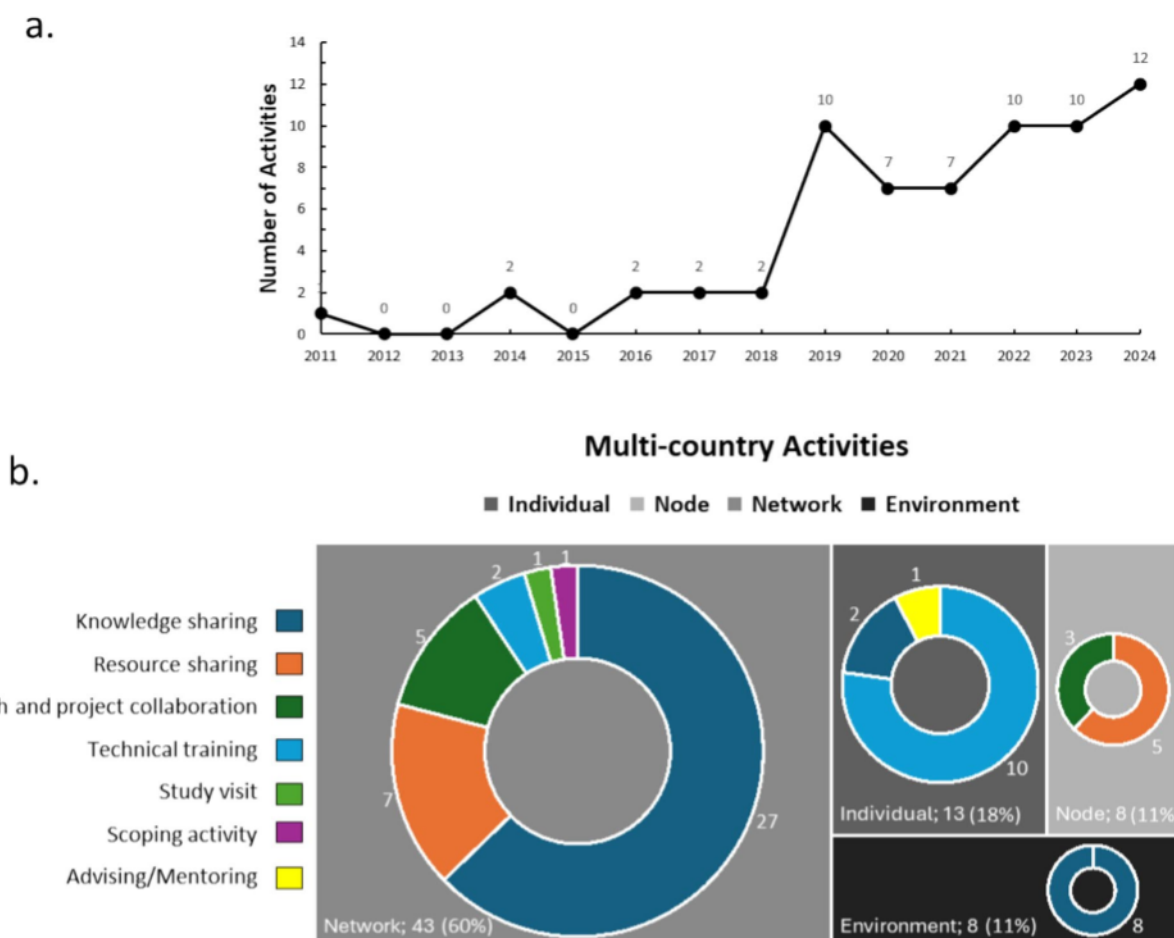


Fig. 6 Yearly distribution (a), classification and INNE categories (b) of multi-country activities

levels began to recover in 2022, and reached the highest point in 2024, with a total of 12 activities conducted per year.

In the earlier years, most activities were ad hoc, involving joint projects, workshops and trainings among Asian countries, and later expanded to Africa. Over time, more programmatic initiatives emerged alongside ad hoc events, such as the vaccinology workshop, roundtable series, PMAC and the HTAsiaLink annual conference.

Between 2011 and 2021, activities were distributed across all 4 INNE levels, with a focus on the Individual and Network levels (Additional file 7). Figure 6b shows that, of the total engagements, 60% (43 of 72) were classified at the Network level, with a strong emphasis on knowledge-sharing initiatives. These efforts were frequently facilitated through regional collaborations within Asia, South–South partnerships and HTAsiaLink. Participation extended beyond LMICs to include upper middle- or higher-income countries or territories such as China, Korea, Malaysia, Singapore and Taiwan.

At the Individual level, activities primarily focused on technical training. Engagements at the Node level often involved resource sharing, joint research, or project-based collaborations. Activities classified under the Environment level typically include high-level convenings such as conferences, policy roundtables and symposia.

From 2022 onwards, there has been a marked shift, with most activities increasingly concentrated at the Network level. Indeed, HITAP shifted its focus towards more multi-country initiatives. Compared with programmatic single-country collaborations that build on prior bilateral engagement, programmatic multi-country initiatives are increasingly network-driven, larger in scale and more inclusive, involving a greater number of countries in a single event. Examples include the Priorities 2024 Conference [42] and the Infectious Disease Modelling Conference conducted in 2024 [43].

Factors influencing capacity strengthening for HTA

From the KIIs, most participants agreed that external support from international partners and networks played a valuable role, especially for countries where HTA systems were still in the early stages of development. This support provides step-by-step guidance, facilitates access to best practices and offers essential resources such as funding and technical expertise. Participants mentioned several positive impacts resulting from these collaborations. These include increased awareness and recognition of the value of HTA among key stakeholders, especially policy-makers, and strengthened technical knowledge and skills among professionals from the Ministry of Health. Countries such as Indonesia, Ghana, the Philippines and Kenya reported progress in establishing

formal HTA processes and guidelines. Beyond technical assistance, the collaborations with organizations such as HITAP provide important moral and strategic value by supporting credibility, raising awareness and strengthening confidence among partners involved in the initiatives. Strengthening these elements can help build trust and sustain stakeholder engagement, which could support the effectiveness and continuity of partnerships over time:

Pairing of emerging HTA practitioners with experienced mentors would go a long way for our region to boost (local capacity), hands-on learning and (evidence-based) decision-making confidence and processes as well [Interviewee 10, Kenya].

Building on these experiences, the following section explores the key factors that influenced the outcomes of international partnerships. By unpacking these elements, this paper offers practical insights that may be useful for countries seeking to strengthen or initiate similar collaborative efforts.

Leadership and political commitment

Participants frequently highlighted that supportive leadership could contribute to HTA institutionalization, particularly through the establishment of dedicated HTA agencies or units and increased uptake of evidence-informed policy recommendations. Leadership also plays a critical role in setting national priorities, which then shapes domestic support and the direction of collaborative efforts. However, changes in leadership may shift these dynamics, depending on the new leadership's level of engagement with and understanding of HTA.

Early sensitization of leaders and key stakeholders, particularly policy-makers, was identified as a key enabling factor for fostering recognition of HTA as a valuable decision-making tool. One participant highlighted that limited technical capacity was reported to affect the timeliness of HTA outputs, which in turn influenced the uptake of recommendations. This suggests a potential cycle in which slower outputs reduce perceived usefulness, potentially affecting prioritization and investment in HTA capacity:

They don't take up some of the recommendations because of the speed of the process. We are not (fast all the time), and that is (due to) our current limited capacity [Interviewee 4, The Philippines].

Increasing awareness at the leadership level can foster greater institutional commitment and mobilize resources to strengthen HTA capacity in response to growing policy demands. Workshops targeting high-level decision-makers can serve as an eye-opening opportunity that fosters acceptance and reduces resistance. For example,

in Lao PDR, the establishment of a dedicated HTA unit was attributed to a co-founder's participation in a regional meeting on advancing UHC through HTA. This exposure sparked high-level discussions that catalyzed institutional development and capacity strengthening, leading to subsequent collaboration and training support from other countries.

Financial considerations in collaborative efforts

Adequate financial resources, which are critical at early stages of HTA development, are necessary for HTA collaborations to thrive. For example, Lao PDR indicated limited domestic resources as a barrier to initiating HTA activities, as the field is still emerging and lacks dedicated funding. As one interviewee said, "It's just a completely new field. So, it requires resource(s) allocated to it." In regard to funding within the country that supports HTA activities, another participant said, "Zero".

Even modest international funding was seen as instrumental in jump-starting the process. In the Philippines, administrative challenges related to accessing domestic funds have impeded progress:

Sometimes the structure, the politics, and administrative work can also be a burden on the success of the collaboration in itself ... so that we can use our funds because we're tired of the partner always (being) the one fully supporting the finances. We wanted to co-support financially [Interviewee 4, The Philippines].

While a country with a more established HTA system, such as Indonesia, expressed fewer concerns about funding, the participant acknowledged that global financial uncertainties have nevertheless constrained resource availability:

Money becomes even more important now with the US policy cutting all aid, among other things, (affecting) HTA implementation ... They cancelled the activities because they lost the funding from USAID [Interviewee 2, Indonesia].

Given these constraints, particularly the high costs associated with activities such as international site visits, there is a need for more innovative and affordable models of collaboration.

While funding may influence collaboration methods, it does not fully determine the way in which countries prefer to engage. For example, the Philippines emphasized the value of flexible formats such as virtual exchanges, whereas Ghana underscored the continued importance of hands-on support:

They might know the skills, they might have done it

before, but actual hands-on support would be very useful [Interviewee 8, Ghana].

In addition to financial assistance, participants from Ghana, Indonesia and Kenya recognized the value of in-kind contributions, particularly the provision of technical expertise:

When it comes to engaging with HTA ... HITAP has been the key technical partner (of) the ministry [Interviewee 8, Ghana].

These cases highlighted that preferences and contextual factors are important in determining the most appropriate and effective capacity-strengthening approach.

Collaboration and partnership model

Effective collaboration goes beyond one-time technical support to facilitate meaningful progress in HTA institutionalization. Sustained engagement requires the establishment of shared goals and mutually beneficial areas of focus among partners. Participants from Indonesia, Lao PDR and the Philippines emphasized that collaboration is more effective when driven by national priorities rather than those of external agendas or agencies:

What I recommend for partners ... collaborating with (country name) is to ensure alignment with the country's specific needs ... as this depends on current government policies and the priorities of the Ministry of Health [Interviewee 6, Lao PDR].

Contextualization of support

Participants stated that HTA development must be tailored to each country's specific context and needs. Countries such as India, Indonesia and the Philippines exemplify this, as various states or islands face distinct challenges, have varying capacities and operate differently. For example, a participant from India mentioned that the southern region has prioritized non-communicable diseases, particularly those affecting maternal and child health. It was also emphasized that HTA hubs across different states vary in their level of HTA maturity. This view was echoed by a participant from Kenya, who stressed the importance of supporting countries not only through knowledge transfer but also by helping them adapt international experiences to their own settings.

Target audience and training models

Training efforts should be tailored to meet the varying needs of different target audiences. For example, introductory or basic-level training should be accessible for individuals who are new to HTA. Advanced training modules can be tailored for those with prior

exposure, allowing for the development of specialized expertise. While short-term training workshops are useful for kickstarting initiatives, more sustainable capacity strengthening comes from investing in higher education, particularly supporting master's- and PhD-level training in HTA-related fields. As reflected in the experiences of interview participants, many did not originally come from health economics backgrounds and were trained in fields such as clinical practice, epidemiology and pharmacy. Their progress was shaped not only by short-term training but also by graduate studies in partner countries and participation in joint projects. Furthermore, a participant from the Philippines mentioned that 8 students are currently undertaking internships in HTA and a 1-year fellowship program was created to serve as a pathway to a master's degree in HTA. Participants also highlighted the importance of targeting specific professional groups. Pharmacists, in particular, were identified as a key audience for HTA capacity strengthening given their clinical knowledge, as noted by participants from Ghana and Lao PDR.

Long-term capacity development

Participants from Ghana, Kenya and the Philippines highlighted the need for sustainable capacity-strengthening strategies. One participant highlighted the challenges of retaining HTA expertise in the public sector: "We really have many great people, but we are not good in keeping them".

To address this, participants pointed to the need for ongoing training, structured career pathways and institutional mechanisms to retain HTA professionals. The early establishment of dedicated HTA units was also identified as a critical component of sustainability, providing a clear pathway for applying skills acquired through training:

Beyond just the workshop, countries should also be supported to build sustainable HTA units...even when there are training opportunities for HTA...they don't know what they are going to do beyond that training [Interviewee 4, The Philippines].

While HTA institutionalization takes time, having a formal unit in place was considered critical for developing and maintaining HTA expertise over the long term.

Role of regional and global public goods

To support knowledge exchange and reduce duplication of effort, participants suggested treating existing HTA resources as public goods that can be openly shared through accessible platforms for use by researchers and government stakeholders. This ensures that others with similar responsibilities and challenges do not need to reinvent the wheel. In addition, regional networks, such

as HTAsiaLink, could benefit from mapping and leveraging existing centers of excellence across countries to facilitate knowledge exchange. Over time, this could support the emergence of smaller centers of excellence in other countries, further reinforcing South–South collaboration and enhancing regional self-reliance.

Discussion

This study is the first systematic attempt to document activities by HITAP involving international collaborations for strengthening capacity for HTA and evidence use. Further, insights from the KIIs also revealed lessons on the role of collaborations in supporting institutionalization of HTA in countries. HTA capacity-building initiatives were highlighted, along with the challenges and opportunities associated with building and institutionalizing HTA, to inform future directions for supporting efforts by the HTA community and international agencies to advance evidence-informed decision-making in health. The key discussion points link to the types of activities and their implications, types of partnerships and the role of context and sustainability.

Types of activities

Taking a multi-pronged approach to strengthening capacity, by employing activities along the continuum of the INNE framework, can be effective in strengthening capacity. Individual-level activities in the short, medium and long term provide the bedrock for building technical capacity in countries. Node-level engagement has been associated with the translation of individual technical expertise into institutional change. This facilitates the use of policy-relevant studies to inform decision-making and helps establish the foundations of a broader HTA ecosystem through the development of guidelines and databases. For example, HITAP's collaboration with Bhutan's Essential Medicines and Technology Division, including capacity-building initiatives such as on-the-job training through economic evaluations of pneumococcal conjugate and rotavirus vaccines, was used to inform decisions and set the stage for institutional use of evidence [44, 45]. Sensitization workshops conducted during these projects were associated with improved stakeholder knowledge and understanding of HTA, contributing to increased interest and demand for further HTA studies. Subsequent initiatives have built on this foundation, including the development of a national HTA framework [46]. This impact can be augmented at the Network level, where there is a shared platform for the co-development and contextual adaptation of tools, methodologies and policy frameworks tailored to diverse national contexts. This collaborative approach helps minimize duplication of efforts and enhances efficiency across the region.

Engagement with a broader set of stakeholders also facilitates a conducive Environment for HTA and evidence use for decisions to flourish.

Such programmatic relationships that go beyond ad hoc engagements and build on past efforts, ensure continuity and allow sufficient time for meaningful capacity strengthening across individual, institutional and systemic levels. However, such an approach requires time and resources, and is subject to external factors such as political commitment. In such cases, opportunistic engagements that may be ad hoc in nature could also be considered as they can evolve into programmatic engagements in the long-term.

Regional platforms and global public goods

The rising demand and limited financial resources may mean that hosting regional-level activities will likely be the direction going forward. The value of multi-country collaboration through Network-level activities has increased over time and was clearly demonstrated during the COVID-19 pandemic. HTA agencies faced increased demand for timely and policy-relevant research and many countries saw a decline in HTA capacity-strengthening activities due to funding cuts and lack of manpower, with potential mismatch in the demand and supply for HTA capacities [47, 48]. Regional networks such as HTAsiaLink were mobilized to conduct studies on vaccination certificates and other related research [47, 49]. Recent examples highlight the value of these regional platforms. For example, the 2024 medicines pricing workshop was organized in response to a network member's request [50], and the 2025 HTA training that brought together participants from 5 countries [51].

Another mechanism for scaling up engagement is through the development and use of knowledge products and online resources that are publicly available through open access. Aggregating HTA guidelines, as available on GEAR [31], or developing guidance on how to create such guidelines, as undertaken by a joint task force between HTAi, ISPOR and HTAsiaLink, makes knowledge more accessible [52]. Online courses such as Massive Open Online Courses (MOOCs), which gained traction during the COVID-19 pandemic, are also useful, particularly for those balancing full-time employment with learning [53, 54]. These can be complemented by practical and accessible resource modules, such as a series on key topics in health economic evaluation for researchers [55]. However, further work is needed to understand how these knowledge products are integrated into country engagement activities and translated into concrete actions. The Disease Control Priorities series, currently in its fourth edition, hosted by the University of Bergen, offers an example of the role of global economic evidence

influencing policy and the shift towards a country-led approach [56]. Initiatives such as EVIPNet [57], a WHO-led knowledge translation network, offer a different model and place emphasis on institutionalizing mechanisms such as policy briefs and deliberative dialogues for evidence-informed policy-making. Going forward, this could include linking open-access evidence products with collaboration and capacity-development activities in selected LMICs, along with follow-up support.

Beyond the design of knowledge products, the location of partners is also a critical consideration for sustaining engagement. Having geographically close partnerships can be beneficial in the long term, as they tend to be more accessible, less costly for in-person activities and, potentially, have more context-specific knowledge, as shown by HITAP's experience in Asia. This highlights the potential value of regional hubs. However, iDSI's experience suggests variation in establishing such hubs, reflecting the challenge of balancing national and regional priorities [16]. Engaging through regional institutions such as the Africa Centres for Disease Control and Prevention (Africa CDC) or institutional mechanisms such as the ASEAN could also facilitate more engagement [9, 58]. In Europe, having a common regulation at the regional level has facilitated such collaboration [38]. Harmonization of HTA practices is underway in ASEAN, though variations in health systems and practices will need to be considered [9, 12]. There is potential for HTAsiaLink to take on a facilitative role in this respect, and the strategic plan launched by the network outlines its aspirations to serve as a regional hub for HTA [17, 59].

In addition to geographic considerations, a country's economic context can influence the effectiveness of collaborative initiatives. South–South partnerships are especially valuable for promoting sustainable and contextually relevant development. This type of collaboration allows countries facing similar challenges to benefit from practical capacity-building, peer-to-peer learning and shared incentives for long-term planning, fostering commitment and sustainability [13, 60]. However, North–South collaborations remain important in providing resources and technical expertise that can support and enhance South–South initiatives.

Further, engagement with other types of stakeholders in HTA, with whom there has been limited interaction, may also need to be considered going forward; this may be done through other networks or organizations such as HTAi and ISPOR that have patient groups and the for-profit private sector in their membership base, or organizations such as the Centre for Innovation in Regulatory Science (CIRS), which also considers the regulatory aspects related to HTA. Regional collaborations could address common challenges, such as accessing health

technologies through pooled procurement [61, 62], and tackling emerging issues such as pandemic responses, early HTA and digital health [63–66].

Context variations and environmental-level engagements

Effective collaboration does not follow a fixed sequence and types of activities; rather, it requires a coordinated effort that simultaneously supports multiple levels of the INNE framework. For countries at an early stage of HTA development, starting with collaborative projects can be just as relevant as beginning with formal guideline development, particularly when aiming to demonstrate value and build support. Despite variations in the frequency and distribution of capacity-building efforts across different INNE levels, countries have made significant progress in institutionalizing HTA.

While such variation may partly reflect where countries are in their HTA development, our findings suggest that it is shaped by a broader set of contextual factors. These include the presence of institutional structures, such as dedicated HTA units or nodal agencies, existing policy or regulatory mandates, prior exposure to economic evaluation and the level of demand from policy-makers for evidence-informed decision-making. In addition, the nature of existing partnerships and funding arrangements can influence which types of activities are prioritized. Together, these factors create nonlinear pathways through which countries engage with different INNE levels. Countries with more established HTA systems may attract different types of collaboration, while collaborative engagements themselves can further accelerate HTA development. Further, regional-level initiatives, such as those in ASEAN, can also drive country uptake of HTA [9].

Regional differences further illustrate how these contextual factors shape collaboration strategies. In Asia, Node-level engagements often take the form of research and project-based collaborations, allowing countries to apply HTA in real policy contexts and produce tangible outputs that demonstrate its value. Meanwhile, Node-level engagements with African countries often focus on advising and mentoring on policy-relevant studies, which are critical in laying the groundwork for HTA by supporting the development of national guidelines and frameworks. These differences reinforce the importance of adapting collaboration strategies to regional and contextual realities, rather than following a uniform approach.

A better understanding of health systems, including the political economy of countries and their initiatives, is one area that could receive closer attention. In supporting regional engagement on HTA in ASEAN and Asia, HITAP undertook a review of evidence use in selected countries to better understand the processes and

stakeholders. Conducting more systematic analyses of health systems of countries where engagement is sought will be important going forward [37]. Knowledge sharing platforms such as PMAC and WHO's Asia Pacific Observatory on Health Systems (APO) may also provide avenues for linking HTA to the broader health system.

Given that leadership and political commitment to HTA were identified as a facilitator to collaborations by key informants, engagements at the Environment level are critical. A range of policy instruments has been used in countries, though legislation has been implemented in only 2 of the countries that HITAP has worked with (the Philippines and Kenya) [9, 67, 68], demonstrating the need for flexibility based on contextual factors. Regional and global commitments to HTA, such as through the WHO South-East Asia Regional Office (SEARO) resolution in 2013 and the WHO resolution in 2014, in which HITAP and the Thai Ministry of Public Health were engaged, can also contribute to creating the global consensus on this issue. Although fewer Environment-level activities were reported in this study compared with other INNE levels, HITAP has recently expanded efforts to engage more systematically with global health platforms such as National UHC Day events in Thailand [69] and through PMAC at the global level [70]. Increasingly, there is an interest in engaging Ministries of Finance with Ministries of Health, at the G20 and ASEAN, with HTA potentially being a topic that could contribute to the dialogue [71, 72]. Issues such as pooled or coordinated procurement could be informed by HTA and require engagement with a broader group of stakeholders in the policy arena [61, 73]. Continuing and further systematizing these initiatives could help support sustainable HTA institutionalization by strengthening the link between evidence generators and policy-makers.

Role of international partners

International partners and global initiatives have played a catalytic role in expanding networks for collaborations on HTA. iDSI was an early example of an international collaborative effort to strengthen capacity in priority-setting, with founding members, NICE International, CGD and HITAP [16, 74, 75]. Additionally, platforms such as the UNDP's ADP, further enhanced South–South knowledge exchange [14]. Beyond Asia, initial linkages with countries in Africa, many of which emerged through engagements with ADP, have been progressively deepened through bilateral collaborations [58]. These evolving relationships highlight the complementary roles of different partnership models in capacity strengthening.

There are also other networks that support evidence generation and use on topics related to HTA. There are a few with a regional focus, such as the Thanzi Programme,

which is a network focused on locally relevant evidence generation, capability strengthening and engagement with national policy institutions across East, Central, Southern and West Africa [76]. The network connects public universities to ministries of health and is led by an intergovernmental with academic institutions in the region and the UK, with activities supported by grants [77]. There are also initiatives without a regional focus. The Norwegian Institute of Public Health (NIPH), supported by the Norwegian Agency for Development Cooperation (NORAD), collaborated to strengthen capacity in public health towards UHC, including HTA, in countries in Africa, the Middle East and Asia. The Joint Learning Network for Universal Health Coverage (JLN) is focused on knowledge exchange, including topics related to HTA, supported by various partners and currently managed by Amref. The Resilient and Responsive Health Systems (RESYST) is an international research consortium, hosted by the London School of Hygiene and Tropical Medicine (LSHTM), with partners in Asia and Africa, focused on conducting research [78]. All of these initiatives originated outside of formal agreements, received funding support from international partners to either start or sustain their activities and are similar in that they bring together partners across geographies with complementary skill sets.

Key informants identified financial barriers to collaborations, with most partnerships focusing on technical contributions and joint engagements with country partners. In some cases, networks independently provide funding to countries requesting support. In terms of maximizing impact, as observed through HITAP's experience collaborating internationally, complementary efforts, by iDSI, ADP and WHO regional offices in Asia, have been particularly beneficial in supporting HTA and health systems research. International organizations such as UNDP and WHO can use their convening power to connect and collaborate. Philanthropic organizations such as the Gates Foundation (formerly Bill & Melinda Gates Foundation), which previously supported capacity-strengthening efforts for evidence use through multi-year grants, helped establish and maintain strong relationships with country partners. In many cases, these partnerships have continued even after specific initiatives concluded. The experience of the past decade suggests that multiple funders working complementarily within the same countries may help address financing challenges and support broader engagement. However, based on experience, making these linkages at global levels will require further efforts [16]. Securing international funding for HTA and health priority-setting capacity development that focuses on developing health systems has been challenging, as most grants are tied to specific health issues [for example,

maternal and child health, human immunodeficiency virus (HIV), pandemic] [79]. This leaves important cross-cutting areas such as priority-setting, health information and human resources largely unfunded, even though they are essential for the success of disease-specific programs.

Aligning priorities of international and domestic agencies is fundamental. HITAP's experience in collaboration has been demand-led and one based on mutual benefits. The recent World Health Assembly resolution underscores the growing demand for domestic financing and the role of HTA, having special significance in light of shifting donor needs [80]. National agencies, such as the PMU-B or the Health Systems Research Institute (HSRI) from Thailand have shown that they can contribute to supporting international partnerships directly [21], or by partnering with other similar organizations to support multi-country grants on research such as the e-Asia Joint Research Program [81] and Global Alliance for Chronic Diseases [82]. This model of support presents an opportunity, though its effectiveness in strengthening research collaboration across countries warrants further examination. Traditional philanthropic organizations' priorities are shifting, and the rise of newer actors and investors in this space calls for ushering in a new paradigm of collaborations, building on lessons from this experience. Investing in HTA has been shown to offer good value for money, and existing evidence could be used to make the case to international organizations [25, 83, 84].

Framework for assessing partnerships

The INNE framework has been previously used by others to describe capacity-building activities [25, 48, 59]. The INNE framework, adapted for the purpose of this study and shown in Table 1 and Fig. 3, can be used as a means of planning and organizing activities for HTA. There are few challenges in using the INNE framework. For one, the classification of activities into different levels is not straightforward and depends on the objective of the activity. In addition, there is an overlap across domains; for example, an activity may be categorized at both the Individual and Node levels. In this study, activities were further coded to differentiate the activity types for illustrative purposes.

The health policy and systems research (HPSR) framework by Mirzoev et al. offers a complementary lens to INNE [85]. Beyond categorizing activities by level, the HPSR framework highlights dynamics that are often implicit in INNE: power dynamics within and across levels, leveraging of synergies across levels to achieve effects on a larger scale and the importance of assessing existing assets or strengths alongside gaps. Applying these lenses to our findings can reveal important nuances in how international HTA collaborations succeed or face

challenges. On power dynamics, key informants highlighted that collaborations were more effective when driven by national priorities rather than external agendas, reflecting an inherent power asymmetry between externally funded partners and recipient institutions that the INNE framework does not explicitly account for. For future collaborations, having early, written agreements on how priorities will be determined, including mechanisms for country partners to find mutually acceptable approaches to resolve disagreements, is recommended to align priorities. Regarding synergies, activities that reinforce other levels have amplification potential to create greater impact. For example, internships (Individual level) are linked to returning of staff to newly formed HTA units (Node level), linking efforts to regional networks such as HTAsiaLink (Network level), which in turn created peer-support and shared norms that influenced national level policies as well as regional level initiatives on HTA, through ASEAN, for example (Environment level). To avoid missing these synergies and overcome silos, we suggest that future evaluations of HTA capacity partnerships explicitly map not only where activities sit but also how they connect to capture intended or unintended spillover effects. Finally, regarding assets, even though countries are operating in settings with limited budgets, there is a risk of overlooking existing strengths within the health system or partner institutions that, once recognized, can be mobilized to accelerate capacity strengthening. For example, in the Philippines, existing health economists within the Department of Health were able to adapt international training materials to local language and context, creating a multiplier effect. Such assets can be identified through situational analyses, as were conducted in India and Lao PDR. We recommend that mapping assets be explicitly incorporated when starting collaborations [86, 87]. Furthermore, the principles that have underpinned implementation in these collaborations were policy impact, contextualization, mutual benefit and flexibility to adapt to resource, timeline and other factors [88]. Developing a strategic plan, as was recently developed for HTAsiaLink [59], or defining these early on in collaborations will signal the principles of engagement and attract suitable partners.

Another framework that could be integrated with INNE to better capture the mechanics of change and demonstrate impact is iDSI's Theory of Change [89]. This approach links international partnerships and activities to the institutionalization of HTA by strengthening technical capacity, raising awareness and stakeholder buy-in, creating institutional structures and processes and supporting networks, ultimately leading to better decisions for health. Identifying indicators for each component can facilitate planning and demonstrate the

impact of international collaborations. Success indicators such as manuscripts derived from such collaborations, or creation of global public goods, have been identified. Outcomes and the impact on the system have been documented through reflections of HTA agencies and networks, and evaluations suggest that such initiatives have contributed to developments in the HTA system. HITAP's own experience has been illustrative, where it conducted external evaluations and a reflection on its 15 years of experience [88]. While the journeys of collaborating on HTA development in Indonesia and India have been synthesized, there is less documentation on collaborations in other countries [30, 90]. As identified in the qualitative results, such learning is critical to inform ongoing partnerships.

There are alternative frameworks for assessing capacity development and collaborations. For example, the World Bank Institute's Capacity Development Results Framework (CDRF) highlights the importance of identifying change agents as well as the target change processes, and noting contextual aspects. While the CDRF was developed in the context of World Bank operations, its lessons can be applied in the context of collaborative efforts to strengthen capacity for HTA, for example, by identifying intermediate outcomes related to enhanced networks [91]. The Consolidated Framework for Collaboration Research (CFCR), based on findings from a systematic review, identifies contextual and organizational activities and outcomes that can be considered for evaluating collaborations [92]. The Collaboration Evaluation and Improvement Framework (CEIF) provides strategies for evaluating organizational collaborations, including conducting social network analysis, which was also undertaken for iDSI [93, 94]. In the HTA space, principles for engagement have been proposed by the HTAi Global Forum [64] where relevant elements from the framework and recommendations may be integrated and considered when assessing the effectiveness of collaborative efforts.

Implications for HTA institutionalization

HTA institutionalization involves embedding the routine use of evidence within health system decision-making to inform policies, such as health benefit package design and pricing [95]. Achieving this requires more than the production of evidence from HTA, it requires the presence of enabling system conditions, including formal mandates, legal framework, institutional structures, defined processes and monitoring and evaluation mechanisms [95]. While capacity-building is not a discrete component within these elements, it underpins their effective implementation. The findings of this study suggest that international collaborations contribute to HTA institutionalization by strengthening the capacities required to

operationalize these system components. Drawing on the INNE framework by Li et al. [25], 4 capacity needs or gaps were identified that impede institutionalization, which HITAP's collaborative efforts sought to address. First, limited, locally available technical expertise restricts the ability of countries to generate high-quality and policy-relevant HTA evidence [9, 48]. Activities at the Individual level, such as training and internship, help build this foundation, but their impact remains limited in the absence of mechanisms to translate evidence into decisions. Second, the absence of formal processes and methodological guidance. Without clear procedures and institutional mandates or stakeholder buy-in, even well-trained HTA producers cannot ensure that evidence is consistently used in policy decisions. Node-level engagements addressed this gap by supporting the development of HTA guidelines and institutional arrangements, such as through technical consultations. Importantly, while international guidelines provide a useful starting point, they require contextualization to local health systems [9]. The development of country-specific guidance helps standardize methods, improve transparency and enhance the legitimacy of decision-making [52]. Third, many of the challenges related to technical or practical know-how or institutional arrangements have been encountered by others, a third gap, and Network-level activities can facilitate peer-learning as well as accessible public goods [59]. Fourth, even where technical capacity and formal processes exist, HTA is unlikely to be routinely used without demand from decision-makers beyond the HTA system. Activities at the Environment level, for example, sensitization workshops and high-level forums, play a role in building understanding of HTA and demonstrating its relevance for priority-setting. These efforts are essential for generating the political commitment required to embed HTA within decision-making

systems. Table 3 summarizes how the identified capacity gaps align with INNE levels, the types of collaborative activities implemented and their implications for HTA institutionalization.

Limitations and future areas of research

This study has limitations. The study does not examine the causality of the impact of collaborations on HTA development in countries. Further, we acknowledge that multiple processes are required for HTA institutionalization. The current list of activities highlighted in this study may not fully represent the range of initiatives undertaken by partner countries. Additionally, the quantity and types of activities identified through the INNE framework may not adequately capture the depth or intensity of engagement (for example, building HTA infrastructure with process guidelines and stakeholder engagement) compared with others (for example, conduct of training and workshops). Our dataset, while comprehensive, is also not exhaustive and focused on including those engagements where there were country collaboration and an associated output. Given the aim of the study was to document HITAP's work, we did not systematically review and compare HTA capacity strengthening initiatives and suggests this as a topic for future research.

Conclusions

HTA has experienced significant growth over the past decades, with international collaborations playing a key role in its advancement. Nonetheless, continued domestic investment in HTA remains important, as HTA serves as a useful tool for countries striving towards UHC, facilitating the prioritization of scarce resources and informing efforts to improve allocative efficiency and the sustainability of the health system. This role is especially critical and urgently needed within the current global

Table 3 Mapping of capacity gaps, INNE levels and collaborative activities to implications for HTA institutionalization

Capacities required	Target stakeholder	INNE level	Example activities	Implications on HTA institutionalization
Technical HTA capacity	Evidence producers	Individual	Training, internships	Increased local capacity to generate HTA evidence
Formal HTA processes and guidelines	HTA agencies	Node	Development/revision of HTA guidelines	More structured and consistent integration of HTA into decision-making
Practical know-how and accessible knowledge	HTA researchers, HTA agencies	Network	HTAsiaLink activities, resource sharing through GEAR	Facilitates diffusion of knowledge, scale-up of activities and joint problem-solving for common challenges
Policy-maker awareness and demand	Decision-makers	Environment	HTA sensitization workshop, engagement through ASEAN, PMAC	Greater understanding and use of HTA to inform policy, and stronger political support for HTA

fiscal environment, where constrained budgets demand greater accountability and prioritization of domestic health spending. A multi-pronged approach will be critical to sustaining such efforts, taking into account emerging needs to ensure that HTA remains fit for purpose in the changing international context.

Abbreviations

ADP	Access and Delivery Partnership
ASEAN	Association of Southeast Asian Nations
CDRF	Capacity Development Results Framework
CGD	Center for Global Development
GEAR	Guide to health economic analysis and research
HITAP	Health Intervention and Technology Assessment Program Foundation, Thailand
HPSR	Health policy and systems research
HTA	Health technology assessment
HTAi	Health Technology Assessment International
iDSI	International Decision Support Initiative
INNE	Individual, node, network and environment
ISPOR	International Society for Pharmacoeconomics and Outcomes Research
KII	Key informant interview
LMICs	Low- and middle-income countries
MOU	Memorandum of understanding
NICE	National Institute for Health and Care Excellence
PMAC	Prince Mahidol Award Conference
PMU-B	Program Management Unit for Human Resources & Institutional Development, Research and Innovation
SDG	Sustainable Development Goals
UHC	Universal health coverage
UNDP	United Nations Development Programme
NORAD	Norwegian Agency for Development Cooperation

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12961-026-01504-2>.

Additional file 1
Additional file 2
Additional file 3
Additional file 4
Additional file 5
Additional file 6
Additional file 7

Acknowledgements

The authors would like to thank key informants for dedicating their time, expertise and experience to the interviews.

Author contributions

Y.T., S.V.D., L.O. and I.S. conceptualized the study. L.P., B.W.B.C. and S.M.G.S-C finalized the methodology and developed the data collection tools. L.P., B.W.B.C., S.M.G.S-C and S.V.D. were involved in data collection, and L.P., B.W.B.C. and S.M.G.S-C analyzed the data. L.P., B.W.B.C., S.M.G.S-C and S.V.D. prepared the manuscript. L.P., B.C.W.B., S.M.G.S-C, S.V.D. and Y.T. reviewed and finalized the manuscript. All authors have read and agreed to the submitted version of the manuscript.

Funding

The Health Intervention and Technology Assessment Program Foundation (HITAP) is a research unit in Thailand that supports evidence-informed priority-setting and decision-making for health. HITAP is funded by national and international public funding agencies. HITAP is supported by the ADP, which

is hosted by the UNDP and funded by the Government of Japan; the Ministry of Public Health, Thailand; and the Thailand Science Research and Innovation (TSRI) Fundamental Fund and the National Science, Research and Innovation Fund (NSRF) via the Program Management Unit for Human Resources & Institutional Development, Research and Innovation (B41G670025), among others. HITAP conducted this study as part of a grant from ADP. The funder is not involved in the study design or data collection. Representatives from the funding agency provided input on the study and 2 representatives are co-authors of the manuscript. The findings, interpretations and conclusions expressed in this article do not necessarily reflect the views of the funding agencies or participants in the study.

Data availability

All the data collected and analyzed in this study are available from the corresponding author and can be provided upon request.

Declarations

Ethics approval and consent to participate

This study is approved by the Institute for the Development of Human Research Protections (IHRP2025044). Data collected through the KIs were stored on a secure online platform and is accessible only to authorized researchers. The data will be retained for a period of 5 years following the completion of the study.

Consent for publication

All study participants and authors gave their consent for publication.

Competing interests

The authors declare no competing interests.

Author details

¹Health Intervention and Technology Assessment Program Foundation (HITAP), Nonthaburi, Thailand. ²Access and Delivery Partnership (ADP), United Nations Development Programme, Bangkok, Thailand.

Received: 6 October 2025 Accepted: 16 June 2026

Published online: 09 July 2026

References

1. Achieving UHC, SDGs and health security through stronger and more comprehensive PHC. World Health Organization Regional Office for South-East Asia; 2022. <https://iris.who.int/handle/10665/361287>. Accessed 30 Sept 2025
2. Chalkidou K, Glassman A, Marten R, Vega J, Teerawattananon Y, Tritasavit N, et al. Priority-setting for achieving universal health coverage. *Bull World Health Organ*. 2016;94(6):462–7.
3. O'Rourke B, Oortwijn W, Schuller T. The new definition of health technology assessment: a milestone in international collaboration. *Int J Technol Assess Health Care*. 2020;36(3):187–90.
4. OECD. International aid falls in 2024 for first time in six years, says OECD. 2025. <https://www.oecd.org/en/about/news/press-releases/2025/04/official-development-assistance-2024-figures.html>. Accessed 27 Sept 2025
5. G-20 Report: stepping up domestic resource mobilization: a new joint initiative from the International Monetary Fund and the World Bank. 2024. <https://www.imf.org/en/Research/IMFandG20>. Accessed 27 Sept 2025
6. WHO Director-General's keynote remarks at the 4th International Conference on Financing for Development, Special Event: health financing for a safe and sustainable economy – towards a Sevilla health financing agenda for action 2025. <https://www.who.int/director-general/speeches/detail/who-director-general-s-keynote-remarks-at-the-4th-international-conference-on-financing-for-development-special-event-health-financing-for-a-safe-and-sustainable-economy-towards-a-sevilla-health-financing-agenda-for-action-2-july-2025>. Accessed 30 Sept 2025

7. Thorat T, Lin PJ, Neumann PJ. The state of cost-utility analyses in Asia: a systematic review. *Value Health Reg Issues*. 2015;6:7–13.
8. Teerawattananon Y, Rattanavipapong W, Lin LW, Dabak SV, Gibbons B, Isaranuwachai W, et al. Landscape analysis of health technology assessment (HTA): systems and practices in Asia. *Int J Technol Assess Health Care*. 2019;35(6):416–21.
9. Sharma M, Teerawattananon Y, Dabak SV, Isaranuwachai W, Pearce F, Pitasant S, et al. A landscape analysis of health technology assessment capacity in the Association of South-East Asian Nations region. *Health Res Policy Syst*. 2021;19(1):19.
10. Panzer AD, Emerson JG, D'Cruz B, Patel A, Dabak S, Isaranuwachai W, et al. Growth and capacity for cost-effectiveness analysis in Africa. *Health Econ*. 2020;29(8):945–54.
11. Hollingworth S, Fenny AP, Yu SY, Ruiz F, Chalkidou K. Health technology assessment in sub-Saharan Africa: a descriptive analysis and narrative synthesis. *Cost Eff Resour Alloc*. 2021;19(1):39.
12. Teerawattananon Y, Teo YY, Dabak S, Rattanavipapong W, Isaranuwachai W, Wee H-L, et al. Tackling the 3 big challenges confronting health technology assessment development in Asia: a commentary. *Value Health Reg Issues*. 2020;21:66–8.
13. Kim T, Sharma M, Teerawattananon Y, Oh C, Ong L, Hangoma P, et al. Addressing challenges in health technology assessment institutionalization for furtherance of universal health coverage through south-south knowledge exchange: lessons from Bhutan, Kenya, Thailand, and Zambia. *Value Health Reg Issues*. 2021;24:187–92.
14. Tantivess S, Chalkidou K, Tritasavit N, Teerawattananon Y. Health technology assessment capacity development in low- and middle-income countries: experiences from the international units of HITAP and NICE. *F1000Research*. 2017;6:2119.
15. Culyer AJ, Podhisita C, Santatiwongchai B. A star in the east: a short history of HITAP. Bangkok, Thailand: Amarin Printing and Publishing Public Co., Ltd.; 2016. <https://www.hitap.net/en/document/a-short-history-of-hitap/#pdf>. Accessed 6 Oct 2025
16. Baker P, Barasa E, Chalkidou K, Chola L, Culyer A, Dabak S, et al. International partnerships to develop evidence-informed priority setting institutions: ten years of experience from the International Decision Support Initiative (iDSI). *Health Syst Reform*. 2023;9(3):2330112.
17. Nugraha RR, Suharlilm C, Prawiranegara R, Putra AL, Sayekti MA, Arman-syah A, et al. A framework for improved collaboration on HTA in the Asia-Pacific region: a role for HTASiaLink. *Int J Technol Assess Health Care*. 2024;40(1):e43.
18. Teerawattananon Y, Luz K, Yothasmutra C, Pwu RF, Ahn J, Shafie AA, et al. Historical development of the HTASiaLink network and its key determinants of success. *Int J Technol Assess Health Care*. 2018;34(3):260–6.
19. Access and Delivery Partnership. <https://adphealth.org/>. Accessed 30 Sept 2025
20. Prince Mahidol Award Foundation. <https://www.princemahidolaward.org/>. Accessed 17 Aug 2025
21. HITAP. Unlocking Networking, Initiatives, Training, and Expertise (UNITE) for Thailand leadership in HTA. 2024. https://www.hitap.net/en/research-detail/?research_id=133&research_title=Unlocking+Networking%2C+Initiatives%2C+Training%2C+and+Expertise+%28UNITE%29+for+Thailand+Leadership+in+HTA. Accessed 6 Oct 2025
22. Designing collaborations involving HTA: finding rhythm for success. https://htaai.org/wp-content/uploads/2024/09/2024-GPF-Background-paper-post-consultation_v3.pdf. Accessed 21 Jul 2025
23. Otte M, Dauben HP, Ahn J, Gutierrez Ibarluzea I, Drummond M, Simoens S, et al. Value based healthcare and health technology assessment for emerging market countries: joint efforts to overcome barriers. *Expert Rev Pharmacoecon Outcomes Res*. 2024;24(9):1061–6.
24. WHO. Terms of use 2021. <https://www.who.int/about/policies/terms-of-use>. Accessed 18 Aug 2025
25. Li R, Ruiz F, Culyer AJ, Chalkidou K, Hofman KJ. Evidence-informed capacity building for setting health priorities in low- and middle-income countries: a framework and recommendations for further research. *F1000Research*. 2017;6:231.
26. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101.
27. Empowering Ghana's Path to sustainable healthcare: HITAP's HTA capacity building workshop in Ghana: HITAP; 2023. <https://www.hitap.net/en/news/ghana-hta-capacity-building/#:~:text=Over%20the%20five%2Dday%20event,journey%2C%20check%20out%20this%20video>. Accessed 6 Oct 2025
28. Eaimnon P. Cross-country conversations: health technology assessment (HTA) experiences from India and Thailand. 2024. <https://thesapphire.health/2024/11/15/cross-country-conversations-health-technology-assessment-hta-experiences-from-india-and-thailand/>. Accessed 30 Sept 2025
29. Islam R. Who has crossed the bridge to HTA: meet selected candidates of HITAP International Internship. 2017. <https://www.hitap.net/en/article/hta-internship-selected-candidates-2017/>. Accessed 6 Oct 2025
30. Downey LE, Dabak S, Eames J, Teerawattananon Y, De Francesco M, Prinja S, et al. Building capacity for evidence-informed priority setting in the Indian health system: an international collaborative experience. *Health Policy Open*. 2020;1:100004.
31. Guide to Economic Analysis and Research (GEAR). <https://gear4health.com/>. Accessed 21 Jul 2025
32. Adeagbo CU, Rattanavipapong W, Guinness L, Teerawattananon Y. The development of the Guide to Economic Analysis and Research (GEAR) online resource for low-and middle-income countries' health economics practitioners: a commentary. *Value in Health*. 2018;21(5):569–72.
33. Chootipongchaiwat S, Tritasavit N, Luz A, Teerawattananon Y. Factors conducive to the development of health technology assessment in Asia: impacts and policy options; (ISBN 978 92 9061 734 1). https://iris.who.int/bitstream/handle/10665/208261/9789290617341_eng.pdf?sequence=1. Accessed 17 Aug 17 2025
34. Isaranuwachai W, Archer RA, Teerawattananon Y, Culyer AJ. Non-communicable disease prevention: best buys, wasted buys and contestable buys. Cambridge: Open Book Publishers; 2019. p. 214.
35. Isaranuwachai W, Teerawattananon Y, Archer RA, Luz A, Sharma M, Rattanavipapong W, et al. Prevention of non-communicable diseases: best buys, wasted buys, and contestable buys. *Br Med J*. 2020;368:m141.
36. HITAP. Deepening a newly formalized collaboration between Kenya's Ministry of Health and Thailand's Ministry of Public Health. 2019. <https://www.hitap.net/en/article/kenya-thailand-health-collaboration/>. Accessed 6 Oct 2025
37. Health Cluster 3: Strengthening health systems and access to care. 2022. https://asean.org/wp-content/uploads/2021/01/Agd-8.3_3-ASEAN-Health-Cluster-3-Work-Programme_Endorsed-SOMHD.pdf. Accessed 30 Sept 2025
38. Ivo RS, Rodrigues T, Couto S, Cossito M. The art of bridge building: a look at the European-level cooperation in HTA (EU-HTA). *J Mark Access Health Policy*. 2025;13(2):26.
39. Brunei, Thailand discuss health tech assessment: Star Media Group Berhad; 2023. https://www.thestar.com.my/aseanplus/aseanplus-news/2023/12/15/brunei-thailand-discuss-health-tech-assessment#goog_rewarded. Accessed 30 Sept 2025
40. HITAP. Watch as HITAP joins forces with Brunei's health leaders to shape a brighter healthcare future. 2024. https://www.linkedin.com/posts/health-intervention-and-technology-assessment-program_watch-as-hitap-joins-forces-with-bruneis-activity-7141351099386478592-rqDu. Accessed 30 Sept 2025
41. WHO. Health Technology Assessment and Health Benefit Package Survey 2020/2021. https://cdn.who.int/media/docs/default-source/health-economics/hta-country-profiles-2020-21/hta_updated_merged_final.pdf?sfvrsn=75ac91f6_5. Accessed 9 May 2026
42. Priorities Conference 2024. <https://priorities2024.com/>. Accessed 21 Jul 2025
43. Infectious Disease Modelling Conference 2024. <https://idmconference.net/>. Accessed 21 Jul 2025
44. Luz A, Engels S. Economic evaluation of rotavirus vaccine. HITAP International Unit; 2019. <https://www.hitap.net/wp-content/uploads/2019/09/Bhutan-mission-report-09-05-2019.pdf>. Accessed 14 Sept 2025
45. Guest Blog: Opportunities and learning economic evaluation in Thailand. 2019. <https://www.hitap.net/en/article/learning-economic-evaluation-thailand/>. Accessed 6 Oct 2025
46. Prakash A, Duba T, Sarin K, Dabak SV, Tashi U. Advancing evidence-based decision-making in Bhutan: development of a health technology assessment framework. *Lancet Reg Health Southeast Asia*. 2024;30.
47. Sitanggang RJ, Chavarina KK, K CS, Wadhwa R, Wiweko B, Purba FD, et al. Impact of COVID-19 pandemic on HTASiaLink network members. *Int J Technol Assess Health Care*. 2024;40(1):e63.

48. Mundy L, Madder G. HTA capacity building in Asia: towards one goal. *Int J Technol Assess Health Care*. 2023;39(1):e56.
49. Kc S, Faradiba D, Sittimart M, Isaranuwatthai W, Ananthakrishnan A, Rachatan C, et al. Factors associated with the opposition to COVID-19 vaccination certificates: a multi-country observational study from Asia. *Travel Med Infect Dis*. 2022;48:102358.
50. A study visit report: unpacking Thailand's medicine pricing, reimbursement policy and benefits package. HITAP; 2024. https://www.hitap.net/wp-content/uploads/2024/05/ReportPricing-study-visit_04.04.pdf. Accessed 30 Sept 2025
51. The 3rd Regional Workshop on Advanced Economic Evaluation. HITAP; 2025. <https://www.hitap.net/en/document/regional-workshop-advanced-economic-evaluation/#pdf>. Accessed 21 Jul 2025
52. Botwright S, Sittimart M, Chavarina KK, Bayani DB, Merlin T, Surgey G, et al. Good practices for health technology assessment guideline development: a report of the Health Technology Assessment International, HTAsiaLink, and ISPOR special task force. *Value Health*. 2024;40(1):e74.
53. IDBx: what to finance in health and at what price? 2022. <https://www.edx.org/learn/finance/inter-american-development-bank-what-to-finance-in-health-and-at-what-price>. Accessed 30 Sept 2025
54. HITAP. Sifting for gold: systematic review of economic evaluations training 2022. <https://www.gear4health.com/material-and-training/training/detail/17>. Accessed 6 Oct 2025
55. Paffett M, Arkandhi AJ. Introducing a pioneering series on "conducting health economic evaluations – the practicalities". 2023. <https://gear4health.com/material-and-training/training/detail/26>. Accessed 17 Aug 2025
56. Norheim OF. Disease control priorities third edition is published: a theory of change is needed for translating evidence to health policy. *Int J Health Policy Manag*. 2018;7(9):771.
57. WHO. EVIPNet. <https://www.who.int/initiatives/evidence-informed-policy-network>. Accessed 9 May 2026
58. Nonvignon J, Asfaw E, Baker P, Drake T. 2022. <https://www.cgdev.org/blog/africa-cdcs-health-economics-unit-more-important-ever>. Accessed 30 Sept 2025
59. Sitanggang RJ, Pongcharoenyong L, Kongkam N, Babidge W, Suwanitika A, Ghazali IMM, et al. Charting the way forward for HTA in Asia-Pacific: HTAsiaLink's strategic plan. *Int J Technol Assess Health Care*. 2025;41(1):e87.
60. About South-South and triangular cooperation: UNOSSC/UNDP. <https://unsouthsouth.org/about/about-sstc/>. Accessed 9 Sept 2025
61. Prakash A, Sarin K, Chalkidou K, Dema N, Teerawattananon Y, Dabak SV. Pooling resources for better health: exploring pooled procurement for health technologies globally and potential application in Asia. *SSM-Health Systems*. 2025;100103.
62. Mission report: improving priority antibiotic access in thailand and regional coordinated procurement mechanisms. HITAP; 2025. <https://www.hitap.net/en/document/mission-report-improving-priority-antibiotic-access-in-thailand-and-regional-coordinated-procurement-mechanisms/#pdf>. Accessed 6 Oct 2025
63. Prince Mahidol Award Conference 2025: harnessing technologies in an age of AI to build a healthier world. <https://pmac-2025.com/>. Accessed 30 Sept 2025
64. Trowman R, Migliore A, Ollendorf DA. Designing collaborations involving health technology assessment: discussions and recommendations from the 2024 Health Technology Assessment International Global Policy Forum. *Int J Technol Assess Health Care*. 2024;40(1):e41.
65. Ananthakrishnan A, Luz ACG, KC S, Ong L, Oh C, Isaranuwatthai W, et al. How can health technology assessment support our response to public health emergencies? *Health Res Policy Syst*. 2022;20(1):124.
66. Medical Innovation Development and Assessment Support (MIDAS). <https://www.midas-health.com/>. Accessed 30 Sept 2025
67. The Social Health Insurance Act. 2023. <https://health.go.ke/sites/default/files/2023-11/SOCIAL%20HEALTH%20INSURANCE%20%28GENERAL%20%20REGULATIONS%20%2C2023.pdf>. Accessed 30 Sept 2025
68. Mbau R, Vassall A, Gilson L, Barasa E. Factors influencing institutionalization of health technology assessment in Kenya. *BMC Health Serv Res*. 2023;23(1):681.
69. HITAP. 2025. https://www.linkedin.com/posts/health-intervention-and-technology-assessment-program_hitap-nationaluhconference-unive
[rsalhealthcoverage-activity-7404097489903284224-q8Tg](https://www.linkedin.com/posts/health-intervention-and-technology-assessment-program_hitap-nationaluhconference-unive_rsalhealthcoverage-activity-7404097489903284224-q8Tg). Accessed 9 May 2026
70. IHPP. Advancing global health collaboration: highlights from the PMAC Strategic Institute Launch 2026. <https://hphptai.gov.net/announcement/ghpmacsi>. Accessed 9 May 2026
71. G20. G20 Joint Finance and Health Ministerial Meeting: chair's statement. 2024. <https://www.g20.utoronto.ca/2024/241031-finance-and-health.html>. Accessed 9 May 2026
72. ASEAN. Joint statement of the 2nd ASEAN Finance and Health Ministers Meeting 2024. https://asean.org/wp-content/uploads/2024/09/Annex-2_Joint-Statement-of-the-2nd-AFHMM-ADOPTED.pdf. Accessed 9 May 2026
73. HITAP. Final report: coordinated procurement: lessons learned globally, potential ASEAN applications, and implications for antibiotic access and policy. HITAP; 2026. <https://www.hitap.net/en/document/final-report-coordinated-procurement-lessons-learned-globally-potential-asean-applications-and-implications-for-antibiotic-access-and-policy/>. Accessed 9 May 2026
74. Lloyd R, Gleed G, Wallach S, Groom G, Husain L. Final report: the International Decision Support Initiative's experience of institutionalising evidence informed priority setting: a synthesis of four country learning reviews. Itad; 2019. <https://f1000research.com/documents/8-993>. Accessed 21 Jul 2025
75. Glassman A, Chalkidou K, Giedion U, Teerawattananon Y, Tunis S, Bump JB, et al. Priority-setting institutions in health: recommendations from a Center for Global Development working group. *Glob Heart*. 2012;7(1):13–34.
76. Thanzi Programme. <https://thanzi.org/about/>. Accessed 9 May 2026
77. Nabyonga-Orem J, Kataika E, Rollinger A, Weatherly HLA. Research-to-policy partnerships for evidence-informed resource allocation in health systems in Africa: an example using the Thanzi Programme. *Value Health Reg Issues*. 2024;39:24–30.
78. RESYST. <https://resyst.ishtm.ac.uk/about>. Accessed 9 May 2026
79. Kanpirom K, Luz ACG, Chalkidou K, Teerawattananon Y. How should global fund use value-for-money information to sustain its investments in graduating countries? *Int J Health Policy Manag*. 2017;6(9):529.
80. Executive Board 156th session: strengthening health financing globally. World Health Organization; 2025. [https://apps.who.int/gb/ebwha/pdf_files/EB156/B156_\(16\)-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/EB156/B156_(16)-en.pdf). Accessed 30 Sept 2025
81. The e-Asia Joint Research Program (the e-Asia JRP) in the collaboration with PMU-B. 2025. <https://www.pmu-hr.or.th/en/portfolio/e-asia-health-research-2025/>. Accessed 17 Aug 2025
82. Global Alliance for Chronic Diseases. 2025. <https://www.gacd.org/>. Accessed 17 Aug 2025
83. Barlow E, Morton A, Dabak S, Engels S, Isaranuwatthai W, Teerawattananon Y, et al. What is the value of explicit priority setting for health interventions? A simulation study. *Health Care Manag Sci*. 2022;25(3):460–83.
84. Kingkaew P, Budtard N, Khuntha S, Barlow E, Morton A, Isaranuwatthai W, et al. A model-based study to estimate the health and economic impact of health technology assessment in Thailand. *Int J Technol Assess Health Care*. 2022;38(1):e45.
85. Mirzoev T, Topp SM, Afifi RA, Fadlallah R, Obi FA, Gilson L. Conceptual framework for systemic capacity strengthening for health policy and systems research. *BMJ Global Health*. 2022;7(8).
86. Dabak SV, Pilasant S, Mehndiratta A, Downey LE, Cluzeau F, Chalkidou K, et al. Budgeting for a billion: applying health technology assessment (HTA) for universal health coverage in India. *Health Res Policy Syst*. 2018;16(1):115.
87. Phommachanh S, Sittimart M, Ananthakrishnan A, Vongsack S, Soysouvanh S, Ashley EA, et al. Situation analysis of evidence-informed health decision-making in Lao PDR: the case of health technology assessment. *Lancet Reg Health West Pac*. 2025;57:101534.
88. Teerawattananon Y, Vishwanath Dabak S, Culyer A, Mills A, Kingkaew P, Isaranuwatthai W. Fifteen lessons from fifteen years of the Health Intervention and Technology Assessment Program in Thailand. *Health Syst Reform*. 2023;9(3):2330974.
89. Lloyd R, Gleed G, Wallach S. International Decision Support Initiative (iDSI) theory of change review report [version 1; not peer reviewed]. *F1000Research*. 2018;7(1659):1659.
90. Sharma M, Teerawattananon Y, Luz A, Li R, Rattanavipapong W, Dabak S. Institutionalizing evidence-informed priority setting for universal health coverage: lessons from Indonesia. *Inquiry*. 2020;57:46958020924920.

91. Ling CM, Roberts D. Guide to evaluating capacity development results: a collection of guidance notes to help development practitioners and evaluators assess capacity development efforts (English): the World Bank Institute's Capacity Development and Results Unit; 2012. <http://documents.worldbank.org/curated/en/352241468163166112>. Accessed 17 Aug 2025
92. Calancie L, Frerichs L, Davis MM, Sullivan E, White AM, Cilenti D, et al. Consolidated framework for collaboration research derived from a systematic review of theories, models, frameworks and principles for cross-sector collaboration. *PLoS ONE*. 2021;16(1):e0244501.
93. Woodland RH, Hutton MS. Evaluating organizational collaborations: suggested entry points and strategies. *Am J Eval*. 2012;33(3):366–83.
94. Shearer J, Adams S, Gleed G, Wallach S. iDSI Network analysis supplement. *F1000Research*. 2019;8(900):900.
95. WHO. Institutionalizing health technology assessment mechanisms: a how to guide. 2021. <https://www.who.int/publications/i/item/9789240020665>. Accessed 9 May 2026

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.