USAID
FROM THE AMERICAN PEOPLE

LIVE AND LEARN.
THE SIGNS SAY "BẾP" (STOVE), "THAN" (COAL),
"KHÓ" (DIFFICULT), AND "THỞ" (TO BREATHE).

COLLECTIVE ACTION
FOR ENVIRONMENTAL HEALTH STUDY

The Beehive Cookstove Story in Hanoi, Vietnam

September 2020

ABSTRACT

This study aimed to understand why and how the Clean Air Green Cities activity, funded by USAID and implemented by Live and Learn, led to collective action to reduce beehive cookstove use in Hanoi, Vietnam. The study primarily used a qualitative approach, with direct observations, 24 key informant interviews, and a data validation session. The study's objectives addressed the factors needed for collective action and how these factors brought different stakeholders together to address common goals to reduce beehive cookstove use and support a related environmental policy.

Collective action is a three-stage process in which facilitators raise an issue, stakeholders convene, and participants act to transform the issue. Some critical factors needed for collective action include political will, an influential facilitator, a diverse network of participants, cross-cutting coordination and communication, and monitoring and accountability. Live and Learn successfully achieved its objectives under Clean Air Green Cities, but, for collective action to be more meaningful in the future, it needs more inclusive participation to sustain decision making in the long term, prioritize actions, accountably monitor progress, and jointly manage resources. This study also examines a case study of collective action around air pollution monitoring in China. Although the case is different, the process and reasons for success were similar, offering lessons about successful collective action that can inform future USAID programming.

COLLECTIVE ACTION
FOR ENVIRONMENTAL HEALTH STUDY

The Beehive Cookstove Story in Hanoi, Vietnam

USAID/Vietnam Learns

Contracted under 72044019C00003

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ACRONYMS

CAGC	Clean Air Green Cities
CECR	Centre for Environment and Community Research
CSO	Civil Society Organization
DPC	District People's Committee
ENGO	Environmental Non-Governmental Organization
EPA	Environmental Protection Administration
GCA	Green Choice Audit
GreenHub	Centre for Supporting Green Development
GreenID	Green Innovation and Development Centre
INEST	Institute of Environmental Science and Technology
INGO	International Non-Governmental Organization
IPE	Institute of Public and Environmental Affairs
KII	Key Informant Interview
MNC	Multinational Corporation
MSEP	Multi-Stakeholder Engagement Process
NGO	Non-Governmental Organization
PC	People's Committee
PM2.5	Particulate Matter (2.5 micrometers or smaller)
SNV	Netherlands Development Organization
USAID	United States Agency for International Development
USTH	University of Science and Technology Hanoi
VCAP	Vietnam Clean Air Partnership

EXECUTIVE SUMMARY

BACKGROUND AND PURPOSE

Collective action is a core approach in USAID/Vietnam's Country Development Cooperation Strategy to promote the journey to self-reliance. Collective action is a coordinated engagement among interested parties within an agreed-upon process in support of common objectives. Collective action can take a variety of forms, ranging from a relatively informal exchange of perspectives to a highly structured process with joint decision making, shared implementation, and accountability.[1] Vietnam Clean Air Green Cities (CAGC), an activity implemented by Live and Learn within USAID's Local Works program, aims to establish networks and strengthen linkages among local actors working on air quality and associated health issues. This study examines the principal factors and processes that allowed stakeholders to collectively act under CAGC to address beehive cookstove use in Hanoi. Lessons identified by this study, relevant to both local works and collective action, will help USAID and implementers connect the right stakeholders to address other issues by engaging in an appropriate process to optimize the collective efforts and impact of all participants, especially in the specific local context of Vietnam.

METHODS

This study applied a predominantly qualitative approach, with direct observation, 24 key informant interviews, and a validation session. The research team also reviewed secondary quantitative data from contextual literature, other studies, and implementer reports. The study assessed the factors required for collective action and their significance in bringing different stakeholders together to address the shared goals of (1) reducing cookstove use and (2) adopting a new environmental policy. The team used a content analysis method and triangulated by cross-referencing different data sources and validating findings with USAID, Live and Learn, and stakeholders.

RESEARCH OBJECTIVES

The study is organized around three objectives:

1. Identify, map out, and analyze the challenges and factors that contributed to the success of collective action in reducing the use of beehive cookstoves.
2. Identify, map out, and analyze the challenges and factors that contributed to the adoption of new environmental policies in Hanoi, specifically related to the use of beehive cookstoves.
3. Based on overall findings and analysis, map out lessons learned and recommendations for future collective action initiatives in Vietnam.

FINDINGS AND CONCLUSIONS

COLLECTIVE ACTION ANALYTICAL FRAMEWORK

The research team analyzed the following factors[2] at each stage of the collective action process, including the trigger/initializing stage, the convening stage, and the sustaining/transforming stage:

[1] CEO Water Mandate. "Guide to Water Related Collective Actions." https://ceowatermandate.org/collectiveaction/.

[2] Using the CEO Water Mandate definition of collective action as the foundation, the team selected collective action factors from development literature by the Council on Energy, Environment and Water and 2030 Water Resources Group/The World Bank Group and tailored to the local context in Vietnam.

- Challenges and opportunities,
- Incentives and punishment,
- Heterogeneity or homogeneity of interests,
- Critical mass,
- Leadership and political commitment,
- Social network,
- Clear roles and responsibilities of stakeholders,
- Influencing capacity of facilitator,
- Cross-cutting coordination and interactive communication, and
- Monitoring and accountability.

OBJECTIVE 1: PILOT TO REDUCE THE USE OF BEEHIVE COOKSTOVES

CAGC supported the Hanoi Environmental Protection Administration (EPA) to successfully pilot a beehive cookstove reduction campaign in Hoan Kiem district during 2018–2019.

At the trigger stage, the intensity of pollution and its impacts on the environment and public health, together with strong leadership, **triggered the action to address beehive cookstoves**. The Hanoi EPA sought support from international non-governmental organizations (INGOs), local non-governmental organizations (NGOs) (Live and Learn), and research organizations to help the government and other stakeholders understand the extent of beehive cookstove use in different districts, plan alternatives, and prepare a policy to address beehive cookstoves.

At the convening stage, a **critical mass** of participating organizations and the **facilitator's capacity** to connect others supported the collective action, which was aided by Live and Learn's long-term experience in environmental networking. Live and Learn demonstrated capacity to connect the appropriate actors for various activities, including field interventions, community mobilization, and advocacy for policy adaptation on eliminating beehive cookstoves in Hoan Kiem. However, according to interviews, participating organizations did not have clear **roles and responsibilities**, an agenda, or an agreed-upon list of shared goals, leading to tensions that hindered the collective action.

At the sustaining/transforming stage, **coordination and communication** among interested parties and stakeholders were critical. CAGC conducted strong communication campaigns in the affected communities to mobilize support. Some innovative methods included on-site health examinations for local households, cookstove exchange programs, piloting new solid fuels, and using a portable air monitoring device to show residents measurements of air pollutants from beehive coal burning. Hoan Kiem district made use of the innovative communication tools and materials offered by CACG, such as video clips, fact sheets, posters, television shows, and news articles, since these materials were more engaging. With media support, news about stove exchange events appeared on social media, in newspapers, and on television during peak viewing times.

However, in the context of the collective action framework, participation from member organizations has been ad hoc, according to interviews, raising concerns that the group of participating stakeholders was not growing sustainably and that the collective action may not be replicable city-wide.

OBJECTIVE 2: ADOPTION OF ENVIRONMENTAL POLICY

The Hanoi People's Committee issued Circular 15, a policy to reduce beehive cookstove use, on October 30, 2019, after the pilot beehive cookstove activity had already been underway for almost a year. Without collective action, the government would still have issued the circular. However, Live and Learn's support via CAGC allowed for a better-informed government decision-making process and consultative policy drafting, from pilot interventions to policy formulation.

At the trigger/initializing stage, an **analysis of beehive cookstove use, along with a senior-level mandate to eliminate beehive cookstoves**, triggered the policy process and involvement from city districts and wards. Hanoi EPA, Hoan Kiem district, a research institute, and, to a limited extent, Live and Learn contributed to the policy formulation process. CAGC supported information gathering, for instance by connecting Hanoi EPA to relevant experts for policy consultation, enriching the content of the policy. This was the first time a local policy process was informed by research-based evidence. In the context of the collective action framework, critical mass is fundamental to bringing in capacity and necessary resources. The composition and size of critical mass may differ from case to case, depending on the scale of intervention, as seen in this beehive cookstove study.

At the convening stage for policy drafting, linkages among the collective action stakeholders were weak, the roles and responsibilities of the stakeholders were not clearly defined, and the influence of Live and Learn as the collective action facilitator was low. As a result, the policy formulation process **lacked different stakeholders' voices**.

At the sustaining/transforming stage, **strong political will** from local governments at the city, Hoan Kiem district, and ward levels **transformed the policy** into action. Among the collective action factors, political will was the **most significant** during this stage. Cross-cutting coordination and communication supported policy implementation, and this collective action factor would need to be strengthened to promote replication of Hoan Kiem's intervention to the other districts where the number of beehive cookstove remains high.[3] In Hoan Kiem, the district and ward governments conducted monitoring activities, but other members of the network did not verify or follow up on results. In the context of collective action, this raises concerns about the **credibility of monitoring data** and the **risk of beehive cookstoves' reintroduction** in the future.

CASE STUDY OF COLLECTIVE ACTION IN CHINA

The research team also examined a case of collective action in China to further enhance the understanding of factors contributing to collective action. The case study does not aim to compare against the beehive cookstove case given the differences in the purpose, context, and scale of the intervention.

In the China case, the environmental non-government organization (ENGO) Institute of Public and Environmental Affairs created an environmental map database using government data to motivate multinational corporations to address pollution caused by their Chinese suppliers. This evidence-based

[3] Because of the effectiveness of Circular 15 of October 30, 2019, support to replace beehive cookstoves has kicked off in all districts of Hanoi. According to Hanoi EPA at a workshop on July 3, 2020, on the implementation of Circular 15 in the first six months of 2020, the number of beehive cookstoves has been reduced from 56,670 at the beginning of 2017 to 15,418 (72.8%) as of June 2020. The districts that achieved the biggest reduction include Hoan Kiem (100%), Soc Son (99%), Ung Hoa (98%) and Long Bien (91%). Hanoi EPA acknowledged that communication and connecting stakeholders via collective action is the immediate next step, along with policy and technical measures.

initiative built up trust among the government and other interested actors, establishing and enlarging a collective action network.

The right mix of stakeholders with diverse but shared interests triggered the network's formation, while clear roles and responsibilities strengthened ties among network members.

Interactive communication among stakeholders created the solution, leading to supportive partnerships to address environmental issues. On the one hand, polluters had to comply with regulations, but on the other, the network provided support so polluters could comply with environmental standards and change their behavior. This data-driven, conversation-based, and assistance-oriented approach offers a new way to address environmental problems through ENGO and business partnerships.

RECOMMENDATIONS

OBJECTIVE 3: LESSONS LEARNED AND RECOMMENDATIONS

Collective action is coordinated action among interested stakeholders within an agreed-upon process in support of a common goal, leading to sustainable outcomes that are impossible to achieve through internal or unilateral action. Beehive cookstove use presented two opportunities for collective action: (1) working to eliminate the cookstoves and (2) supporting the formulation of the related environmental policy. Together, these efforts substantially reduced beehive cookstove usage in the pilot district of Hoan Kiem (by 100 percent as of the beginning of July 2020),[4] and Circular 15 calls for eliminating beehive cookstoves in Hanoi by the end of 2020. Collective action, in this case, at the collaborative and consultative levels, contributed to this success.

However, effective collective action in more challenging, complex political economy contexts requires more substantial efforts and commitment, shared responsibilities and benefits, transparency, and accountability from participating stakeholders. Collective action also demands developing new skills and knowledge, such as more in-depth analysis of local needs and stronger abilities to connect the government, private sector, and CSOs.

Recommendations for USAID:

- Use the Collective Action Project Design Document to define **collective action**. This will create a shared understanding, especially among USAID implementers. The definition should then inform a framework of collective action, with a more participatory process to identify and prioritize issues for collective action, analyze and connect the right local stakeholders, and improve decision making and the capacities that sustain collective efforts and impacts.
- In the Vietnamese political context, successful collective action requires including the GVN. Interventions should **align with the government's Policy Agenda and existing political will.**
- The **backbone organization** to facilitate collective action should have credibility in the sector, strong network linkages, particularly with GVN, coordination, communication, and leadership skills, and knowledge of government procedures.
- **Maintain flexibility in mechanisms**, allowing implementers to adapt to the context. Require collaborative and self-sustaining monitoring approaches, as well as consistent feedback loops that support iterative adaptation.

[4] Hoan Kiem DPC. 2020. Final result report on the replacement of beehive cookstoves in Hoan Kiem district. Report No. 219/BC-UBND. July 7, 2020.

- **Communicate with other development partners** to harmonize efforts and understand the policy environment, helping the collective action coalition reach higher policy levels as needed.

Recommendations for Implementers:

- Collective action interventions should attempt to address pending issues identified by this study, including:
  - The need for participating organizations to have **clear roles and responsibilities**, an agenda, or an agreed-upon list of shared goals, to avoid tensions that could weaken the collective action's ability to self-sustain.
  - Mitigate **ad-hoc participation** of some of the member organizations, which could negatively impact the sustainability, growth, or wider replication of collective action.
  - Develop stronger and more consistent **monitoring of collective action progress and results**, which is essential for ongoing learning, adaptation, and the sustained interest of participating organizations.

INTRODUCTION

BACKGROUND

Traditionally, development interventions involve a limited number of stakeholders, with relationships built mainly between the implementer and partners such as government agencies or local organizations. However, many of today's development challenges, such as environmental pollution and public health, require a non-conventional partnership of non-traditional stakeholders if the intervention is to be maximally effective and operationally and financially sustainable. Recognizing this, the United States Agency for International Development in Vietnam (USAID/Vietnam) incorporates collective action as a core approach in its Country Development Cooperation Strategy to promote Vietnam's journey to self-reliance.

In collective action, interested parties cooperatively engage in an agreed-upon process to support shared objectives. Collective action can take various forms, ranging from relatively informal exchanges of perspectives to a highly structured process of joint decision making, implementation, and accountability.[5] In effective collective action, parties leverage resources to address shared objectives, share responsibilities and benefits, reduce risks to sustainability, and continuously learn and adapt. Participating stakeholders can benefit from each other's expertise, gain new ideas and perspectives, and, together, create momentum to drive needed social change.

Vietnam Clean Air Green Cities (CAGC), an activity funded by USAID and implemented by Live and Learn for Environment and Community (Live and Learn), is piloting a collective action approach to establish networks and strengthen linkages among actors working on air quality and associated health issues in Hanoi, Vietnam.[6] Live and Learn's collective action strategy includes creating working groups to identify environment-related health issues, advocating for changes to air quality policies, mentoring youth-led organizations and technical groups, and coaching students, teachers, and community groups to build capacity, enhance connections, and mobilize local resources. Live and Learn is implementing CAGC from 2017 through 2020.

The Communist Party's Secretary of Hanoi, in a meeting with city departments at the end of 2017, ordered the Hanoi Environmental Protection Administration (EPA) to enact policies to eliminate beehive cookstoves. Beehive cookstoves use solid fuel in the form of low-quality coal blended with mud, which emits toxic air pollutants when burned. Many households and home-based restaurants use beehive cookstoves. Hanoi EPA, in close collaboration with Live and Learn through CAGC, piloted the beehive cookstove reduction campaign in Hoan Kiem district during 2018–2019. The action resulted in a specific policy, Circular 15, approved by the Hanoi People's Committee (PC) in October 2019, to guide the elimination and replacement of beehive cookstoves with more environmentally friendly stoves.

CONTEXT

Since 2010, Hanoi has expanded rapidly both in area and population because it merged with Ha Tay province and because of increased migration from other provinces. As of September 2020, the population

[5] CEO Water Mandate. "Guide to Water Related Collective Actions." https://ceowatermandate.org/collectiveaction/.

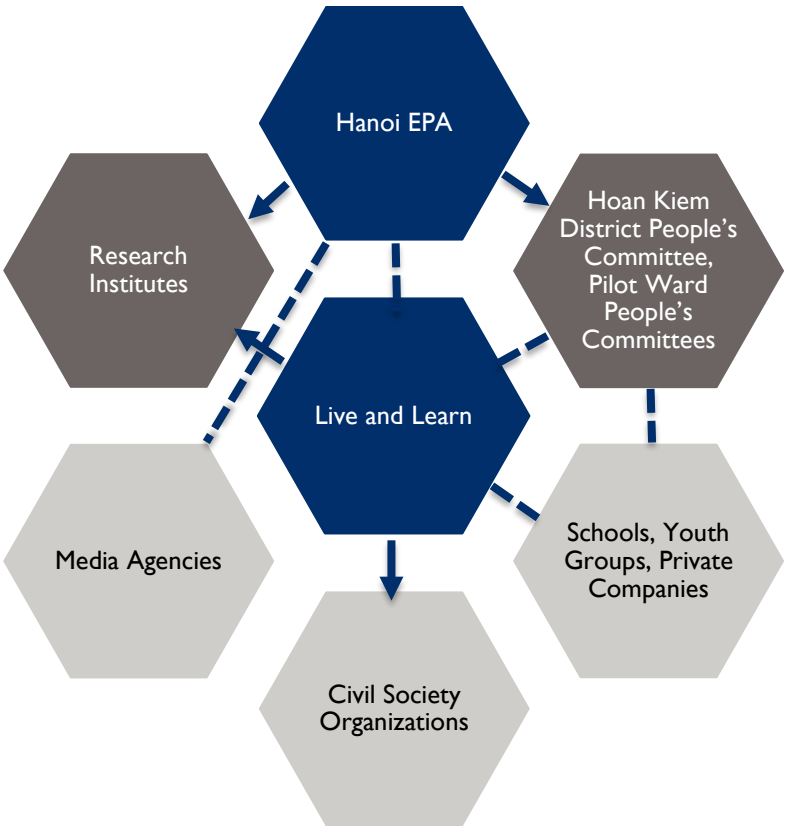
[6] Live and Learn's original award did not include collective action terminology. In the second year of implementation (2018), the idea of collective action started to be utilized to better reflect the various implementation approaches CAGC was utilizing to mobilize communities and advocating with local stakeholders.

of Hanoi has reached over 8 million.[7] The expansion of Hanoi has accelerated environmental deterioration. According to 2011–2014 monitoring information, benzene gas concentrations in Hanoi exceeded the Vietnamese standard by a factor of 1.2 to 2.5.[8] Air quality around key traffic intersections has also deteriorated because of vehicle emissions. Most craft villages have contaminated surface water, underground water, and air. The worsening pollution situation raises substantial concerns about public health, particularly for children and the elderly. It is now imperative that all stakeholders, including the government, businesses, NGOs, and communities, act to address environmental degradation in Hanoi.

CAGC aims to (1) establish networks and strengthen linkages among local state and non-state actors on air quality and associated health issues and to (2) build the capacity of network members (schools, youth groups, private sector, environment and health organizations, media, and government agencies) to effectively address, take action, and advocate for air quality and associated health issues.[9]

[7] "Hanoi announces population census data." 2019. http://hanoimoi.com.vn/tin-tuc/Xa-hoi/947654/tong-dan-so-cua-ha-noi-la-8053663-nguoi.
[8] Hanoi EPA. 2016. Environmental Status Report.
[9] Live and Learn. CAGC Monitoring, Evaluation and Learning Plan.

FIGURE 1: COLLECTIVE ACTION NETWORK IN THE BEEHIVE COOKSTOVE CASE



Blue	Facilitators for usage reduction and policy adoption
Dark Grey	Stakeholders involved in both actions
Light Grey	Stakeholders involved only in usage reduction
→	Task order-based activities
- - -	Two-way cooperation

PURPOSE AND AUDIENCE

This study examines efforts under CAGC to reduce beehive cookstove use. The study will highlight the roles and relationships of different stakeholders, as well as why and how collective action reduced (or failed to reduce) beehive cookstove use and improved air pollution management practices and environmental policies in Hanoi. This study is not a performance evaluation measuring progress against objectives. Instead, it explores the principal factors and processes that allowed stakeholders to act collectively. With its analysis of collective action, this study aims to help improve the performance of related activities, provide lessons learned on the broader collective action model and on how collective action might apply in other activity designs, and explore how USAID might use collective action in other contexts. The primary audiences for this report are USAID, Live and Learn, CAGC stakeholders, and others piloting collective action approaches.

Social Impact conducted this study under USAID/Vietnam Learns, a five-year activity to support USAID/Vietnam staff and partners to implement more efficient, effective, and transparent programs by improving (1) USAID and implementing partners' capacity to achieve expected results, (2) USAID's understanding and tracking of project performance, and (3) collaboration, learning, and adapting.

RESEARCH OBJECTIVES

The research objectives for this study are to:

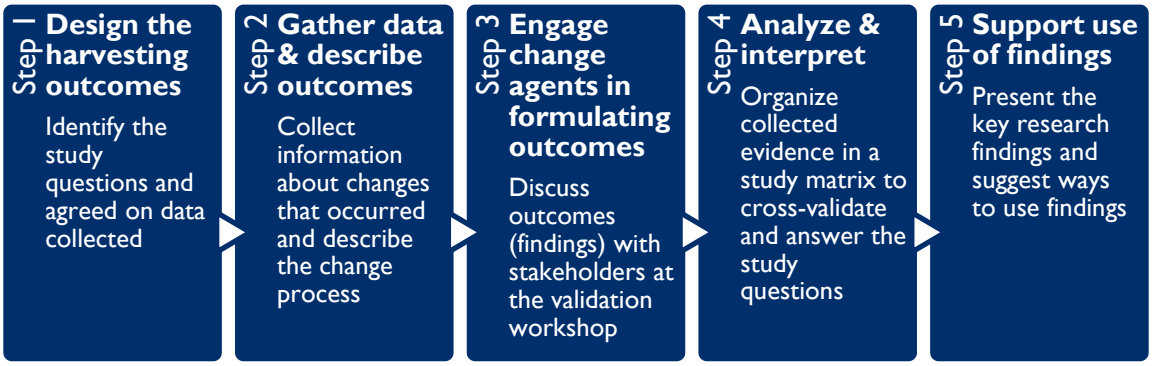
1. Identify, map out, and analyze the challenges and factors that contributed to the success of collective action in reducing the use of beehive cookstoves.
2. Identify, map out, and analyze the challenges and factors that contributed to the adoption of new environmental policies in Hanoi, specifically related to the use of beehive cookstoves. Based on these findings, identify what seems to work, does not work, and associated recommendations (this objective refers to Circular 15, issued by the Hanoi People's Committee on October 30, 2019).
3. Based on overall findings and analysis, map out lessons learned and recommendations for future collective action initiatives in Vietnam.

METHODOLOGY

OVERVIEW

This study adopts a mix of qualitative and quantitative approaches, using a simplified form of outcome harvesting's steps[10] to collect evidence of results and detect changes that occurred during implementation. Outcome harvesting is appropriate for studying both experimentation with innovative approaches and country-led behavioral and institutional changes involving social actors with differing roles and capacities.[11]

FIGURE 2: OUTCOME HARVESTING'S INTERACTIVE STEPS



The research team examined beehive cookstove use through five methods: (1) a desk review of reports, (2) direct observation at implementation sites, (3) key informant interviews (KIIs) with stakeholders, (4) a mini-survey asking respondents to rank the factors that led to collective action, and (5) a data validation workshop to solicit feedback on the data collected through the first four methods in a focus group-type setting.

USAID conducted Step 1, designing the harvesting outcomes. The research team carried out Step 2, with a desk review, direct observation, KIIs, and a mini-survey. Step 3 was a validation workshop where stakeholders discussed the initial findings presented by the research team. The team analyzed and triangulated data in Step 4. This report and a subsequent utilization event facilitated by USAID Learns will complete the final step.

Vietnam offers few examples of collective action. Since the beehive cookstove case is the only example of sub-national (district or city level) collective action for the research team to analyze in Vietnam, the team

[10] This study uses a modified form of outcome harvesting, a qualitative evaluation technique that gathers (or "harvests") narratives from an array of key stakeholders about intended and unintended changes related to an intervention, then verifies and analyzes those changes through a consultative and iterative multi-step process. Outcome harvesting is methodologically appropriate when the focus is primarily on outcomes rather than activities (i.e., what was achieved and how), when the programming context is complex, and when the purpose of a study is not only about understanding what has taken place but also about learning from those achievements (see https://www.betterevaluation.org/en/plan/approach/outcome_harvesting and https://www.marketlinks.org/sites/marketlinks.org/files/resource/files/Report_No._43_-_SC_Tool_Trial_Outcome_Harvesting_-_508_compliant3.pdf).

[11] World Bank. Cases in Outcome Harvesting.

also reviewed literature about collective action in China around pollution management to better identify lessons learned and best practices.

RESEARCH DESIGN

DOCUMENT REVIEW

The research team reviewed CAGC documents to understand how the activity worked and what changes it achieved. The documents reviewed include the project description, stories of change on beehive cookstove elimination, the list of participants and roles in the alliance, a report on beehive cookstove use in Hanoi, and a communication campaign on the elimination of beehive cookstoves and replacement by biomass gasifiers in four wards in Hoan Kiem district: Tran Hung Dao, Chuong Duong, Phuc Tan, and Hang Dong.

The team also reviewed studies and secondary sources on collective action, including "A Behavioral Approach to the Rational Choice Theory of Collective Action," "Guide to Water-Related Collective Action," "Collective Action for Water Security and Sustainability," "Governance of Air Quality and Stakeholder Engagement: Lessons and Experience from International Cases," "Collective Action, Environmental Activism, and Air Quality Policy," "What is a collective action approach and what makes it effective? - a desk review," and a Chinese case study (full citations are in Annex I). These secondary sources helped strengthen the team's understanding of collective action's theory and practice, enabling (and suppressing) factors, and the conditions for successful collective action.

DIRECT OBSERVATION

The research team visited the two pilot wards, Hang Bo and Phuc Tan, in Hoan Kiem district to gather field information and interview residents, especially restaurant owners, about beehive cookstoves. The team observed the level of use of beehive cookstoves in the pilot wards and how residents replaced beehive cookstoves with other types of stoves fueled by gas, electricity, or biomass. The team also used site visits to verify comments from interviewees. The team kept notes on the usage behaviors of residents and took pictures of residents' stoves.

KEY INFORMANT INTERVIEWS

The research team conducted 24 KIIs with stakeholders involved in the beehive cookstove collective action and development partners working on air pollution and environmental health to understand how they engaged in collective action or multi-stakeholder approaches. The KIIs provided insight on the collective action process, the roles of stakeholders and their contributions to results, stakeholders' interests in maintaining and promoting the desired change, challenges they faced during the process, and areas to improve in the future. Table 1 below lists the stakeholders interviewed.

TABLE 1: KEY INFORMANT INTERVIEWS

RESPONDENT CATEGORY	# OF KIIS
Donor: USAID	1
Development Partners: World Bank, GIZ, German Embassy, World Health Organization	4
Implementing Partners: Live and Learn, Vietnam Clean Air Partnership (VCAP), Centre for Supporting Green Development (GreenHub)	5
Local Government: Hanoi EPA, Hoan Kiem District/Ward	5
Research Institute: University of Science and Technology	2
Media: Nhan Dan Television	1
Others: Youth group, kindergarten, school, restaurant owners, beehive cookstove users	6
TOTAL	**24**

MINI-SURVEY

The research team asked key informants to identify people involved in collective action to eliminate cookstoves and change related policies. The team then conducted a mini-survey via email with seven of these respondents, asking them to rank the factors supporting collective action and share what they thought leads to successful collective action. Only one respondent provided feedback, probably because stakeholders were not familiar with the collective action terminology even after efforts to explain the idea.

DATA VALIDATION WORKSHOP

The research team conducted a validation workshop where stakeholders in the cookstove collective action could discuss initial findings. The team used focus group discussions during the workshop to further explore the factors leading to collective action and the role of USAID in supporting the collective action process. The workshop also supplemented the mini-survey, given the limited response discussed above.

USAID Learns facilitated the workshop, which was divided into two main sessions: (1) a presentation of preliminary findings and (2) a discussion of collective action factors and the role of USAID. USAID Learns grouped participants into four smaller focus groups, mixing stakeholders from different sectors. Participants included not only stakeholders involved in collective action but also other individuals and organizations, such as members of the CAGC network. The diverse group of participants offered comprehensive feedback from varied perspectives.

Table 2 below lists the stakeholders who participated in the workshop's focus groups.

TABLE 2: FOCUS GROUP PARTICIPANTS

RESPONDENT CATEGORY	# OF PARTICIPANTS
Donor: USAID	1
Development Partners: GIZ, UN Habitat	2
Implementing Partner: Live and Learn	2
Local Government: Hanoi EPA, Hoan Kiem District	3
Civil Society Organizations: GreenHub, Hanoi Association of Architects	2
Research Institute: University of Science and Technology, VNU University of Science	3
Media: Nhan Dan Television	1
Independent environmental health evaluators	2
TOTAL	**16**

ANALYSIS

The research team recorded qualitative data from KIIs in interview notes, including some near-verbatim transcriptions of respondents' answers and summaries that followed the structure of the interview guides. The validation workshop and observation notes provided additional qualitative data for analysis.

The team applied content analysis by organizing the collected data into themes around collective action factors for both activities (beehive cookstove usage reduction and policy adoption). From the notes, the research team identified, organized, analyzed, and reported challenges and factors that contributed to collective action. The team used a Findings, Conclusions, and Recommendations matrix to organize quotations and information extracted through the document review, notes from the validation workshop, and observations, arranged by respondent and research objective. The team used several triangulation methods, including cross-referencing different data sources (interviews, observations, and documentation) and consulting Live and Learns and USAID during the validation workshop.

LIMITATIONS

Table 3 below describes the major limitations of this study and mitigation strategies:

TABLE 3: STUDY LIMITATIONS AND MITIGATION STRATEGIES

BIAS AND RISK	MITIGATION STRATEGY
The collective action concept and approach are new in Vietnam	Reviewed a case study on environmental pollution management in China to better understand the collective action approach in addition to CAGC
The study's statement of work predetermined selected success factors for collective action	Reviewed additional literature to confirm that selected factors are consistent with global experiences and contextualized for Vietnam
KII respondents were unfamiliar with the research procedures and hesitated to provide responses	Clearly explained the purpose of the research and that the team was there not to evaluate the outcomes of the intervention but to assess the principal factors that allowed stakeholders to act collectively
Few respondents filled out the survey questionnaire	Replaced the survey with focus group discussions with key stakeholders during the validation workshop to further understand the factors that led to collective action and the role of USAID in supporting the collective action process

FINDINGS AND CONCLUSIONS

COLLECTIVE ACTION ANALYTICAL FRAMEWORK

The three-stage process of collective action includes: (1) the trigger or initializing stage, when the need for collective action to address an issue emerges; (2) the convening stage, when different stakeholders meet, identify their common interests, and discuss solution priorities; and (3) the sustaining or transforming stage, when actions bring about changes.

Depending on stakeholders' capacities, motivation, and challenges, collective action can take place at four different levels: (1) sharing information (*informative*), (2) seeking advice (*consultative*), (3) pursuing common objectives (*collaborative*), and (4) integrating decisions, resources, and actions (*integrative*).[12] This report presents findings in terms of these different levels of engagement, which are detailed in Table 4.

TABLE 4: COLLECTIVE ACTION LEVELS AND ASSOCIATED REQUIREMENTS

COLLECTIVE ACTION PROCESS	RESOURCE REQUIREMENTS	DESIRE/NEEDS FOR COMMON PURPOSE AND CONSENSUS	EXPECTED COORDINATED ACTION	EXPECTED COMMITMENTS FROM STAKEHOLDERS
Informative	Low	Not Needed	Not Expected	Low
Consultative	Moderate	Low	Low to Not Expected	Low
Collaborative	Moderate to High	Moderate to High	Moderate to High	Moderate to High
Integrative	High	High	High	High

The factors supporting or hindering collective action have different levels of importance at different stages and in different contexts. This study selected factors based on previous collective action theories and [13] case studies on water security and sustainability[14] and tailored the analytical framework and factors to the local context in Vietnam. Some factors overlap across stages. The factors considered in this report include:

1. **Challenges and opportunities:** the presence of challenges or opportunities due to inadequate data, declining resources and environmental quality, newly applied regulations and policies, rising pollution, and other factors that create risks for communities, governments, and businesses. Opportunities may range from business solutions to technological interventions to aligning with the government's policy agenda.
2. **Incentives and punishment:** the impetus for stakeholders to act collectively toward the common goal of a network or multi-stakeholder group. Members with strong economic, normative, and social interests are more likely to contribute time and effort to collective action.

[12] Water CEO Mandate. "Guide to Water Related Collective Actions." https://ceowatermandate.org/collectiveaction/.
[13] The team reviewed several collective action frameworks and associated supporting and hindering factors, including: The Logic of Collective Action: Public Goods and the Theory of Group, Collective Action for Water Security and Sustainability, Multi-Stakeholder Engagement Processes, Collective Impact, and Collective Impact 3. See Annex IV for a full list of documents reviewed.
[14] Council on Energy, Environment, and Water for the 2030 Water Resources Group. 2014. Collective Action for Water Security and Sustainability: Preliminary Investigations. https://www.2030wrg.org/collective-action-water-security-sustainability-preliminary-investigations/.

3. **Heterogeneity or homogeneity of interests:** The more varied the interests of group members, the more difficult it is to build consensus on common objectives or priorities.
4. **Critical mass:** the minimum number of stakeholders required to mobilize and, in turn, produce collective action. The critical mass required differs from case to case and depends on the scale of the intervention.
5. **Leadership and political commitment:** the willingness of leaders to use their position to support the collective action. Political commitment can vary from allocating local resources to ensuring that the relevant agencies perform their duties to support the collective action.
6. **Social network:** the links among different stakeholders, predicting collective action as a function of the network's size and density. The more centralized, dense, and diverse the social network, the more effective the collective action will probably be.
7. **Clear roles and responsibilities of stakeholders:** the degree of clarity in which stakeholders understand roles and responsibilities in the collective action. This is not limited to individual stakeholder roles but also includes how well members understand the holistic structure of the collective action.
8. **Influencing capacity of the facilitator:** the identity of the facilitator, the distinctive qualities that it possesses, and its identity over time. A facilitator with high influencing capacity brings quality members into the collective action network and sustains their active participation.
9. **Cross-cutting coordination and interactive communication:** information sharing, decisions, and management of common resources to induce and sustain collective action. Coordination involves managing operations, ensuring that stakeholders are aware of and commit to the tasks for which they are responsible, and driving agendas and timelines. Interactive communication helps to exchange information among stakeholders, elicit feedback, and support learning, as opposed to one-way, linear communication.
10. **Monitoring and accountability:** the essence of the institutional framework for collective action to ensure that actions achieve expected outcomes. Monitoring is particularly critical in complex and rapidly changing environments in which interventions need to be adaptive. Results should be shared among stakeholders in the collective action to provide feedback for continuous learning and improvement.

RESEARCH OBJECTIVE 1: PILOT TO REDUCE BEEHIVE COOKSTOVE USE

Identify, map out, and analyze the challenges and factors that have contributed to the success of collective action in reducing the use of beehive cookstoves.

FINDINGS

Trigger/Initializing Stage

During Vietnam's Subsidy Economy between 1975 and 1986, kerosene stoves or beehive cookstoves were in practically every household.[15] Kerosene burners are rare today, but beehive cookstoves are still easily spotted in small street-facing restaurants, wet markets, and tea stands, among other places. For many, cheap coal, which saves money and burns for hours, is worth the negative health impacts and pollution it causes. Surprisingly, beehive cookstove use was higher

[15] Nguyen Tran Duc Anh. 2019. Nhớ Bếp. http://nhipsonghanoi.hanoimoi.com.vn/tin-tuc/cam-nhan/821827/nho-bep.

in urban areas than in rural areas of Hanoi in 2017. Up to 5,670 persons in Ba Dinh District and 1,872 persons in Hoan Kiem District cooked with beehive stoves at home, in household-based restaurants, or at small pavement tea or water stands.[16] Hanoi EPA gathered these data from a survey it conducted after receiving an order from Hanoi City leadership to tackle the twin issues of beehive cookstove use and rice straw burning as apparently significant sources of air pollution. Further source apportionment analysis that is underway will allow Hanoi EPA to identify the dominant sources of air pollution,[17] which include various production activities, vehicle emissions, and transboundary transport. This analysis may find that beehive cookstoves and rice straw burning are not key pollution sources; however, their impacts are localized and, in the case of rice straw burning, seasonal, causing concerns about public health. Around the same time, USAID completed the design of CAGC, including an impact indicator on reducing solid fuels among target group interventions. Reduction of beehive cookstove fit well with CAGC. Thus, air pollution presented an **opportunity**, and the **political will** from Hanoi City leadership to address it **triggered collective action** to reduce the use of beehive cookstoves.

Convening Stage

In the search for beehive cookstove replacements, Hanoi EPA met with the Vietnam-Netherlands Development Organization (SNV), Live and Learn, and local organizations. SNV has run a sustainable energy program across rural provinces in Vietnam and tested upgraded cookstoves using biomass rather than beehive coal for safety, efficiency, and environmentally friendly characteristics. Pilot users of these stoves complained about their large size, smoke production, and need for a difficult-to-source fuel. The upgraded stoves work better in rural settings than urban ones because kitchen space is typically bigger in rural areas.

At the **convening** stage, Live and Learn worked to complement Hanoi EPA's work, reaching out to communities in four wards in Hoan Kiem District to raise awareness about the negative health impacts of beehive cookstoves. Having **strong ties and a network** developed beforehand, Live and Learn was **well placed to attract other organizations**. Live and Learn conducted an initial stakeholder mapping[18] to form the CAGC network, identifying 11 organizations with various resources and capacities, including research institutions, city-level governments, private sector organizations, youth groups, and international organizations. Live and Learn used the mapping to understand who was doing what in air pollution management. The mapping exercise also helped connect interested parties to participate in CAGC through bilateral or multilateral meetings. A crucial collective action factor was that Live and Learn targeted participating organizations with **diverse capabilities in reducing air pollution**. Without Live and Learn's contribution to pull in other local actors, the beehive cookstove reduction action would have been implemented traditionally, through direction from Hanoi City cascading down to the district and ward levels, mainly involving local authorities and their mass organizations.

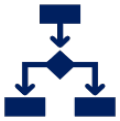
For the beehive cookstove reduction action, Hanoi EPA, SNV, Live and Learn, GreenHub, and private companies first joined the pilot in Hoan Kiem district. Later, additional stakeholders joined, such as Bach Khoa University, public media (newspaper and TV) organizations, and youth groups. The network engaged private companies that sell improved cookstoves (Bep Tre Xanh, The He Xanh). These companies provided upgraded stoves and biomass fuels at beehive cookstove exchange events, but this raised

[16] Hanoi EPA. 2017. Báo cáo nghiên cứu sử dụng bếp cải tiến thay thế bếp than tổ ong.
[17] Interview with Ms. Le Thanh Thuy, Luu Thanh Chi, Hanoi EPA.
[18] Internal Live and Learn Project Document with list of participants and roles in the alliance.

concerns about conflicts of interest between the companies and the group.[19] Youth groups showcased communication products such as sketches, photos, and leaflets with key messages about toxic emissions and the possible health impacts caused by incomplete burning of solid fuels, while children from schools in Hoan Kiem reused beehive cookstoves by turning them into flowerpots. In addition, at the local level, the Hoan Kiem District People's Committee (DPC) and Ward PCs mobilized households and held meetings at the residential group and ward levels to discuss health impacts and pollution concerns.[20] Altogether, Live and Learn's efforts created a **critical mass** to jointly roll out the elimination campaign.

The joint action of involving different stakeholders brought positive changes on the ground, confirming a significant reduction in beehive cookstove usage during the Hoan Kiem pilot. In the context of the collective action framework, this level of engagement is considered collaborative, in which the collective action requires a medium-to-high level of shared agenda and consensus among stakeholders.[21] However, the research team observed from interviews that stakeholder participation was fragmented and ad hoc, with Live and Learn contracting other stakeholders to implement tasks. Some network members were unaware of the overall objectives of other activities under the collective action effort. Key informants shared that **each member's role was not clear** from the beginning, causing some tensions as organizations executed their work.

Sustaining/Transforming Stage



In the **sustaining/transforming stage**, Hoan Kiem DPC championed the work with **clear determination and political will from its leadership**. For example, the DPC issued an action plan and rolled out implementation for beehive cookstove replacement and elimination. The DPC developed the action plan on its own, setting targets and timelines for beehive cookstove elimination for the pilots and the entire district. It organized community trainings with support from the Centre for Environment and Community Research (CECR) to train local facilitators, with three courses training over 200 local facilitators. This capacity building will help local actions' sustainability. GreenHub and Live and Learn offered community engagement expertise to support communication and behavior changes among residents in pilot areas. Some innovative methods included on-site health examinations for local households and using a portable air monitoring device to show residents measurements of air pollutants from beehive coal burning. Hoan Kiem district quickly made use of the innovative communication tools and materials offered by supporting organizations (Live and Learn, GreenHub, the media, and youth groups), such as video clips, factsheets, posters, television shows, and news articles, since these were more engaging than the traditional tools of paper-based orders and policy notices. News about stove exchange events appeared on social media (Facebook), in newspapers, and on television during peak viewing times. The Office of Environment of Hoan Kiem created a group chat via the Zalo mobile application to **monitor** activities throughout the four pilot wards, documenting these activities through photos and messages. According to interviews, with the support from Live and Learn, Green Hub, CECR, and other actors, local officers effectively handled the cookstove reduction campaign and are now equipped with the necessary knowledge and tools they did not previously possess. Officers could engage more closely with local communities. Key informants were proud to report that the

[19] Unfortunately, the participating cookstove providers were unavailable for interviews for the research team to confirm their roles in the CAGC activity.
[20] Live and Learn. 2018. Report on Communication Campaign On The Elimination Of Beehive Cook Stove And Replacement By Biomass Gasifier At 4 Wards: Tran Hung Dao, Chuong Duong, Phuc Tan, Hang Dong In Hoan Kiem District, Hanoi. Internal document.
[21] CEO Water Mandate. 2014. "Guide to Water Related Collective Actions." https://ceowatermandate.org/collectiveaction/.

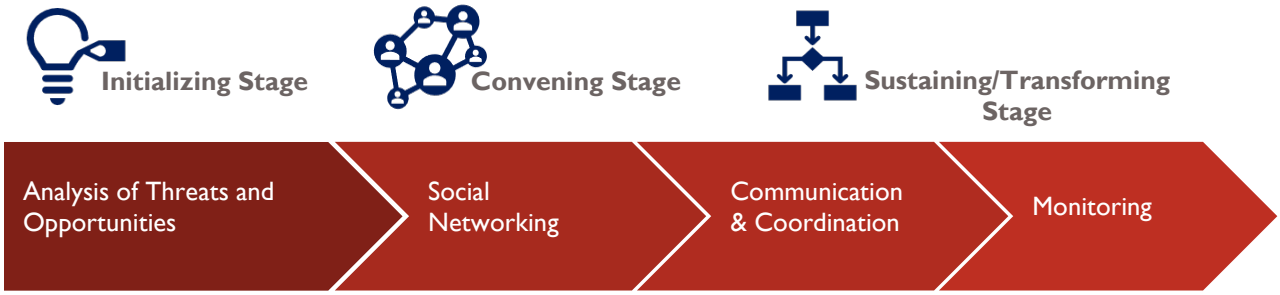
collective efforts brought an early success in Hoan Kiem district by the end of June 2020, in light of the 2,525 beehive cookstoves counted before the reduction pilot in 2018.

However, in the context of the collective action framework, the fragmented and ad hoc participation from stakeholders during the convening stage poses a threat to the sustainability of the collective action, especially in replicating the campaign across the city. Also, the network did not have a monitoring and verification mechanism in place (such as third-party verification) to validate the results from district reports. Hanoi EPA confirmed this shortcoming, noting that communications, reporting, and verification of results were areas for improvement in their next steps. Under the framework of collective action, transparency in reporting **enhances accountability**, builds trust, facilitates learning, and sustains shared interests among stakeholders.

CONCLUSIONS

Figure 3 summarizes the beehive cookstove reduction process. The key factors associated with each stage are discussed below.

FIGURE 3: SUMMARY OF THE BEEHIVE COOKSTOVE COLLECTIVE ACTION PROCESS



At the trigger stage, the intensity of pollution **threats** and pollution's impacts on the environment and public health, together with strong **leadership**, triggered action to tackle the beehive cookstove issue. The Hanoi EPA study helped reveal the extent of beehive cookstove use in different districts, and Hanoi EPA planned for alternatives (upgraded stoves) and prepared policies to address beehive cookstoves.

At the convening stage, a **critical mass** of participating organizations and the capacity of the **facilitator** (Live and Learn) to connect others supported the collective action. Because this collective action was at the collaborative level, **roles and responsibilities** of participating stakeholders should have been more

clearly defined, and a common agenda and goals should have been shared to leverage joint efforts and avoid any tension and conflict that could hinder collective action.

At the sustaining/transformation stage, **coordination and communication** among interested parties and stakeholders were critical. CAGC conducted strong communication campaigns in the affected communities.

The **success of collective action** is not merely about achieving objectives and results but also about how collective action organically grows and **self-sustains**, what lessons feed into continuous **learning and adaptation**, and the need to **formalize the collective action process**.[22] Engagement in the beehive cookstove reduction pilot was collaborative, but several elements of collective action are not yet in place, including:

- By design, CAGC is an informal structure, which means that it does not have a governing structure to make decisions and coordinate tasks. In place of a multi-stakeholder board or similar to make decisions and prioritize tasks, the implementer alone decided priorities. Hanoi EPA mentioned that the tasks undertaken by the network are often ad hoc and non-strategic, as they are either an ongoing activity of one stakeholder not supported by the network (e.g., Hoan Kiem's pilots, CECR capacity building in Hoan Kiem) or an activity that Live and Learn contracted other organizations to implement (e.g., communication and awareness raising by youth groups, community engagement by GreenHub, and further training by CECR). The loose process of agenda-setting, participatory convening, and decision making potentially discouraged buy-in from stakeholders, affecting the network's sustainability.
- Although external communication was active and diverse, internal communication among stakeholders was limited. Some members were not aware of the objectives of other activities under the collective action effort, and the direction of communication flowed mostly from Live and Learn to members rather than both ways.
- Lastly, although there was a shared group chat in the Zalo application among Hoan Kiem, Hanoi EPA, Live and Learn, and other actors monitoring the progress of beehive cookstove reduction, **participatory validation** to enhance **transparency** and **accountability** was lacking. According to the collective action framework, monitoring and accountability is the fundamental factor that affects the learning and adaptation process and is the condition to sustain interest from participating organizations.

RESEARCH OBJECTIVE 2: ADOPTION OF NEW ENVIRONMENTAL POLICIES

Identify, map out, and analyze the challenges and factors that have contributed to the adoption of new environmental policies in Hanoi, specifically related to the use of beehive cookstoves.

FINDINGS

The adoption of the new environmental policy, Circular 15, on replacing and removing beehive cookstoves, included two aspects related to collective action: (1) the policy issued on October 30, 2019, and (2) ongoing policy implementation after Circular 15 came into effect.[23] The policy adoption was not

[22] Council on Energy, Environment, and Water for the 2030 Water Resources Group. 2014. Collective Action for Water Security and Sustainability: Preliminary Investigations. https://www.2030wrg.org/collective-action-water-security-sustainability-preliminary-investigations/.
[23] Hanoi EPA. 2019. Circular 15/CT-UBND. October 15, 2019.

designed from the beginning to be a multi-stakeholder process but rather was a political task of Hanoi EPA alone. Without collective action, Hanoi PC, with support from Hanoi EPA, would still have issued the circular. However, support from CAGC helped **inform the policy** through the beehive cookstove usage reduction pilot in Hoan Kiem district, which was collaboratively implemented by Hanoi EPA, Hoan Kiem DPC, Live and Learn, and other stakeholders.

As it was drafting the policy, Hanoi EPA engaged primarily with local government agencies (districts and wards), a research institute, and Live and Learn. This level of engagement is **consultative**, as the EPA sought scientific evidence on the pollution impacts of beehive coal-burning emissions and held consultation meetings with residents in Hoan Kiem. Typically, for consultative engagement, the resource requirements are moderate, the desire or need for common consensus among stakeholders is low, and the expectation for coordinated action is low.[24] Live and Learn's collective action support toward beehive cookstove reduction (e.g., communication campaigns and pilot efforts) fed into the policy formulation process, but their engagement during policy drafting was limited: they provided a small amount of budget support for some consultative meetings.[25]

During interviews, development partners acknowledged that civil society organizations (CSOs) have voices in the policy formulation process; however, their capacity and influencing power are still limited. In future contexts, policy advocacy will typically be a collective action decision, and shifting from the consultative level to a higher level of engagement (collaborative or integrative) would maximize development results.

Trigger/Initializing Stage

Three factors affected collective action around policy adoption at the trigger stage: (1) challenges/opportunities, (2) incentives/punishment, and (3) homogeneity of interests.

Because beehive cookstoves bring several advantages, such as cheap fuel, ease of use, and no need to refuel continuously, it was not easy to convince residents to replace them. To address this challenge, Hanoi EPA commissioned an environmental impact assessment of beehive cookstoves from the Institute of Environmental Science and Technology (INEST) at the University of Science and Technology Hanoi (USTH) in Bach Khoa, measuring users' exposure to air pollutants. Emissions of carbon monoxide, carbon dioxide, polycyclic aromatic hydrocarbons, and fine particulate matter ($PM_{2.5}$) negatively impact air quality and environmental health. Direct stove users risk exposure to $PM_{2.5}$ at levels seven to eight times higher than those just a few meters away from the stove.[26] Although the assessment did not address all the environmental and public health concerns around cookstove usage, it was the first time a local state management agency like Hanoi EPA deployed an **evidence-based policy formulation process**.

Hanoi EPA's policy specifies the **accountability** of local authorities to reduce beehive cookstoves in their localities, triggering the commitment of districts and wards. Hoan Kiem district was the first champion, putting out an action plan to address beehive cookstoves. Participating actors primarily came from the local administrative system (city, district, and wards), ensuring homogeneity of interests in replacing beehive cookstoves. As a government agency with a policy formulation mandate, Hanoi EPA took the lead

[24] CEO Water Mandate. "Guide to Water Related Collective Actions." https://ceowatermandate.org/collectiveaction/.
[25] From discussions with Live and Learn.
[26] Dable. 2019. Xóa bếp than tổ ong: Việc cần thiết phải làm. https://baotainguyenmoitruong.vn/xoa-bep-than-to-ong-viec-cap-thiet-phai-lam-288445.html.

in engaging with most stakeholders, instead of Live and Learn playing this facilitator role. Other stakeholders involved earlier in the beehive cookstove reduction activities, such as CSOs and youth groups, were not aware of the policy formulation process and could not, therefore, share their opinions.

Convening Stage

The factors affecting collective action at the convening stage were critical mass, social networks, the roles and responsibilities of the collective action members, and the facilitator's influence.

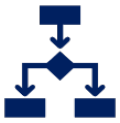
Unlike the beehive cookstove reduction activity, **only a few stakeholders** from the collective action efforts engaged specifically in policy formulation and adoption.[27] According to the collective action framework, a small number of stakeholders may not generate the critical mass capable of noticeable impacts. Hanoi EPA mostly drove the action. It is worth noting that the action followed an administrative directive that made Hanoi EPA responsible for drafting the policy. Hanoi EPA carried out some consultation sessions with residents and representatives from districts, but it was not aware of other collective action stakeholders' willingness to participate and strengths in policy formulation. The lack of participation from other stakeholders in the collective action led to missed opportunities to reach out to other districts to explore the challenges they faced in implementing the policy so the collective action stakeholders could provide appropriate support, as they had in Hoan Kiem district.

Live and Learn was not involved in the policy formulation process except for some budget support to Hanoi EPA to organize consultation meetings with the beehive cookstove pilot wards. This lack of engagement from Live and Learn, the collection action facilitator, limited engagement from other stakeholders in the policy process. The collective action approach was not designed from the beginning to include a policy formulation process. At the time of this study, collective action stakeholders did not know the status of policy implementation or how they could support it as the stakeholders did for the pilot in Hoan Kiem. Additionally, there was no working agenda covering how the collective action would support other districts in enforcing their action plans to implement policy or whether another intervention would support this.

Future collective action efforts for policy advocacy will probably need collaborative or even integrative stakeholder engagement to drive the necessary transformation. In interviews, development partners confirmed that shared objectives and an agreed-upon agenda are essential for effective multi-stakeholder engagement. The facilitator's influence is critical in mobilizing different stakeholders to join and collectively act. Policy-oriented collective action should aim to reach a higher level of policy decision makers, namely, the ministerial or central government level, and stakeholders should consult with other development partners to align with a common policy agenda.

[27] When collective action is analyzed as a holistic, collaborative process, then action on policy (Research Objective 2) should be considered an outcome of this process. However, this study assesses policy action as a standalone process under Research Objective 2, so the team separately analyzed the degree to which stakeholders were specifically engaged in collective action that contributed to the adoption of new environmental policies. Overall, this study acknowledges that the Hoan Kiem pilot and Circular 15 policy process are interlinked and that the results from the former action contributed to the policy.

Sustaining/Transforming Stage



In transforming policy into action, several factors proved to be important.

Political commitment, or **political will**, affected not only policy issuance but also implementation, particularly in replicating the pilot in other districts. The local government, namely Hanoi city, Hoan Kiem district, and its wards, were determined to implement and enforce Circular 15. Discussions with various stakeholders, including government agencies, revealed that without political commitment, the policy would probably not have been implemented effectively.

The DPC and the ward PCs used a social media forum, Zalo, to update stakeholders on policy implementation. The district managerial level also used this platform to supervise activities implemented by the wards. The district could post about households found to be using a beehive cookstove, requesting immediate action from the local ward. Stakeholders found this **communication mechanism** effective and thus valuable.

Further, at the time of this study, policy implementation had started in all districts in Hanoi, achieving certain beehive cookstove reduction targets. The complete replacement of beehive cookstoves, which Hoan Kiem will achieve by the end of 2020, might be too challenging to replicate in many districts, especially given the COVID-19 situation. However, Hai Ba Trung and Dong Anh districts have expressed interest in replicating Hoan Kiem interventions. According to Circular 15, since its issuance date at the end of October 2019, main tasks have involved communications with residents on the city's policy. Districts confirmed they had completed the communication tasks and were implementing the shift from beehive cookstoves to less harmful stoves. Hoan Kiem has shared its experiences.[28] However, governments in districts other than Hoan Kiem had not shared results with members of the collective action network. Consequently, the network members did not know how they could support these other districts. Since the other districts were not engaged in the network, their interventions to implement Circular 15 were self-contained in a conventional approach. The collective action approach was limited to the pilot in Hoan Kiem.

The pilot wards and Hoan Kiem district monitored and shared implementation progress with the stakeholder network through Live and Learn. The monitoring activities incorporated engagement with different state stakeholders (e.g., Hanoi EPA, Hoan Kiem DPC, the pilot ward PCs) and ongoing updated results, which was considered a good practice to replicate in the other districts of the city. One of the biggest concerns of the stakeholders in **monitoring policy implementation** was that residents might revert to the beehive cookstove because of its economic advantages. However, no one in the network monitored for this regression.

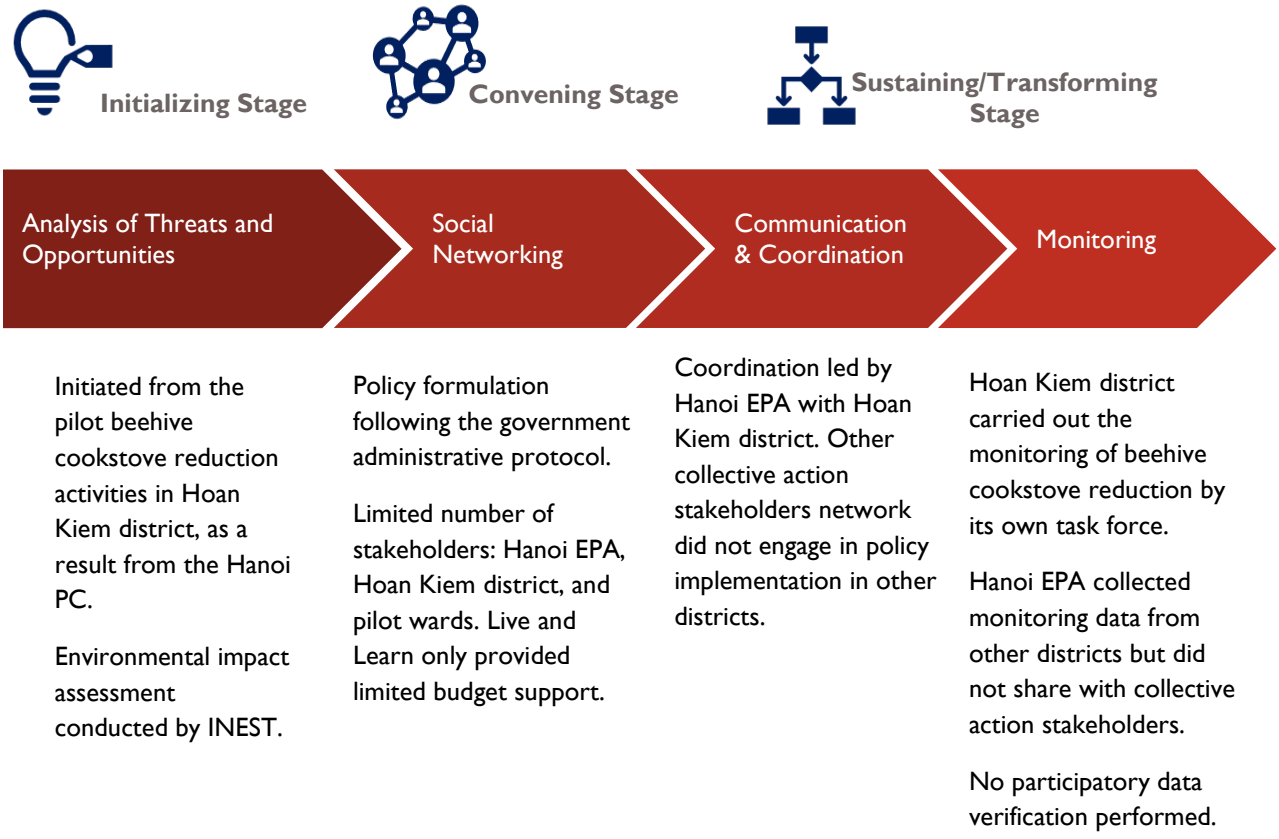
In addition, the preliminary review workshop surfaced a similar concern: district representatives shared that they found it challenging to enforce the policy because there was little guidance about the consequences of noncompliance. Without low-cost, portable alternatives with readily available fuel, the target result (over 70 percent reduction in beehive cookstoves citywide)[29] proved too ambitious.

[28] July 3, 2020 workshop organized by the Hanoi Department of Natural Resource and Environment to review the first six months of Circular 15 implementation.
[29] From the Department of Natural Resource and Environment's workshop materials.

CONCLUSIONS

The Hanoi PC issued Circular 15 in October 2019, after the pilot had been implemented for almost a year. The policy formulation process was not designed around a collective action approach from the beginning but simply followed the government's administrative protocols. Without collective action, the circular would still have been issued, but support from CAGC allowed for further consultation and input incorporation into the policy drafting process. Figure 4 below represents a summary of the process of collection surrounding the adoption of Circular 15.

FIGURE 4: SUMMARY OF THE COLLECTIVE ACTION PROCESS ON CIRCULAR 15 ADOPTION



At the trigger/initializing stage, the **analysis of beehive cookstove usage and the regulation to deter use** triggered the policy issuance and involvement of the city's districts and wards. Although Hanoi EPA consulted Hoan Kiem district, a research institute, and (to a limited extent) Live and Learn, it did not engage the broader stakeholder network. Consequently, the collective action stakeholders' **motivations to integrate policy implementation into their workplans were limited**.

The collective action approach will probably apply to future policy advocacy efforts, such as around the Law on Environmental Protection. In these cases, the **convening stage** will require collective efforts from many individuals and organizations to create **critical mass**. **Influence from the facilitator** will be critical in mobilizing different stakeholders to join and collectively act. To act, the collective action members must understand each other's mandates and strengths. There should be a shared agenda, developed on a participatory basis, with key stakeholders agreeing on priorities and a roadmap to achieving them. Policy influence will be stronger when the network and facilitator reach a higher level of policy decision makers, at the ministerial level or even higher, in pursuit of better policies.

At the sustaining/implementation stage, **strong political will** from the local government at the city, Hoan Kiem district, and ward levels **transformed policy into action**. This factor is the most important among all other collective action factors. Without political will, policy formulation is highly unlikely. At the time of the study, the policy implementation had been rolled out to other districts that were interested in learning from Hoan Kiem in the usage elimination and monitoring activities. Beyond Hoan Kiem, governments coordinated and communicated to implement the policy but left the collective action members out of these communications, limiting stakeholders' interest in and ability to support implementation. Hoan Kiem district and its wards monitored implementation with ongoing progress updates serving as good practice for other districts to adopt. However, participatory result verification was lacking, raising **concerns over the credibility** of the results and worries about the **risk of beehive stoves returning** in the future.

CASE STUDY OF COLLECTIVE ACTION IN CHINA[30]

The below case study describes successful collective action for environmental management in China. The case study is not designed to compare with the collective action on beehive cookstove behavior change and policy adoption, but to examine the factors that influenced achievements throughout the three stages of collective action: the trigger/initializing stage, the convening stage, and the sustaining/transforming stage for learning purposes.

In recent years, China has witnessed remarkable progress in information disclosure and environmental transparency to its citizens, particularly since the promulgation of the Regulation of the People's Republic of China on the Disclosure of Government Information and the Measures for the Disclosure of Environmental Information in 2008. These two policies require that the Chinese government at all levels and enterprises disclose a broad spectrum of information—including environmental quality, pollution discharge and emissions, and environmental management and inspection—leading to a vast and rapidly increasing volume of environmental data.

Because of the comprehensive scope of official environmental data and the lack of an alternative source, the governmental data are widely viewed as the primary source of reliable environmental information in China's authoritarian setting.

Institute of Public and Environmental Affairs (IPE) is a Beijing-based environmental non-government organization (ENGO) founded in 2006 to promote information dissemination and serve green development. IPE developed data-based approaches to make multinational corporations (MNCs) and their polluting suppliers take action on environmental issues. IPE's initiatives—an environmental map database and a green supply chain network—are good examples showing how collective action among ENGOs and companies can help address a high-profile issue in China.

IPE collected large-scale data from many official sources, namely, government functional agencies at different levels, official media reports, and real-time monitoring by key industrial polluters mandated by law and disclosed via official channels. By extracting the necessary data from these large, complex,

[30] H. Z. Jing Xu. 2020. "Environmental Activism and Big Data: Building Green Social Capital in China." Sustainability. https://www.mdpi.com/2071-1050/12/8/3386/htm; Jasmin Gan. 2019. "How Pollution Data Pressured China to Clean up Its Act"; Ju Sun and Wenjie Yan. 2020. "The Power of Data from the Global South: Environmental Civic Tech and Data Activism in China; Case Consortium at Columbia University. 2014. Publishing Pollution Data in China: Ma Jun and the Institute of Public and Environmental Affairs. https://ccnmtl.columbia.edu/projects/caseconsortium/casestudies/135/casestudy/www/layout/case_id_135_id_983.html.

heterogeneous, and unstructured datasets, IPE adopted a series of rules to transform the extracted data into standard and easily interpretable formats, stored the data in a unified data structure, and generated maps to visualize the data. As a result, IPE produced an environmental map database with well structured, easily understandable, and real-time or near real-time data.

Further, IPE established a Green Choice Audit (GCA) system to carry out a rigorous audit of an enterprise's environmental practices by an accredited third-party auditor and IPE. This arrangement created a robust verification process and led to deeper network relationships.

Trigger/Initializing Stage

At the trigger stage, IPE **leveraged** the right condition of **new local regulations** to motivate MNCs and, eventually, local suppliers to use its environmental map database to take relevant actions to comply with Chinese environmental policies.

Enterprises had been significant contributors to China's environmental degradation. IPE transformed big data from enterprises into a supply chain management tool to motivate the business community to improve environmental performance and enhance accountability. Many MNCs were sensitive about their brands and thus **concerned about complying with local policies to maintain their reputations**. MNCs are also the primary buyers from local suppliers. Therefore, they were interested in using the environmental map database to monitor their local suppliers. The local suppliers, in turn, had to comply with the environmental policies or otherwise take corrective actions to **maintain their contracts with the MNCs**. Further, the local suppliers had their own network of suppliers. As a result, IPE's actions established multiple layers of suppliers who were willing to perform environmental compliance to receive contracts. Deterrents regulated by the local government policy, in this case, triggered the participation of stakeholders in the collective action network.

This story also involves **homogeneity of interests**. **Greening the supply chain** can be described as a set of approaches and practices for managing and achieving effective coordination and collaboration between organizations to minimize negative environmental effects in the supply chain. Brand-sensitive MNCs wanted to maintain their reputation, local suppliers had to keep their contracts with the MNCs, and IPE promoted a green supply chain, while the Government of China enforced environmental regulations to reduce pollution. IPE was cautious in the first few years to convince government officers that the pollution map did not aim to interfere with their work or punish commercial enterprises.

Convening Stage

IPE, as the **facilitator, initiated the green supply chain** by developing a credible and large-scale environmental map database, stimulating the participation of other stakeholders.

In 2018, the number of the polluting suppliers pushed by the MNCs to engage with IPE to address their violations climbed to 2,458—over three times the number in 2016—and, even more tellingly, the number of the polluting suppliers that went through the GCA system increased by nearly five times to 1,206.

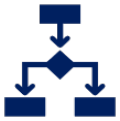
The more stakeholders involved, the more attention from the public and the Government, subsequently attracting the participation of other MNCs and local suppliers. **The composition of the network** was also important. For decades, China has been seen as the "world's factory," with a massive gross domestic product. The participation of well-known global brands, such as Adidas, Nike, New

Balance, Walmart, and Unilever, significantly affected the whole economy. Therefore, these brands' engagement was important in promoting the network and, thus, the collective action.

MNCs and their first- and second-level local suppliers already had **close business relationships** before the collective action, which **strengthened even more when they joined the network**. Similarly, **there were already strong ties between the functional government agencies and polluters**, as well as other members of the network. The facilitator was core to the network, **building up relationships** not only with MNCs but also their suppliers, even at the second level. The strong network created favorable conditions for other stakeholders to join in, making the network organically grow.

Roles and responsibilities of members were **clearly identified** in the network in accordance with each member's mandates and interests. IPE took the lead in collecting data from credible sources (such as government agencies and official media) and provided support on corrective actions through the GCA system. MNCs monitored their local suppliers on compliance with environmental regulations. Local suppliers had to follow the policies and take corrective actions if they created pollution. Finally, the government at different levels enforced the policy.

Sustaining/Transforming Stage



Looking back to the starting point of the collective action, we can see that without the **political will** for environmental protection **leading to regulations** targeting polluters, the green supply chain could not be established. Political commitment was not limited to drafting policy: the Government of China also **enforced the policy**.

Communication and interaction among IPE, brand-sensitive MNCs, and suppliers led to the formation and expansion of a relationship network in which stakeholders **shared the priority of environmental policy compliance** from different perspectives. IPE, as the facilitator, and MNCs, as the buyers, **listened to the voices of polluters to support them** in taking corrective action and obtaining GCA certificates. The Government of China has often relied on top-down command-and-control approaches to address enterprise environmental problems. However, through the big data-induced management tool used by IPE, MNCs and their suppliers formed a much more horizontal structure emphasizing **conversation, negotiations, assistance, and partnership**.

The database was **visualized**, updated on a **real-time basis**, and **public** to all stakeholders to review, **recognize** polluters, and **monitor** environmental compliance. An interactive communication mechanism was applied throughout the network. Data sources were **reliable**, as they were collected from a **broad spectrum of official information**. The **trustworthiness** of the environmental map database created **accountability** among the network members.

FIGURE 5: IPE ENVIRONMENTAL MAP DATABASE WITH NATIONWIDE VIOLATION RECORDS

As the facilitator, IPE not only **engaged** the collective action stakeholders but also offered **technical support** to polluters, making compliance not a matter of confrontation but rather a constructive partnership among members. The technical support paved the way for polluters to maintain their businesses by correcting violations, thus promoting healthy partnerships in the green supply chain.

Lessons Learned

The environmental map database made government data accessible to MNCs to audit and legitimate their activities. This evidence-based initiative established trust among actors, strengthening and enlarging the collective action network. These achievements did not come immediately and required patience from IPE to convince government officials. The collective action network will grow organically only after conflicts of interest are harmonized.

The right mix of stakeholders with diverse interests triggered the network's formation, while clear roles strengthened members' ties to each other.

Effective communication and support among stakeholders led to the solution. Polluters had to comply with the regulations, but the network provided support so they could meet environmental standards and change their behavior. This data-driven, conversation-based, and assistance-oriented approach presents a new way of acting and interacting to address environmental problems and build ENGO–business partnerships.

RECOMMENDATIONS

RESEARCH OBJECTIVE 3: LESSONS LEARNED AND RECOMMENDATIONS

Based on overall findings and analysis, map out lessons learned and recommendations for future Collective Action initiatives in Vietnam.

Collective action is coordinated action among interested stakeholders within an agreed-upon process in support of a common goal, leading to sustainable outcomes that are impossible to achieve through internal or unilateral action. Beehive cookstove use presented two opportunities for collective action: (1) working to eliminate the cookstoves and (2) drafting and issuing the related environmental policy. Together, these efforts substantially reduced beehive cookstove usage in the pilot district of Hoan Kiem (by 100 percent as of the beginning of July 2020),[31] and Circular 15 calls for the elimination of beehive cookstoves in Hanoi by the end of 2020. Collective action, in this case at the collaborative and consultative levels, contributed to this success.

However, effective collective action in more challenging, complex political economy contexts requires more substantial efforts and commitment, shared responsibilities and benefits, transparency, and accountability from participating stakeholders. Collective action also demands the development of new skills and knowledge, such as more in-depth analysis of local needs and stronger abilities to connect the government, the private sector, and CSOs.

As USAID continues to use collective action to achieve its development results, it should define collective action in its Project Development Document to create a shared understanding, especially among USAID implementers. This should inform a structured framework for collective action, with a more participatory process to identify and prioritize issues for collective action, analyze and connect the right local stakeholders, and improve decision making and the capacities that sustain collective efforts and impacts.

Although the beehive cookstove case is specific and small scale, it offers vital lessons for future collective action efforts at each of the three collective action stages.

Trigger/Initializing Stage

Process: This preparatory stage includes (1) scoping the environmental health challenge and action areas, (2) identifying stakeholders through stakeholder mapping, (3) selecting an appropriate level of multi-stakeholder engagement (e.g., USAID, an implementer, or a forum), and (4) designing the collective action approach with objectives, action areas, capacity development needs, and the scale, scope, and timeframe of the action.

Factors of influence: The **intensity of the threat** and its impact on stakeholders typically prompt collective action. **Incentives and punishments** set by the government through norms and policies can also trigger collective action. Given the political context in Vietnam, **political will** and government commitment around an issue will often make collective action possible.

Recommendations for USAID:

- Conduct a scoping analysis to identify environmental health challenges within USAID's theories of change. Include stakeholder mapping and action areas in this analysis. For example, to address air

[31] Hoan Kiem DPC. 2020. Final result report on the replacement of beehive cookstoves in Hoan Kiem district.

pollution, an action area could be promoting air quality monitoring, and critical stakeholders could be regulators, community leaders, research institutions, and related industries.

- Define collective action, design a collective action process framework, and guide implementing partners with requirements on the level of engagement, governing structures, expected outcomes, communication, and grievance mechanisms.
- Within the Vietnamese political context, successful collective action requires including the GVN. Interventions should align with the government's Policy Agenda and existing political will.
- Provide necessary support to develop implementing partners' capacities if they are not fully equipped to facilitate collective action. It might be helpful to seek guidance from organizations that have experience in collective action and can facilitate learning (e.g., United Nations Development Organizations or the 2030 Water Resources Group hosted by the World Bank).

Recommendations for Implementers:

- Conduct analysis to further understand the priority environmental challenges and the socioeconomic drivers and underlying systemic deficiencies that led to these challenges. Consider adapting this analysis into concept notes or proposals that invite other stakeholders to join the collective action network.
- Conduct a detailed stakeholder mapping to characterize prospective stakeholders to identify who should be engaged in the process. Potentially interested parties include the government, the private sector, development partners, equipment and consulting service providers, research institutions, media organizations, and youth groups.
- Decide the appropriate engagement level with participating stakeholders (either informative, consultative, collaborative, or integrative), depending on how much stakeholders share common ground, their decision making processes, and their expectations, commitments, resources, and experience.
- Design the collective action to include preliminary desired outcomes and objectives, priority action areas, and the effort's estimated scope and scale. Guide the coalition with an action plan that lists detailed tasks, timelines, and involved stakeholders.

Convening Stage

Process: In an interactive convening process, the facilitator should facilitate conversations with interested parties about the action's expectations, objectives, and structures. Stakeholders should participate in meetings to discuss the priorities to be addressed, decide on initiatives, and solve implementation challenges. CAGC's experience with stakeholder engagement reveals the importance of maintaining good relationships among the facilitator, partners, and the community to mitigate risks and improve outcomes.

Factors of influence: An **influential facilitator** creates a **critical mass of stakeholders** resourceful and capable enough to produce noticeable impacts. According to the collective action framework, critical mass is fundamental to bringing in needed resources to catalyze collective action. The composition and size of critical mass may differ from case to case, depending on the scale of the intervention, as seen in this study from the beehive cookstove reduction and policy formulation action. The facilitator should engage other stakeholders in a participatory manner to agree on the **roles and responsibilities of each stakeholder**, helping reduce any tensions or conflicts that may arise.

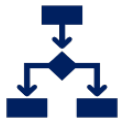
Recommendations for USAID:

- When selecting backbone organizations to facilitate collective action, consider the following criteria:
  - credibility and reputation in the sector or social issue the collective action will address
  - strong network linkages with different groups of stakeholders: government agencies (depending on the action, anywhere from grassroots to the central level), international development partners, CSOs, academia, think tanks, the private sector, and community groups (Live and Learn's networking capacity is exemplary in this regard)
  - capacity to dedicate time and personnel to coordinate activities and engage different stakeholders (low turnover is also advantageous)
  - "big picture" mindset, results-oriented, and ability to design and facilitate activities to achieve expected results
  - strong leadership skills to coordinate and facilitate the network
  - knowledge of the government system and administrative procedures
- Set up a grievance process to receive any complaints from participating stakeholders and resolve them as necessary.
- Communicate with other development partners to harmonize efforts and understand the policy environment, helping the collective action coalition reach higher policy levels as needed.
- Provide resources to support convening the collective action participants.

Recommendations for Implementers:

- Establish clarity by ensuring that all participating organizations understand and agree to expectations around the collective action. The collaborative and integrative levels of engagement require certain formalities, such as written ground rules and principles, memoranda of understanding, letters of intent, or legal contracts specifying stakeholders' roles and responsibilities.
- Establish the degree of formality: Formalize processes for decision making, new member recruitment, communication, and monitoring and accountability in a participatory manner as the collective action moves from informal conversation to formal convening meetings. Formalization is needed for partnership arrangements, consensus making, and participation from high-level government officials.
- Identify any capacity gaps needed in facilitating and managing collective action (such as analytical, coordination, or communication skills) and help address them.

Sustaining/Transforming Stage



Process: At this stage, the priorities and initiatives are rolled out. The intervention can be implemented by a sub-group of stakeholders or a specific task force. If the collective action has a decision making group, the stakeholder group should report its findings to the decision making group. Action on the ground often takes place at the collaborative or integrative levels, requiring more formality in terms of communication, coordination, monitoring, reporting, and accountability.

Factors of Influence: **Communication and coordination** among interested stakeholders are critical to facilitate action, help exchange common interests, increase trust, and create and enforce the network's norms. As actions turn into changes on the ground, **monitoring and accountability** are essential for collective action to be self-sustaining, adaptive, and resilient to changes to the operating environment.

Recommendation for USAID:

- Maintain flexibility in mechanisms, allowing implementers to adapt to the context. Require collaborative and self-sustaining monitoring approaches, as well as consistent feedback loops that support iterative adaptation.

Recommendations for Implementers:

- Support communication among stakeholders. Provide background information to ensure that all collective action participants understand the underlying issues. Prepare working papers and agendas to send to partners before meetings, emphasizing the decisions sought at the meeting, to increase stakeholder engagement. Document decisions made and follow-up actions required and share meeting minutes with participants. Effective and engaged communication among participants requires attention to the timing of meetings, venues where interaction feels neutral, and modes of communication partners are comfortable with. Sometimes, face-to-face dialogue is needed in addition to the technical communication platform used by the group.
- Build in learning and resilience. This element was critical in the beehive cookstove case when participants realized they should not pursue the upgraded beehive cookstoves that had problems with biomass fuels and were not suitable for urban areas. Participants changed the course of action to replace beehive cookstoves with gas burners and other appropriate stoves. As new information, changes in perspective, and challenges evolve, the facilitator should build in flexibility and prepare participating organizations to adapt, learn, and be resilient to any socioeconomic changes.
- Establish a decision-making approach. Form an advisory committee to receive stakeholder inputs, especially those related to regulatory reforms, policy advocacy, and resource mobilization.
- Implement a monitoring, reporting, and verification system, so partners can collaboratively check progress and hold each other accountable. For example, the network can construct a monitoring and evaluation matrix, including measurable indicators for CAGC, that can apply to any activities under CAGC's scope. Sub-activities should be reported against the monitoring and evaluation matrix and validated, ideally by a third-party evaluator, at the midterm and end of the intervention. This will create trust and sustain stakeholders' interests in pursuing common goals.

STUDY UTILIZATION

This study's findings, conclusions, and recommendations contributed to USAID's Collective Action Project Development Document (PDD) design by supporting internal processes. At the validation event, USAID Learns gathered a variety of stakeholders and shared a selection of preliminary findings to enable discussion around the successes and challenges of collective action in the context of reducing the use of beehive cookstoves and implementing local policy to ban the beehive cookstove. Stakeholders reached consensus around key factors that led to successful collective action efforts and concrete steps USAID should take to support future collective action.

USAID will be using the study results in the new design processes to define with greater precision what collective action is (and is not) and selection criteria for funding future collective actions and facilitating organizations. The study and its validation event proved to be a useful experience for Live and Learn to better understand formal collective action approaches and opportunities to increasingly socialize the concept in the Vietnamese context among stakeholders.

Valuing the independence of the research team, Hanoi EPA shared findings and recommendations from the validation event at a meeting on July with all districts of Hanoi to promote the implementation of the Circular 15. She was impressed with what we shared at the validation event. This demonstrates evidence use beyond USAID in order to collaboratively make progress toward development objectives.

USAID Learns will facilitate a utilization event that combines evidence from this study and a related collective action activity to hone recommendations and apply them toward current and future collective action programming and advance both project and activity designs. See Annex V for detailed information on key considerations following the validation event.

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ANNEX II: PERSONS INTERVIEWED

The full listing of persons interviewed was submitted separately in line with data de-identification policies. Please contact Phuong Pham, phuong.pham@socialimpact.com, to request the data.

ANNEX III: DATA COLLECTION TOOLS

A. INTERVIEW GUIDE

Introduction about the objective of the study

- To understand the factors and process led to CAs (case of the beehive stoves)
- Lessons for future USAID program design)

Questionnaires

1. Understanding the participation of the organization/individuals in the beehive cookstoves story/Clean Air Green Cities (aka project)

- Could you please tell when you started to work with the project?
- Could you tell which project activities you are involved in? What is your role?

2. Understanding the CA process

(addressed to Live and Learn; Hanoi EPA, Hoan Kiem District)

- Could you describe how the process flow of how the beehive cookstove story is formed and the stakeholders were engaged (addressed to Live and Learn; Hanoi EPA, Hoan Kiem District) in the cookstove campaign? And the issuance of the specific policy regarding the beehive cookstove? What are the highlights of the process?
- Along the process, which are the organizations you have reached out to? Did you encounter any difficulties?
- What are the advantages/disadvantages of the CA

  For decreasing use?

  For passing the legislation?
- What are the challenges in implementing this CA?

  For decreasing use?

  For passing the legislation?
- What could have been done better?

  For decreasing use?

  For passing the legislation?

3. Factors and challenges to the Collective Action and Policy Adoption

- What factors do you think led to collective action around the reduced use of beehive cookstoves?

- What factors do you think led to collective action on the local policy (i.e. Circular 15)
- What impact do you think these factors had on the eventual outcome of reduced use and a new policy?
- How did these factors influence how the different stakeholder groups worked together to reduce the use of beehive cookstoves?
- What could be other factors involving the process we might have missed mentioning here?
- What can Live and Learn and Hanoi EPA do to better engage could do better in engaging multiple -stakeholders or better manage a multi-stakeholder process?
- Have you been involved in other donor activities regarding air pollution? How do you think these initiatives have contributed to the adoption of environmental policy in Hanoi?

4. Did you continue utilizing the CA approach after the project? What did that look like?

If not, have you considered a CA approach for other work that you are doing/or plan to do?

- Any local budget secured?
- Capacity of staff is ready to continue CA?
- Plan to extend the network?
- What is your next project that you might use CA?

5. What advice would you give a donor considering supporting a collective action effort?

Follow-up: When selecting issues for collective action, should the topic be decided by a) the donor in advance or b) the network in coordination with the donor? Why?

B. MINI STRUCTURED QUESTIONNAIRE SURVEY

We are a research team carrying out a study on collective action approach with the entry point of the Reduction on usage of beehive cookstove activity, under the framework of the Clean Air Green Cities project. This project is implemented by Live and Learn to establish a network of local actors taking actions to improve air quality and related environmental health issues.

There are several numbers of factor listed below to promote the multi-stakeholder network. To measure the significance of these factors to the network, we would seek for your support by scoring from 1 to 3 (1: least impact; 2 – moderate impact; 3 – most impact, and NA – not applicable).

There are two activities relevant to the network, namely (1) reduction of beehive cookstove usage; and (2) policy adoption to improve the air quality.

No.	Factors	Reduction of beehive cookstove usage in Hanoi				Policy adoption to improve the air quality			
		NA	1	2	3	NA	1	2	3
1	Opportunities/Challenges								
2	Incentives/Punishment								
3	Heterogeneity of interest								
4	Critical mass (resources, operating environment, diverse stakeholders in the network…)								
5	Leadership (political commitment)								
6	Social network								
7	Clarity in roles and responsibilities of the stakeholders								
8	Influence of the facilitator								
9	Cross-cutting coordination and communication								
10	Monitoring and accountability								

THANK YOU FOR YOUR FEEDBACK!

ANNEX IV: COLLECTIVE ACTION ANALYTICAL FRAMEWORK

Based on previous collective action studies (see Table 5), the research team identified factors that influence the impact and success of a given collective action. This study focuses on a subset of these factors, plus the influence of the facilitator, as these are most relevant to the beehive cookstove case and the potential effectiveness of potential future collective action efforts funded by USAID.[32]

TABLE 5: COLLECTIVE ACTION THEORY AND ASSOCIATED FACTORS

Theory	Logic of Collective Action	Prisoner's Dilemma and Collective Action	Commons Dilemma
Main Argument	Rational self-interested individuals will not act to achieve their common or group interest	In the presence of a common threat, cooperation would be rational, but defection dominates because of a lack of information and coordination	Absence of rights, rules, and norms leads to freedom to use common pool resource, which in turn ruins it
Dilemma	Free riding	Dependence on others' decision and actions	Depletion of the common pool due to self-interested individual actions (short-term thinking)
Factors	Size of the group, incentives, and penalties	Coordination and communication	Rights and entitlements

Theory	Social Identity Theory of Collective Action	Relative Deprivation Theory and Collective Action	Critical Mass Theory and Collective Action
Main Argument	Interrelationship among injustice, efficacy, and identity predicts collective action behavior	Unjust disadvantage fosters collaborative actions	Actions of individuals depend on the actions of others
Dilemma	Creation of social identity and its politicization	Restricted to self-beliefs	Formation of the critical mass in the first place
Factors	Social identity	Threats and opportunities	Critical mass

[32] Council on Energy, Environment, and Water for the 2030 Water Resources Group. 2014. Collective Action for Water Security and Sustainability: Preliminary Investigations. https://www.2030wrg.org/collective-action-water-security-sustainability-preliminary-investigations/.

Theory/Research	Social Capital Theory	Leadership	Institutional Framework for Collective Action
Main Argument	Strong relationship between different actors (and their resource capacities) within a social structure fosters collective action	Leaders driven by strong enough economic and social motivation can direct and influence, coordination, efficiency, and continuity of collective action	Rules, rights, and entitlements are fundamental to producing and sustaining collective action
Dilemma	Highly dependent on face-to-face exchanges and social structure	Leadership is subject to economic or moral incentives	Monitoring requires capacity and accountability is difficult to assign
Factors	Social ties and network	Leadership	Monitoring and accountability

There are some alternative terms for collective action, such as *multi-stakeholder engagement process* (MSEP) and *collective impact*, with similar principles and characteristics. MSEP is defined as **structured processes** used to ensure participation on a specific issue based on a set of principles, sometimes inspired by the rights-based approach to development. The aim is to **ensure participatory equity, accountability, and transparency and to develop partnerships and networks among different stakeholders**.[33] **Collective impact** is a theory developed in a 2011 article by John Kania and Mark Kramer.[34] Since its establishment, the collective impact framework has inspired several initiatives to address complex social issues.

The Stanford Social Innovation Review has distilled some of the key ingredients of successful community efforts to move "from fragmented action and results" to "collective action and deep and durable impact." These ingredients (or "conditions") are a **common agenda**, **shared measurement**, **mutually reinforcing activities**, **continuous communication**, and **backbone support**.[35] Building up from the original framework, the Tamarack Institute has promoted Collective Impact 3.0 since 2015, encouraging a shift from management to a movement-building approach, in which **a diverse group of stakeholders**, including those not in traditional institutions or seats of power, is brought together to build a vision of the future based on common values and narratives. Thus, the upgraded framework focused on reforming (even transforming) systems where improvements alone will not make a difference.[36]

[33] United National Development Programme. 2006. Multi-Stakeholder Engagement Processes: A UNDP Capacity Development Resource.
[34] J. Kania and M. Kramer. 2011. Collective Impact. Stanford Social Innovation Review. http://ssir.org/articles/entry/collective_impact.
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ANNEX V: VALIDATION WORKSHOP REFLECTIONS

Data Validation Event for the Collective Action for Environmental Health Study: Summary Brief

OVERVIEW

This brief summarizes outputs and feedback collected during a data validation workshop held on June 24, 2020. The purpose of this event was to gather key stakeholders and review initial findings for the Collective Action for Environmental Health Study, requested by the Office of Health at USAID and implemented by USAID Learns.

A total of 20 people representing USAID, implementing partners (IPs), academics, media, local governments, and international organizations met to engage with the initial results of the study and provide their feedback. Some of these organizations were the United Nations (UN), Live and Learn, Institute of Science and Technology, GIZ, Think Play Ground, People's Committee of Hoan Kiem District, and Hanoi EPA.

PRESENTATION OF FINDINGS

The presentation covered the successes and challenges of collective action in the context of reducing the use of beehive cookstoves and implementing local policy to ban the beehive cookstove. In short, the study found that there was little collective action in the early stages—deciding the issue and coming up with a solution—which was acknowledged by everyone in the room.

In the later stages of the process, there were more collective action factors applied, especially around building and engaging with a large group of stakeholders. The study also noted that for the application of environmental policies, there was limited stakeholder involvement at the convening stage, which is critical for a fully engaged collective action initiative.

After the presentation, Ms. Thuy from Hanoi EPA provided several helpful remarks. One key quotation was: "The shared initial findings are very impressive, and it should have been done a long time ago, even during the implementation. In my 20 years plus of working in environment matters, leaders have never had such a report. It comes at the right time."

GROUP WORK: HOW COLLECTIVE ACTION WAS AND WAS NOT REPRESENTED IN BEEHIVE COOKSTOVE ACTIVITIES

In the first part of small group work, participants considered the two beehive cookstove activities, use reduction and policy adoption, and identified how collective action did and did not play a role during four key steps: (1) analysis of threats and opportunities, (2) social networking, (3) coordination and communication, and (4) monitoring. This was the reflection component of the validation event—looking at the results and considering the experiences of the people in the room and how others felt collective action contributed to these two activities.

The groups focused on three questions designed to draw out specific recommendations:

1. What is needed in order to improve collective action?
2. What should USAID do to improve collective action?
3. What should USAID *not* do in relation to collective action?

The notes below highlight key points from all groups.

HOW DID COLLECTIVE ACTION PLAY A ROLE IN THIS STEP?

In the initial stages, collective action played a role through the gathering of feedback from key stakeholders, but participants also noted that strong political will at the local leadership level drove the policy decision more than a broader collective action effort. As the activity moved into the social networking and communication stage, participants saw collective action activities such as using an online platform (Zalo) and engaging a very diverse group of stakeholders as very positive.

HOW DID COLLECTIVE ACTION *NOT* PLAY A ROLE IN THIS STEP?

Only a few organizations engaged in the critical early stage of analyzing threats and opportunities. During the communication stage, although communication was frequent, participants found that it was one-way, event-based, and with poorly identified key messages. For the monitoring component, participants noted that there was neither community monitoring nor independent monitoring to cross-check results.

WHAT IS NEEDED IN ORDER TO IMPROVE COLLECTIVE ACTION?

Participants discussed several practical suggestions, including more research, earlier stakeholder mapping, and engaging a broader stakeholder base. Participants also noted that it is important to work early to expand the network to private sector stakeholders. The collective action initiative should engage local people in communications and share experiences and draw on lessons learned throughout the activity.

WHAT SHOULD USAID DO TO IMPROVE COLLECTIVE ACTION?

Participants mentioned connecting the initiatives of different local groups and helping bridge local and international efforts. Others mentioned providing expertise and connecting local initiatives to relevant agencies. Multiple participants highlighted the role USAID can play in bringing people together, including bringing results to the Vietnamese government. Participants also mentioned that USAID could improve collective action by supporting local organizations.

What should USAID not do in relation to collective action?

Participants made several suggestions:

1. Do not support projects and activities that have a negative impact on Vietnam's environment.
2. Do not be too specific in selecting targets.
3. Do not be involved in decision making, allowing sufficient autonomy in project implementation.

REFLECTION QUESTIONS: FACTORS FOR SUCCESS AND CONCRETE STEPS FOR USAID

The final session of the workshop was spent brainstorming on two reflection questions:

1. What factors lead to a successful collective action initiative?

Commitment	Common Point
Participation	Teamwork
Leadership/Commitment	Sharing

Learning Process	Transparency
Process Formalization	Political Will

2. What are concrete steps USAID can take to support collective action in Vietnam?

- Needs assessment of the social issues stakeholders in the collective action network are going to engage; identifying priorities
- Identify the target audience
- Understand the situation
- Support learning and reflection
- Capacity development, both in general and specifically developing leadership capacity

PARTICIPANT FEEDBACK

Participants rated the level to which they agree or disagree with three statements about the data validation event. For this event, 16 of 20 participants completed the survey, and all 16 selected "strongly agree" or "agree" with the following three statements:

- I benefited from being involved in this session.
- We invested the right amount of time in this session.
- It would have been difficult for any individual organization to accomplish on its own what was accomplished today.

The final statement ranked the highest, with 13 participants strongly agreeing.

ANNEX VI: STUDY STATEMENT OF WORK

SPECIAL STUDY OF CLEAN AIR GREEN CITY

USAID LEARNS BACKGROUND

Social Impact, Inc is implementing the new USAID/Vietnam Learns Contract. The scope of the five-year project is to support USAID/Vietnam staff and partners to implement more efficient, effectives, and transparent programs by improving: (1) USAID and IPs capacity to achieve expected results; (2) USAID's understanding and tracking of projects performance; and (3) collaboration, learning, and adapting (CLA).

POSITION BACKGROUND

The key themes underlying USAID's promotion of a journey to self-reliance can be found in the Vietnam Clean Air Green City. This project, implemented by Live and Learn, seeks to establish networks and strengthen linkages among local actors working on air quality and associated health issues. To do this, it creates working groups to identify environment-related health issues, advocate for policy changes on air quality management, mentor youth-led organization and technical groups, and coach students, teachers and other community groups to build capacity, enhance connections, and mobilize local resources for supporting local organizations.

The current project was originally planned through June 2020. A follow-on project has been awarded which will last through August 2022.

KEY RESEARCH QUESTIONS

Collective action is a collaborative approach to address a community/social issue by local actors. It is often also referred to as a multi-stakeholder approach. These terms can be used synonymously for the purposes of this activity.

1. Identify, map out, and analyze the challenges and factors that have contributed to the success of collective action in reducing the use of beehive cookstoves.
   Types of factors MAY include:
   i. Timing
   ii. Contracting mechanism
   iii. Specific individuals or groups – capacity to influence others
   iv. Ability of specific groups to mobilize
   v. Ability of specific groups to implement
   vi. Operating environment
2. Identify, map out, and analyze the challenges and factors that have contributed to the adoption of new environmental policies in Hanoi specifically related to the use of beehive cookstoves. Based on these findings identify what seems to work, does not work and associated recommendations. This refers to Directive 15 CT/UBND issued by Hanoi People's Committee on October 30, 2019[1].
3. Based on overall findings and analysis, map out lessons learned and recommendations for future Collective Action initiatives in Vietnam.

Note: When examining factors of success, the consultant may want to consider the extent to which the collective action module, the profile of the IP, the contract mechanism (fixed award amount) or other key factors may have contributed to the success of the project. It should also be noted that this is not an

evaluation of the current project or approach, nor it is intended to evaluate the current implementing partner. USAID hopes to use this study to improve the performance of other local works projects, provide lessons learned on the wider collective action module and how it might apply to other activity designs, and how collective action may be used in other contexts. The consultant may also consider using "Outcome Harvesting" as a process of investigation.

STAFFING

Consultant Requirements - Team Lead (with the possibility of complementary STTA support)

- At least five years of experience leading research assignments with a strong qualitative focus especially in areas of environment, development policies and practices required;
- Familiarity the concept of Collective Action and locally led development activity strongly desired;
- Experience facilitating and collaborating in thematic working groups for civic action and advocacy in Hanoi, strongly desired;
- Experience using research results for conceptualizing learning for sharing is a plus;
- Experience conducting research using Outcome Harvesting as a research approach desired;
- Experience with USAID research assessments and related requirements;
- Very strong analytic data, communication, facilitation skills;
- Fluency in Vietnamese and in-depth knowledge of the operating environment in Vietnam required;
- High degree of fluency in written English required.

Note: While the recruitment process is ongoing, Learns will continue to ascertain whether an additional team member might be required to compliment skills set.

DELIVERABLES

1. Report of kick off meeting with USAID
2. Research Plan –
3. It should clearly outline the intended research approach(es) and rational, confirmed timelines and a list of intended Key Informant Interviews. KIIs should include at a minimum: USAID, provincial government officials, local environmental activists, Live and Learn staff, experts in public health/air pollution and private sector stakeholders.
4. Validation event of topline findings with key stakeholders
5. Draft 1 Report for USAID comments
6. Learns facilitated Pause & Reflect event to examine implications on future programming (conducted after USAID has reviewed and commented on Draft 1)
7. Final Report

United States Agency for International Development
Hanoi, Vietnam