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Engaging Stakeholders with Evidence and Uncertainty: Developing a Toolkit

Sandy Oliver, Laurenz Langer, Promise Nduku, Hayley Umayam, Kate Conroy, Charlotte Maugham, Tamsin Bradley, Mukdarut Bangpan, Dylan Kneale, Chris Roche

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About this working paper

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CEDIL methods working paper: Engaging stakeholders with evidence and uncertainty: developing a toolkit

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Glossary and abbreviations used in the working paper

Action research/participatory action research: A number of approaches that encourage participatory and democratic processes in the development of knowledge that involve simultaneously undertaking research and taking action. Action research often involves a blurring of the practitioner and researcher roles, so that practitioners themselves are often those who both conduct the research and enact changes (actions) in response.

Beneficiary: A person or entity intended to benefit from the enactment of a particular policy or intervention.

CEDIL: Centre of Excellence for Development Impact and Learning – an initiative supported by aid from the UK Government designed to develop and promote new impact evaluation methods in international development.

Consensus development methods: A set of participatory approaches for organising evidence and gathering the interpretations, expertise and views of stakeholders, usually with the aim of converting these into a set of agreed recommendations or guidelines (Corbie-Smith *et al.*, 2018). A statement supported by consensus may be complemented by a statement about the degree of consensus, and whether any issues defy consensus being achieved.

Consultation: A method of engaging citizens that has historically been viewed as offering limited power to citizens to influence research, often being considered as tokenistic (Tritter and McCallum, 2006).

Context reflects the circumstances or setting in which a piece of research or a phenomenon takes place. Depending on the phenomenon being studied, and the way in which it is being studied, the context of interest can vary. For example, if we were conducting a single case study of maternal feeding practices, the context of most interest might be the immediate household environment, with other elements of context (such as the village or wider family) also potentially of interest. In contrast, if we were conducting a survey of infant feeding practices across settings, several different levels of context (including country level) may be of interest.

Decision-maker: A term used in this research to denote a particular type of stakeholder. A decision-maker sets the policy within the context of the research, including the policy around the design, funding and implementation of services and/or interventions. For example, in a piece of research about adolescent contraception in a given area, decision-makers could include those who fund sexual health clinics, those who develop policies around where sexual health clinics should be located, and those who develop policies around which services should be offered at sexual health clinics, and how those services should be delivered.

Equity refers to the absence of differences between individuals, entities and populations that are known to be unnecessary and avoidable, and which emerge through processes and practices that are unfair and unjust (Welch *et al.*, 2021).

Evidence, in a broad sense, relates to facts or testimony in support of (or in opposition to) a conclusion, view, statement or belief (Rychetnik *et al.*, 2004). What counts as 'evidence' varies

substantially depending on the context and the question being asked. Knowledge, on the other hand, is a justified belief that can be derived from interpretations of evidence, or from practice or experience.

'Evidence' discourse: A phrase used in the working paper to describe the debates surrounding the role of evidence in shaping decisions. In a broader sense, 'discourse' here can refer to debates both on the directional flow of evidence into policy, as well as the types of evidence that influence decisions (particularly local knowledge versus generalisable knowledge (see definitions below)).

FDCO: Foreign, Commonwealth and Development Office – a UK government department that now includes all international development functions of the UK Government.

Generalisable knowledge: Knowledge claims that rest on explicit, codified knowledge that can be widely transferred through statistical or theoretical inference, and that are developed through primary studies and research syntheses to offer new conceptualisations, theoretical understanding or empirical evidence. The kinds of generalisable knowledge that are useful for development policy include the nature and scale of social concerns, and the recognition and explanation of causal relationships, including mediators and moderators. Knowledge generated in one setting is generalisable to other settings if the influence of contextual factors is either insignificant or well understood.

Human-centred design: An approach that is based on the use of techniques to communicate, interact or empathise with a group of stakeholders, or to stimulate them, so as to obtain an understanding of their needs, desires and experiences, which often transcends that which the stakeholders themselves actually realised existed (Bazzano *et al.*, 2017).

Insider research refers to an approach to conducting research where the researcher has natural access to a particular setting and is an active participant within this setting (Brannick and Coghlan, 2007). In this working paper, the term 'insider research' reflects the roles of the authors as being active participants within an evidence ecosystem as producers and consumers of research.

Iterative designs/iteration in research: The process of gaining insights through analysing and revisiting data, and using these insights to shape how subsequent steps of the research are conducted in order to gain further understanding and focus.

Knowledge is a justified belief that could be derived from interpretations of evidence, or could be derived from practice or experience.

Learning Organisations: An organisation with a strong learning culture, with a focus on utilising or conducting research and evaluation and embedding the findings in policy and practice.

Local knowledge or context-specific knowledge: Knowledge claims that rest on explicit, codified knowledge developed through local primary studies. Also, knowledge claims that rest on familiarity with local settings, cultures and politics to offer the following: tacit understanding of the nature and scale of local issues (where 'scale' may rest on impressions

indicating matters of priority rather than accurate measures); recognition of trends and forecasting (essential for planning); practice and organisational 'know how'; and sensitivity to context that is essential for considering the appropriateness of interventions and insights into the transferability of the evidence of effects. On the one hand, evidence synthesis offers a method for providing knowledge claims that are expected to hold widely, thereby creating knowledge from and for widespread groups; and on the other, it can inform deliberation by specific groups to integrate with knowledge of their local context.

Logic model: A graphical representation of intervention processes, and outcomes linked by arrows indicating the direction of effect, which are developed into chains of cause-and-effect relationships.

LMIC: Low- or middle-income country, as defined by the World Bank.

Nesta: A UK-based NGO, originally known as the National Endowment for Science, Technology and the Arts, which is concerned with promoting evidence.

NGO (iNGO): Non-governmental organisation(s) or international non-governmental organisation(s) are independent of government and usually have a focus on tackling social issues and addressing people's needs.

Outcomes and Evidence Framework: Used in this working paper to denote a specific tool developed by the International Rescue Committee that seeks to support decision-makers and practitioners to utilise evidence to design effective programmes and interventions (see www.rescue.org/resource/outcomes-and-evidence-framework).

Political science: The study of, and theories surrounding, the politics and practice of governance at the local, regional, national and international levels.

Positive deviance inquiry: An approach for exploring the factors that can explain why some individuals or other social entities have unexpectedly achieved desired outcomes. For example, positive deviance inquiry might explore why some children grow and develop well in otherwise harsh environments (Lapping *et al.*, 2002).

PROGRESS-Plus: An acronym for a framework that is used to assess the distribution of effects of interventions across different characteristics and that can be used to consider the equity of interventions. PROGRESS refers to Place of residence, Race/ethnicity/culture/language, Occupation, Gender/sex, Religion, Education, Socio-economic status and Social capital, with the 'Plus' referring to additional categories (such as age, sexual orientation and disability) which may influence the distribution of intervention effects (Welch *et al.*, 2021).

Real-world context: The 'real-world' context reflects the usual everyday practices and behaviours within a given context.

Stakeholder: A seemingly innocuous term which is often contested. In research, stakeholders are those individuals with a contract, claim, obligation, duty, responsibility or stake in any part of the research process. They can be defined as 'organizations and individuals that are involved in a specific activity because they participate in producing, consuming, managing,

regulating, or evaluating the activity' (Hyder *et al.*, 2010). They may take different roles, such as funders, influencers, collaborators, recipients or beneficiaries of research. Often the term stakeholder is used to denote those who indirectly or directly impact the research, or are impacted by the findings of the research or the challenge which the research seeks to explore or address.

Stakeholder engagement (or stakeholder involvement) is a term used to describe a number of different activities (many of which are described in this working paper) that seek to ensure that the critical insights of stakeholders can inform all aspects of the research process, from design to data collection, to analysis and interpretation, to dissemination. Stakeholder engagement activities can differ according to several different axes; one way of understanding different forms of stakeholder engagement activities is to identify the extent to which stakeholder insights do inform the conduct of research (i.e. where the balance of power lies between researcher and stakeholder). The weakest levels of influence are where stakeholders are informed about research and are a passive audience to whom the findings are disseminated; in contrast a co-production model rests on principles of equal partnership for equal benefit.

Stakeholder mapping: A visual process involving the identification of all of the stakeholders impacted by or involved in research, who may be engaged within the research process (see stakeholder engagement).

System: Social systems are a set of interrelationships between individuals, groups and institutions that form a coherent whole that is complex and adaptive. 'Systems are dynamic and constantly changing; systems themselves exist within other, interdependent systems (e.g. individual, organisation, community); changes in one part of the system can have unexpected changes in other parts of the system' (Best and Holmes, 2010, p. 148).

Systematic review: Systematic reviews aim to find as much as possible of the research that is relevant to the particular research questions, and use explicit methods to identify what can reliably be said on the basis of these studies (see: https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=67).

Theory of change: As in the case of logic models, theories of change are used to graphically represent complex interventions. Unlike logic models, theories of change are more explanatory as they require all of the underlying assumptions of how and why different components, activities and outputs lead to a change in outcomes to be hypothesised.

Triangulation, in this working paper, involved combining different data and methods in order to increase the validity and credibility of the findings.

Uncertainty: In terms of generalisable knowledge, uncertainty reflects the accuracy, precision or meaning of the research findings or the underlying key concepts. In terms of local knowledge, uncertainty reflects the context in which decisions are to be applied, where there may be varying levels of consensus, familiarity and predictability.

Abstract

Background

An earlier working paper on 'Stakeholder Engagement for Development Impact Evaluation and Evidence Synthesis' prepared for the UK Department for International Development drew on systematic reviews to clarify the appropriate choice of models for stakeholder engagement, depending on what is known from generalisable research and what is known about specific contexts for which decisions are made or research is done (Oliver *et al.*, 2018b).

Aim of the work

The aim of the original work was to help readers navigate the relevant literatures in order to choose appropriate models for engaging stakeholders with decision-making, with research evidence and with evidence production, both to encourage the use of evidence by policy makers, programme managers and practitioners, and to help them use research evidence more effectively. This follow-up study aimed to refine this framework by discussing it with policy makers and researchers before populating it with evidence and tools for stakeholder engagement, and using this as the foundation for a toolkit.

Methods

Group discussions and one-to-one interviews with professionals who engage stakeholders in policy decisions or research have informed refinements to the framework. User testing was an integral part of developing a toolkit based on the framework.

Results

Approaches for engaging stakeholders with policy decisions or research tend to favour either generalisable evidence from research or context-specific evidence, including local data and tacit knowledge. The most inclusive approaches have tended to overlook generalisable evidence, while approaches emphasising generalisable evidence have tended to overlook the knowledge held by civil society (particularly the less organised parts of civil society).

Some international development and humanitarian organisations are leading the way with practice and guidance for combining generalisable and context-specific evidence for local action around the world. Some local non-governmental organisations (NGOs) who base their learning on local evidence alone acknowledge their lack of attention to generalisable evidence as a shortcoming. Listening to both groups has resulted in a publicly available toolkit for bringing together generalisable evidence and local knowledge.

The development of the framework was informed by listening to practitioners: it changed from being a static framework to being a flexible framework, and it was thereby populated with a greater range of methods for engaging stakeholders with either making decisions or conducting research. Pivoting the two matrices to allow alternative orientations recognises

situations that emphasise either generalisable evidence or local knowledge. This pivoted orientation better illustrates situations where research and policy or practice decisions occur either simultaneously or in rapid cycles.

Populating the framework with a greater range of methods revealed how similar many methods are, whether they are applied to making decisions or conducting research. It is the clarity and consensus about the context in which a decision will be applied, or the clarity and consensus regarding knowledge before the research begins, that indicates appropriate methods for engaging stakeholders, more than whether the work involves making collective decisions or conducting research. Although engagement methods are available for a broad spectrum of (un)certainty, in practice, where generalisable evidence is emphasised, the wider society is less engaged. Conversely, where engaging the wider society is emphasised, less attention is paid to generalisable evidence. There is a need therefore for tools that encourage researchers and decision-makers to consider drawing on a wider range of methods for engaging with evidence and stakeholders.

The framework now provides the foundation for a toolkit (see the appendices) that distinguishes major differences in stakeholder engagement, illustrates pathways for choosing appropriate methods for stakeholder engagement, signposts evidence and practical tools to support stakeholder engagement, and guidance for identifying and understanding stakeholders and their relationships. Stakeholders from local and international organisations can locate their activities within the framework and were involved in its latest developments. The toolkit offers evidence and tools to support stakeholders with technical skills and 'soft' communication skills.

Conclusions

The framework has been populated and translated into a toolkit that includes the following: a flexible framework that can highlight either generalisable or context-specific evidence; a flow chart to help navigate the framework so as to choose suitable approaches for stakeholder engagement; interactive guidance and a map to signpost evidence and tools for stakeholder engagement; and a simpler visual heuristic.

Decision-makers and researchers are encouraged to be open-minded regarding the possibility that other stakeholders do not share their understanding of the context of interest (where decisions will be applied) or existing knowledge (when initiating research). Judgements about shared understanding need to take into account both the core concepts of any potential policy, programme or study, and the socio-political context that will influence what studies are meaningful or what decisions are implementable. Overconfidence about consensus of understanding may lead to poor implementation of policies or disappointing research findings.

1. Introduction

Although it is increasingly common across policy sectors for decisions to be informed by research evidence, the degree to which this can take place is usually constrained by evidence being incomplete, not entirely clear or free of doubt, or contested. For instance, there is an impressive evidence base about the positive short- and medium-term outcomes of cash transfer programmes, but much less in-depth attention is paid to the local contextual factors that might support or undermine those impacts (Bastagli *et al.*, 2016). Policy decision-makers wishing to make well-informed decisions are therefore required to draw on what research evidence is available (whether it was generated through studies or evaluations locally or further afield), and to combine it with the knowledge they already hold or knowledge held by other stakeholders who are familiar with where the decision will be applied.

A similar problem arises for researchers who focus primarily on generating evidence about 'what works'; and is illustrated by the variable findings from randomised controlled trials of care for patients with tuberculosis (TB). Successful TB treatment requires patients to continue a long course of therapy, often under difficult circumstances (Munro *et al.*, 2007). Ensuring their adherence by offering incentives to attend a clinic regularly to take their medicine under supervision (directly observed therapy (DOTS)) has had limited success. Various randomised controlled trials have identified difficulties in this regard: practitioners rationed incentives to those patients they considered most deprived and therefore most deserving; patients found the timing of the incentive (a midday meal) and treatment inconvenient; or civil conflict displaced most of the local population and prevented clinic attendance (Lutge *et al.*, 2015). Consequently, the investment in methodological rigour for assessing causal relationships was squandered by overlooking local knowledge about what suits local individuals and communities. The same argument applies to researchers as to policy makers and decision-makers. Researchers wishing to conduct high-quality research are required to combine their methodological expertise with knowledge held by stakeholders who are familiar with the site or topic of the research.

Both the cash transfer example and the TB therapy example illustrate the importance of taking into account generalisable evidence and context-specific evidence. These two concepts are at the core of the arguments throughout this working paper. The definitions from our earlier work (Oliver *et al.*, 2018b) are repeated here:

> **Knowledge that is generalisable –** knowledge claims that rest on explicit, codified knowledge that can be widely transferred through statistical or theoretical inference, and that are developed through primary studies and research syntheses to offer new conceptualisations, theoretical understanding or empirical evidence. The kinds of generalisable knowledge that are useful for development policy include knowledge about the nature and scale of social concerns, and the recognition and explanation of causal relationships, including mediators and moderators. Knowledge generated in one setting is generalisable to other settings if the influence of contextual factors is either insignificant or well understood.
>
> **Knowledge that is context-specific –** knowledge claims that rest on explicit, codified knowledge developed through local primary studies. Also, knowledge claims that rest

> on familiarity with local settings, cultures and politics to offer the following: tacit understanding of the nature and scale of local issues (where 'scale' may rest on impressions indicating matters of priority rather than accurate measures); recognition of trends and forecasting (essential for planning); practice and organisational 'know how'; and sensitivity to context that is essential for considering the appropriateness of interventions and insights into the transferability of the evidence of effects. On the one hand, evidence synthesis offers a method for providing knowledge claims that are expected to hold widely, thereby creating knowledge from and for widespread groups; and on the other hand, it can inform deliberation by specific groups, who thereby integrate with knowledge of their local context.

This definition of context-specific knowledge emphasises 'local' settings and issues, which implies both a spatial understanding of context (such as countries, rural or urban settings, or neighbourhoods) and a social understanding of context that takes into account socio-economic position and culture. Consequently, the context-specific knowledge may be about or held by both populations of specific locations and populations who share characteristics of health and wellbeing, socio-economic position, including employment and ethnicity, beliefs, and communities of interest.

With these definitions in mind this working paper uses the word 'local' based on the assumption that it accommodates this more complex understanding. It focuses on bringing together knowledge that is generalisable and knowledge that is context-specific, by engaging stakeholders who are close to the issues of interest, whether that closeness is evident in terms of geography, professional or personal roles, culture or some other aspect of their daily lives.

The cash transfer and TB examples also illustrate how bringing together these two types of knowledge relies on bringing together different types of stakeholders: researchers and policy makers or practitioners, and service users or the wider public. This working paper addresses the challenge of choosing those stakeholders, and the methods for engaging them with evidence, either as part of collective decision-making or as part of conducting research. Our earlier work proposed a conceptual framework that offered a rationale for those choices, depending on the social context in which decisions are implemented or the context of the existing knowledge before the research begins (Oliver *et al.*, 2018b). Specifically, the framework distinguished engagement methods and matched them appropriately to the circumstances: whether or not there is a shared understanding of the knowledge to be used for a decision; or whether or not there is a shared understanding of the knowledge to be built on for research. The framework acknowledged that making decisions and conducting research are both influenced by political power, democratic processes, institutional mechanisms, values and priorities.

The argument so far presents the problem by analysing systematic reviews of research, and the framework already developed was similarly based on analyses of systematic reviews of research. The rest of this section summarises the framework and then asks whether the framework makes sense to policy makers and researchers themselves, and whether it can be translated from an analytical framework into a practical tool to support stakeholder engagement. This question marks the start of the study reported here.

1.1 Making decisions with local knowledge and generalisable knowledge

A core part of the original framework focused on decision-making for policy. Important policy decisions benefit from knowledge about the local context and knowledge from research about similar circumstances elsewhere. In this working paper 'local' may mean, for instance, an organisation, a community, a state or a nation. Local knowledge comes not only from local data (occasionally local research) but also from local people who have a stake in the issues under consideration – the stakeholders who make the decision, those who have to implement the decision, and those who may be affected by the decision. Research knowledge from elsewhere can also be used when it is generalisable statistically or theoretically to other contexts, or when local stakeholders judge it to be relevant to the decisions they face. However, some decisions are not made for local contexts alone but for many contexts: for instance, decisions made by international or national bodies whose jurisdictions vary socio-economically. These decisions similarly benefit from knowledge held by stakeholders who bring experience from across countries or around the world, and from studies whose findings might be widely applicable.

The challenge is to develop ways of bringing these different sets of knowledge together to inform decisions. This requires choosing appropriately between existing methods for engaging stakeholders in making decisions and doing research. This involves finding ways of encouraging (a) decision-makers to think about what formal evidence generated elsewhere might be adapted to their own needs and how to make those judgements; (b) decision-makers and other stakeholders to think about the local knowledge they hold, both formal and tacit knowledge; and (c) future discussion between different stakeholders about these different sources of knowledge and how to bring them together constructively.

The choice of methods and tools for making decisions about policy (organisational or wider public policy) depends in part on whether decision-makers and stakeholders have a shared understanding about the context where the decisions will be applied, and whether the research available is judged to be relevant to the circumstances.

1.2 Conducting research for local use or generalisable use

A complementary part of the framework focused on research and evaluation.[1] Throughout this working paper research is understood to include evaluation (and other research methodologies), unless otherwise specified, and evaluation is understood to employ methods that are often shared by wider approaches to research, which are specified if necessary.

Decisions about research mirror decisions about policy so that the challenge is to develop ways of bringing together knowledge held by different stakeholders to guide research and evaluation. This involves finding ways of encouraging (a) researchers (and research

[1] Research is defined as 'a detailed study of a subject, especially in order to discover (new) information or reach a (new) understanding', and evaluation is defined as 'the process of judging or calculating the quality, importance, amount, or value of something' (Cambridge University Press (n.d. a,b).

commissioners) to think about whether the key concepts underpinning their research questions are clear and agreed – for local research or generalisable research; (b) researchers and other stakeholders to think about how they define these key concepts; and (c) future discussion between researchers and other stakeholders about these key concepts, shaping research questions and interpreting research findings together constructively to maximise their utility for policy development. It follows that the choice of stakeholder methods and tools for making decisions about conducting research depends in part on whether the aim is to produce new knowledge that will be for local use or will be applied much more widely, and whether the researchers and other stakeholders have a shared understanding of what is already known before the research begins.

1.3 A framework developed with stakeholders

The original framework was developed by analysing systematic reviews of research about stakeholder engagement with policy and research. In this follow-up work discussions with decision-makers and researchers have led to a refined analytical framework (Figure 1), which now signposts evidence and tools that support stakeholder engagement. This refined framework helps decision-makers, researchers and other stakeholders choose methods and tools for engaging with evidence and each other, depending on whether they plan to:

- make or implement a policy decision, or change practice (left-hand matrix) or plan some research (right-hand matrix)
- address local priorities only (columns on the far-left and far-right), or more generally (two inner columns)
- build on existing clarity and consensus regarding what they know when starting out (top row), or begin by reducing uncertainty and developing consensus about the context in which a decision will be applied, or the existing knowledge that new research will build on (bottom row)

Figure 1 describes the context of each cell in the two matrices. Instead of text describing the context, these cells can be populated either with types of evidence or study designs that suit decision-making (left-hand side) or research (right-hand side); or with approaches to stakeholder engagement that suit the contexts. Whether the intention is to make decisions or conduct research, the framework includes a reminder to:

- take into account political power, democratic processes, institutional mechanisms, values and priorities (red triangle).

The current study builds on the earlier work by addressing this research question:

> ***Does the stakeholder engagement framework developed from theoretical and empirical studies make sense in terms of how decision-makers and researchers describe engaging stakeholders in their own work?***

The aim of the current study is to investigate and refine the framework in order to produce practical guidance about the choice and application of stakeholder engagement methods that are suitable for producing and using knowledge for collective decisions. This has been done

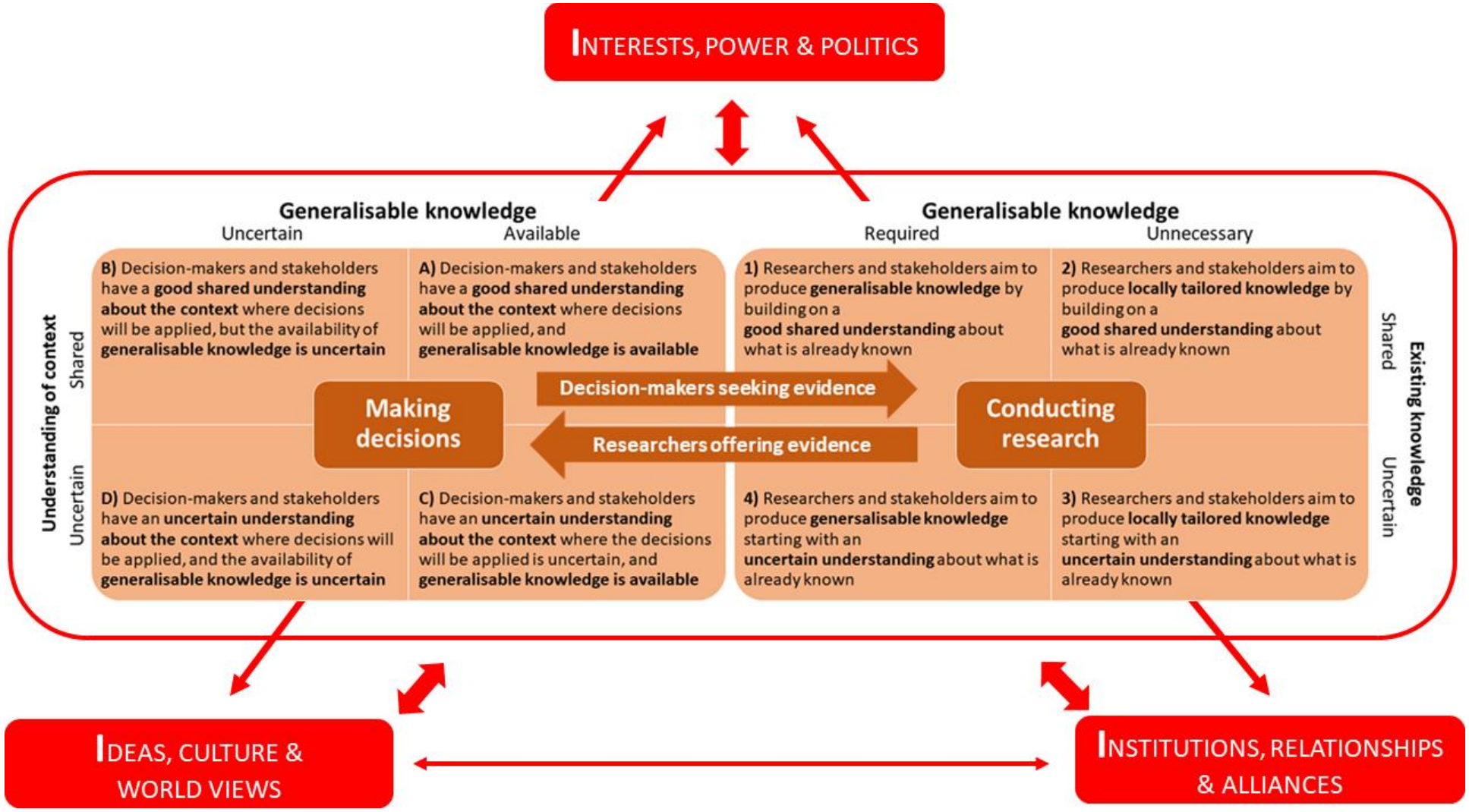
by inviting stakeholders who generate evidence and stakeholders who use evidence for making decisions to talk about their experiences and to explore the conceptual framework.

The next section describes the methods for this work. Section 3 describes how various stakeholders see their work of engaging with evidence and uncertainty, and their work of engaging with other stakeholders. We populated the two matrices of the framework (see Appendix 2 for the decision-making matrix and Appendix 3 for the conducting research matrix) with systematic review evidence aligned with stakeholders' descriptions of their work. Section 4 draws out the learning in terms of engaging stakeholders with generalisable evidence for making decisions and conducting research. Section 5 re-orients the framework to increase the emphasis on engaging stakeholders with context-specific evidence for making decisions and conducting research. Section 6 explores the assumptions underpinning the different models, and how to choose between them. Section 7 takes into account the wider contexts in which decisions are made and research is conducted – in particular, political power, democratic processes, institutional mechanisms, values and priorities. Details of how this understanding was translated appear in Appendix 3, which describes a toolkit that includes the following five sections:

1. A **flexible framework**, spanning the whole field of stakeholder engagement, that explains the key dimensions that distinguish major differences in stakeholder engagement.
2. A **flowchart** illustrating pathways for choosing appropriate methods for stakeholder engagement.
3. An **interactive guide** that matches the key contextual features of engagement methods to tasks and circumstances.
4. An **evidence map** that signposts systematic reviews and practical tools and guidance.
5. **Guidance** for identifying and understanding stakeholders and their relationships.

Section 8 summarises the development of the toolkit, notes the strengths and limitations of the work, offers some overarching conclusions and draws out implications for practice and the next steps for research.

Figure 1: Decision-making and research framework for social development and humanitarian aid programmes within a social, cultural and political context



2. Methods

Section 2 provides an outline of the methods used to understand how stakeholders view their work of engaging with evidence and other stakeholders for decision-making or research, and the methods used to develop a series of tools to support such engagement.

2.1 Overall design: insider research, and iterative tool development

Between us, the authors of this working paper, we brought expertise in (a) development interventions with direct relevant experience of promoting policy change; (b) interactions between research and practice; (c) knowledge management and dissemination; and (d) the theory and practice of impact evaluation. We brought familiarity with research, international development and humanitarian aid. We also brought a track record in the following areas: practising and researching different traditions of stakeholder engagement spanning action research with donors; field research in Africa and the Pacific; policy engagement in Africa, Asia and the Pacific; the use of research; capacity building for research and research use; participatory impact evaluation; politics of evidence and results; politics of gender; and research priority-setting. We kept in mind this experience and our current projects and teaching as we reflected on the utility of guidance and tools for stakeholder engagement.

We conducted a rapid appraisal of the utility of stakeholder engagement models that applied: the framework above (Figure 1) to guide a systems perspective; triangulation of data collection; and an iterative approach to data collection and analysis (Beebe, 1995). Evidence, guidance and tools that were already available were compared with respondent interviews and workshop discussions about the stakeholder engagement models. Iterative data collection and analysis interspersed (a) interviews, workshops and identifying existing guidance and tools with (b) the development of guidance and tools.

We recruited a purposive sample of respondents through networks of researchers/evaluators, policy makers and practitioners in development and humanitarian aid for interviews or group discussion about how to choose between different stakeholder engagement models, and what helps or hinders engagement with research processes, research findings and other sources of knowledge for making policy, management and practice decisions. The recruitment of participants and the search for existing guidance and tools continued until we had sufficient data to populate our whole analytical framework.

Data collection involved interviews with individual stakeholders, inspection of organisations' websites, and searching for systematic reviews and practical tools to support stakeholder engagement with evidence. We developed the toolkit iteratively, alternating design and engaging in discussions over several cycles, first within the team and then with potential users.

Throughout the work, we brought our direct experience of stakeholder engagement that, between us, spanned the whole framework:

- individual reflection on our practices (monitoring, evaluation, policy development, programme planning, teaching, research)
- collective reflection combined with incremental development of tools

This reflection and the use of our networks to identify potential interviewees and discussion forums made this a piece of insider research and reflective practice.

Full ethics approval was given by the University College London (UCL) Institute of Education Research Ethics Committee (REC 1260).

2.2 Investigating choices for engaging with evidence and stakeholders

We translated our analytical framework of stakeholder engagement with decision-making and research into practical tools through a series of interactions with a broad range of stakeholders in order to understand the variations in approaches and terminologies employed across a broad landscape.

To translate the framework for a range of audiences we presented it at the following venues: the What Works Global Summit in Mexico City in 2019; advanced professional training workshops; accredited academic courses for undergraduates and postgraduates; and a CEDIL webinar.[2] These sessions aimed (a) to confirm or refine the framework's key dimensions and the purposes of different models of stakeholder engagement; (b) to ensure they were meaningful to a range of stakeholders; and (c) to refine the language and signposting required to communicate the framework clearly.

To understand the choices that stakeholders make when engaging with evidence or each other we sought individuals or organisations with an interest in evidence and/or engagement in relation to decisions in the fields of social and economic development or humanitarian aid in low- or middle-income countries (LMICs). We identified individuals through our participation in the What Works Global Summit in Mexico City in 2019, and through our own evidence and development networks. We conducted in-depth interviews with individual stakeholders to understand how they engage with evidence and decision-making, and with each other; how they talk about it; and their challenges. See Table 1 for the sampling frame, which ensured a mix of policy/practice decision-makers and researchers who have international, national, local or organisational interests.

1.1 [2] Engaging Stakeholders with Evidence and Uncertainty, webinar, 25 November 2020, https://cedilprogramme.org/events/cedil-webinar-series/upcoming-webinar/engaging-stakeholders-with-evidence-and-uncertainty

Table 1: Sampling frame for recruiting stakeholders to this study

Remit	Policy/practice decisions	Research/evaluation decisions
National/ international	• International NGOs • Development donors • Government departments (LMICs) • Policy makers from LMICs • Participants at What Works Global Summit	• Participants at What Works Global Summit • Academics or researchers in LMICs
Local/ organisational	• Participants at What Works Global Summit • Local NGOs/agencies in LMICs	• Researchers in LMICs • Graduate students in the UK from other parts of the world

We identified additional organisations through those that hosted FCDO-funded systematic reviews in searchable databases (Oliver *et al.*, 2020). We inspected websites to understand how organisations choose to engage with evidence and other stakeholders.

2.3 Methods for collecting and analysing evidence and tools

In-depth interviews: Each interview lasted between 20 minutes and one hour. After an explanation of the project, and the receipt of their informed consent, the respondents were prompted by an interview schedule to describe how they engage with evidence and other stakeholders.

A workshop at the Global Evidence Summit in Mexico City in 2019 guided participants step-by-step through the framework and invited them to comment on how their work related to it.

Interviewees offered their personal interpretations of the issues under discussion, and signposted their organisational documents. Where the latter were available we used them in preference to draw on an organisational position.

Analysis of primary data: Key features of the work described in interviews, workshops, webinars and the associated documents were mapped against the analytical framework to identify the range of stakeholder engagement methods, the contexts in which they were employed and the reasons for the choice.

Identifying and mapping evidence and tools: The literature previously identified (Oliver *et al.*, 2018b) was supplemented by electronic searches for systematic reviews using language adopted by the interviewees (e.g. human-centred design, positive deviance). We found

additional systematic reviews through participants at the What Works Global Summit in Mexico City in October 2019. Complementary searches sought existing tools for supporting stakeholder engagement with evidence.

Two authors (LL and SO) designed the evidence map and the coding scheme informed by the stakeholder engagement framework, the science of using science (Langer *et al.*, 2016) and public involvement in research (Oliver *et al.*, 2014b).

They independently coded 10 systematic reviews then discussed decisions about eligibility and the definitions and application of codes. The coding scheme was revised before coding another 10 systematic reviews in the same way. A further 20 reviews were purposely chosen to meet the eligibility criteria and to cover all elements of the framework. One author (SO) summarised the key learning from each systematic review, and another (LL) checked this. Subsequent systematic reviews were coded by one author (SO) alone.

Stakeholder engagement tools were identified by the co-authors in their own fields, and by using a Google search to search for terms that were raised by interviewees or in evidence. The coding scheme developed for systematic reviews was piloted and applied to the tools.

2.4 Developing a toolkit to support engagement

Developing the toolkit involved a cycle of design, adding content and inviting feedback with the following overlapping steps:

- Identifying systematic reviews about approaches mentioned in group discussion or interviews.
- Identifying existing tools to support stakeholder engagement.
- Incorporating systematic reviews and support tools into an interactive guide and an evidence map.
- User testing (individually or in group discussion).

The aim was to collate existing tools and prepare new tools to choose between them for supporting stakeholder engagement. We built on the framework for stakeholder engagement to develop an interactive guide for choosing appropriate approaches and tools, and a map of evidence and tools.

We discussed the stakeholder engagement framework in a range of forums to seek feedback from a purposive sample of stakeholders. Some stakeholders were chosen for their specialist knowledge in evidence and decision-making, and others for their interest as novices. They were:

- academics and development specialists within CEDIL's network (in a lecture and two webinars)
- government staff from the Global South and the Global North
- staff from NGOs from the Global South and Global North (in workshops as part of two advanced professional training programmes)

- undergraduate and postgraduate students (as part of their teaching programme)

A purposive selection of tools was identified, to populate the framework. This formed the content when developing an ***interactive guide*** for choosing approaches to engage stakeholders (who and how), taking into account the purpose of the work (decisions for development or decisions for research) and the clarity and consensus regarding the starting point (the context for development or the context for building on existing knowledge).

The systematic review evidence underpinning the stakeholder engagement framework, and complementary tools, were collated in an accumulative repository as reference material for planning stakeholder engagement, and were presented as an interactive ***map of evidence and tools***.

Usability testing: Tools to support stakeholder engagement were collated into an online toolkit (involving five sections). A few individuals (policy makers, academics and knowledge brokers) were then invited to try to use the toolkit (and to discuss it as they did so). Each test was conducted virtually and took about an hour. The participants were first asked about how they routinely work with evidence and/or stakeholders. They were then asked to keep this in mind while they read and responded aloud to the design and content. They were assured that we were testing the toolkit, not them, with the aim of improving guidance for people making decisions about policy, programmes or practices, and people making decisions about research. Afterwards, features of the toolkit that attracted their positive comments were categorised as: expected or standard features, desirable features or features with a competitive edge. Features attracting negative comments were categorised as: cosmetic features, dysfunctional features, or 'showstoppers' – features that would stop them using the toolkit (Ananiadou *et al.*, 2010). Dysfunctional features and showstoppers were prioritised for modification before subsequent usability testing.

Toolkit launch: The toolkit was launched with a CEDIL webinar.[3] Two authors introduced the framework and the tools. Subsequent speakers considered the issues from their experience of supporting government engagement with evidence and stakeholders, and engaging stakeholders as part of monitoring, evaluating and learning for aid programming.

[3] Engaging Stakeholders with Evidence and Uncertainty, webinar, 25 November 2020, https://cedilprogramme.org/events/cedil-webinar-series/upcoming-webinar/engaging-stakeholders-with-evidence-and-uncertainty/

3. Findings: Options for engaging with evidence and stakeholders

This section describes how various stakeholders see their work of engaging with evidence and uncertainty, and their work of engaging with other stakeholders. It focuses specifically on why they choose particular approaches, by noting the context for each approach and drawing out the reasoning from interviewees' accounts.

3.1 Engaging with generalisable evidence and uncertainty

The perceived value of generalisable evidence is apparent from the number of development organisations investing in infrastructure to share it: bibliographic databases, evidence maps, and searchable blogs that make research findings more accessible. For instance, generalisable evidence in the form of systematic reviews is made publicly available by 3ie for social and economic development,[4] and by FCDO.[5] Academics and international NGOs (iNGOs) collate and make publicly available on the worldwide web generalisable evidence on the effectiveness of interventions to serve policy makers, local NGOs, frontline professionals, donors and others involved in humanitarian action.[6] When making generalisable evidence available, its quality is considered in terms of the confidence (or uncertainty) that can be placed in assessments of the causal relationships (internal validity). The task of assessing its relevance to specific contexts is left to the readers. It is notable that only the health service researcher interviewed, and none of the development or humanitarian agency interviewees, mentioned these international resources of generalisable evidence.

This differs from development and humanitarian aid organisations, who use this evidence to guide their own work. They also take into account the relevance of the findings to wider settings (external validity). The latter requires combining this evidence with local knowledge, an activity which is considered in Section 3.3.

3.2 Engaging with local evidence

Some organisations work almost exclusively with evidence that is produced, validated or used locally – for instance, from project monitoring and evaluation systems, or local forums. Often such stakeholders indicated concern about the preservation or circulation of such local evidence or local learning practices. Our interviewees from organisations with a local remit described evidence being shared through local networks, including informal face-to-face interactions. These interactions were seen as important opportunities not simply for the sharing of information but as a means of embedding evidence and knowledge across multiple types of actors in order to 'avoid duplicating' or the need for 're-learning' relevant, localised information.[7]

[4] www.3ieimpact.org/evidence-hub/publications/systematic-reviews
[5] www.gov.uk/research-for-development-outputs
[6] https://evidenceaid.org/online-collections-of-research-for-the-humanitarian-sector
[7] Interview: local NGO 1a.

However, interviewees admitted that such informal interactions would not on their own result in the retention of localised evidence and information. In terms of more formal interactions, other interviewees highlighted how intensive efforts are required to enhance the long-term sustainability of local learning practices. This could take the form of deeper levels of support to fewer organisations or institutions, with a focus on supporting local staff in their framing and presentation of findings so that such evidence brokering at the local level is more sustainable. For instance, interviewees suggested that, in humanitarian contexts, support to local staff aims not only to build credibility for those individuals producing evidence within an organisation, but to support institutional memory as well.[8] This approach was also thought by the interviewees to help encourage a culture of learning among humanitarian organisations.

A learning culture is similarly valued in the health sector, where interviewees described specific processes (such as a learning organisation framework) for understanding the type of evidence sought by organisations, and how local organisations facilitate learning.[9]

However, engaging with local knowledge alone (whether monitoring and evaluation data or community knowledge), without looking to wider generalisable evidence, was seen by the interviewees as a shortcoming:

> *[Decisions about programming or organisational policies are] all based on internal monitoring and evaluation processes … but also from gut [instincts], and from seeing what worked. But our own internal criticism is that we do not have time to look at [external or generalisable] research relevant to our work. So we should be doing this but we don't.* [iNGO 2]

For this interviewee, consulting the wider literature would be useful in order to improve practices and tasks carried out locally. For instance, this interviewee saw the potential for external, generalisable knowledge to inform decisions that could increase impact locally, as well as to improve their own methods of gathering local evidence. In particular, this interviewee felt that research on evidence uptake could help practitioners understand when such information is utilised or when it 'falls flat', as a way to improve relevance.

A local NGO staff member raised the same shortcoming, noting that in developing their programming on shifts from subsistence to cash-based market economies, they missed an opportunity to draw on wider literature.

> *Other countries and contexts have faced similar dilemmas [like the shift to cash-based market economies]. Their solutions might be different, but the shame here is that we maybe undermine broader literature that could help frame things better.* [Local NGO]

Similar to knowledge management enterprises involved in compiling and disseminating generalisable evidence (Section 3.1), some NGOs are sharing local contextual information more widely – about a single country (for instance South Sudan)[10] or internationally.[11]

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[8] Interview: local NGO 1a.
[9] Interview: health services researcher.
[10] Interview, iNGO 3; see also www.acaps.org/special-report/south-sudan-analysis-ecosystem
[11] www.reachresourcecentre.info/

However, this type of contextual information does not always address the type of information needed to inform decision-making, particularly with regard to what works in a given context. Local contextual knowledge, including information about what generalisable knowledge has been successfully applied at the local level, circulates more commonly through informal or tacit channels, creating challenges for uptake (Donahue and Tuohy, 2006).

3.3 Engaging with generalisable and local evidence

Some organisations, such as ALNAP, value both of these forms of evidence:

> *information that informs a specific proposition [that] draws heavily on an empiricist, and broadly 'scientific' understanding of knowledge [and information that draws on] … subjective and socially constructed 'realities'* . [Knox Clarke and Darcy, 2014, p. 11]

For local use: One of our interviewees described in detail how they draw on both generalisable and local evidence in the health sector. For health services research to support a hospital with 2,000 in-patient beds and about 4 million patient visits a year, local evidence is gathered first:

> *… directly from the patients. Secondly we look at the patient records from that routine services. Another one is the service records, including the waiting time. The fourth one could be about the investigations like chest X-ray image, blood tests, urine tests and some kind of that have to be done in the laboratory or device. The fifth parts would be data from healthcare providers, which included both the formal healthcare provider like the nurses, doctors, physiotherapists. Another one is the information from caretakers of the patients. The last one that I can think of is the layperson who is not even our patients or related to our patient at the hospital but people just walk by or people outside the hospital* [Health services researcher]

To plan human resources, budgets and equipment, and to design service delivery that can meet the needs of the patient/population, trends in patients and treatments are inferred from sources of local and generalisable evidence. For generalisable evidence, medics turn to evidence published in journals.

> *The first thing … is to look at whether they test this kind of medication in the same [ethnicity] of patients, the severity of the disease or there are specific conditions that patients may have or make them not suitable to use that medication. I would say it is more like the generalisability. It is true we look at it at broad level first whether it can be used for us in our local context.* [Health services researcher]

For practice decisions, on the other hand, our interviewees rely on national health technology assessment, which takes a more systematic approach to engaging with evidence and stakeholders for national decisions. In Thailand, for instance, policy makers, researchers, clinical and public health experts, patient groups and industry consider generalisable and local evidence for clinical effectiveness and safety, cost effectiveness and budget impact, as well as social and ethical aspects (Leelahavarong *et al.*, 2019).

> *They do it quite regularly, they have their committees that select which topic should go into the HTA [health technology assessment] considerations. Sometimes it's from the public, they do the public hearing to learn about which kind of technology should be being investigate and should be put into the benefit package of the health scheme.* [Health services researcher]

For international use: The United Nations Children's Fund (UNICEF) combines generalisable evidence (collated internationally) with local knowledge for action on the ground. It draws on generalisable evidence for its strategy.[12] It is also investing in generalisable evidence by developing knowledge management infrastructure, in the form of evidence maps[13] and methodological briefs 'to provide guidance on how to undertake, commission and manage evidence synthesis products such as systematic reviews, rapid evidence assessments and evidence gap maps'.[14] At the same time, it encourages the use of local evidence, including through a brief on conducting participatory research as part of impact evaluations.[15]

The International Rescue Committee not only encourages and supports the use of generalisable and local evidence but also provides tools to help combine them. Their intention was to

> *... become evidence-based through the introduction of an Outcomes and Evidence Framework in strategic planning, business development and program design. The framework will define the outcomes we seek, present a theory of how we achieve them, and indicate how certain we are that the outcome can be achieved with different interventions. We aim to scale up interventions that have robust evidence of positive impact on people's health, income, education, power, or safety in crisis-affected states. For example, of our current program areas, cash programming has evidence of positive impact across several outcomes. Conversely, where there is a dearth of evidence, we will pilot and test new interventions and conduct impact evaluations on mature interventions.*
>
> *We will pilot and evaluate a number of tools to assess the contexts in which we operate, including local power dynamics and social networks; social and cultural norms; and economic and environmental issues (all of which can affect the way people use services and drive conflict). We will pay particular attention to gender analysis and the opinions of our clients and partners.* (International Rescue Committee, 2015 p6)

The Outcomes and Evidence Framework[16] is now publicly available, and can guide users to develop theories of change that are supported by generalisable evidence and knowledge about the local context. It provides, within theories of change, access to systematic review evidence about the effects of interventions (for generalisable evidence), and to indicators and guidance notes to help assess progress in specific contexts. For instance, the theory of change leading to the desirable outcome that 'Women and girls use services that treat physical and

[12] www.unicef-irc.org/publications/1160-evidence-and-gap-map-research-brief-unicef-strategic-plan-2018-21-goal-area-1.html
[13] www.unicef-irc.org/evidence-gap-maps
[14] www.unicef-irc.org/publications/1077-methodological-briefs-on-evidence-synthesis-brief-1-overview.html
[15] www.unicef-irc.org/publications/750-participatory-approaches-methodological-briefs-impact-evaluation-no-5.html
[16] http://oef.rescue.org/#/?_k=x0w42e

mental consequences of gender-based violence and prevent further harm' is informed by systematic review evidence about 17 interventions, and five indicators for assessing local services.[17]

3.4 Dual roles as both producers and users of research

Some interviewees from local NGOs for development mentioned methods for drawing on local evidence, such as positive deviance inquiry and human-centred design, where there was no clear distinction between engagement for decision-making and engagement for research. Fast cycling between research and practice with the same stakeholders was also apparent. Although not named as such, positive deviance inquiry was also considered appropriate for health services research:

> *Rapid cycle of learning would be very helpful. So, instead of discussing how to do it, I would say just do it and learn from it, make a quick learning cycle, evaluate as much as possible, until you find a good idea to [then] implement it. I always believe that the best way to have a good idea if you have lots of ideas and sometimes you don't know which idea is really working so you need lots of it continuous exploring.* [Health services researcher]

When generalisable evidence is available, but the local context is not sufficiently understood, local stakeholders are essential for

> *... trying various kind of implementations methods. You've got to engage with stakeholders otherwise they're not going to implement it for you. Right, I mean to make it known that [it] has been working elsewhere [but] we're not really sure how to ... maximise the benefit to the local people. Then it's a good way to ask your stakeholders to conduct this kind of research. It will be very good if the stakeholder can be a research conductor, involved in the investigation. Usually in our setting the researcher is also healthcare providers. We aim to support them to be an investigator too. Researchers that would be excellent implementers and can implement the new programme right away. They can learn which method is best for implementing in this setting.* [Health services researcher]

The rapid cycling between research and practice was similarly reported to be a major feature in local NGOs' engagement with stakeholders.

> *In terms of what's worked – we're identifying certain research cycles. And those are the ones that tend to be the best because they're designed to be participatory ... so if we've meaningfully involved people/stakeholders in research question design, choosing indicators, and maybe even [data] collection, then in the analysis and certainly have some type of validation, etc. then we see more uptake of the data/evidence because there's less concern over ownership. As people more aware of research/evidence, there's a realisation that information is power (and can influence funding), so the more people think they own the data and know that it's there, the more people are willing to use it and not just feel threatened and get nervous [about the different stories being told with data].* [iNGO 2]

[17] http://oef.rescue.org/#/outcome/14?_k=8inj1s

3.5 Engaging with each other

The aspect of the framework that generated most interest was the red arrows, which form a triangle connecting the three red boxes:

> *When we look to your image and we see: the interest, power and politics; ideas, cultures and worldviews; and institutions relationships and alliances … I guess right now, this is one of the most important things to focus when we are engaging stakeholders.* [Local NGO 2]

Interest, power and politics: To effect change in humanitarian work, effort is targeted internationally, nationally and operationally.

> *[We try] to identify the stakeholders … that have the most impact and highest amount of power, in terms of positive or potential power. We look at financial and programming power. We try to … identify donors … heads of programmes within UN agencies … with the ability to shift programming according to evidence, and then the third is the more static operational partners (who have fewer decisions to take in their programming). But it is a balance between knowing audience and building an audience.* [iNGO 2]

At the other end of the scale, being politically active was said to include

> *support[ing] civil society to develop their positions and use my role to spread those more broadly.* [iNGO 3]

Despite this interest in power and influence, it was reported that this part of the framework, with its explicit mention of politics, is where some organisations keep a low profile.

> *We don't tend to talk about this too much and probably should more. We tend to give 'we're independent, we don't want to engage politically' but we might not think critically about ourselves enough to see if we're just supporting the status quo with our products.* [iNGO 2]

Some organisations may avoid endorsing research or advocacy in order to maintain their humanitarian principles of impartiality or if they think the topic is politically sensitive (iNGO 3).

Institutions, relationships and alliances: Interviewees also described the preparatory work of identifying the most appropriate stakeholders to encourage uptake of evidence. Whether interviewees were interested in change within an organisation or within a country, they visualised seeking the potential for influence at multiple levels. Within an organisation:

> *We go with the personal, social, and structural levels and how to make them have the motivation and abilities to do that in three levels.* [Health services researcher]

This means seeking an influential individual champion to convince first, then reaching out to many people to encourage collective change through training and peer support, and to the authorities who can facilitate official changes, sometimes through the giving of rewards or the imposition of penalties.

> *We always look to the people who are going to be best to deliver this message or deliver this evidence. … like spiritual leaders or unofficial leaders that people trust … a champion and to get their buy-in first. A significant person, they may not be the boss [but] … someone that people respect because they have done so many good things for them and people listen to them. They [community leaders] have a lot of networks.* [Health services researcher]

The same strategy is adopted on an international scale by NGOs. Having identified the key stakeholders, a communication strategy is designed to target them all appropriately:

> *to develop policy recommendations for decision-makers both in country and … feeding influence into broader discussions globally for lobbying, etc. [with an] advocacy and influencing component … We develop public-facing and private advocacy documents. This is done bi-laterally and at the national and regional level.* [iNGO 3]

The purpose here, as indicated by the health service researcher above, is to develop alliances and collective energy to effect change.

> *So the lesson is getting another agency to see you as a resource that can support [their needs]. … So positioning yourself [as a research producer] as a resource, be the convener [of conversations across several stakeholders], the mobiliser to where they [research users] proactively see you … we have funding and time [to convene these conversations], which is rare. So it's not just on us to push the recommendations forward, it's our allies. So best to do it in partnership and collaboration.* [Local NGO 1b]

Ideas, culture and world views: Organisations that were well-versed in evidence-informed decision-making anticipated challenges when considering the appropriateness of policies or programmes that had been shown to be effective elsewhere. Indeed, when a report relies on too few locations it is dismissed for being too narrow and not generalisable.[18]

We found a level of nervousness around cultural issues, particularly for outsiders, whether they are from another country or from another part of the same country. In particular, culturally sensitive issues may be a core aspect of inequity, and resolution of this problem can only come about by discussing the issues with the relevant stakeholders, which was considered by the respondents to be very challenging. This was a challenge for international NGOs considering the possibilities for 'scaling up' and for decision-making within a single country.

> *We have been using a lot of stakeholder mapping … so that we can really [develop a] common understanding of what is happening because it's such a huge country and in a very tense political context … We often work with the federal government and it makes decisions for a country that is very, very big, very diverse culturally in the regions.* [Local NGO 2]

As well as doubts about the appropriateness of specific policies or programmes, there were doubts about the possibility of engaging the population at large with the concept of evidence for decision-making. A minister who was championing evidence briefs about indigenous

[18] iNGO 3

community health thought, mistakenly, that the indigenous people would not understand the evidence.

> *Actually … the decision-makers, they had many more barriers to appraising and understanding than the indigenous representatives. For them [the indigenous people], it was really easy to converse and to understand. They are, in many ways, used to having different opinions coming to their reality and changing it. … So for them it was really easy to make a political, cultural statement on the evidence briefs and their participation was really, really rich, but the workers and the policy makers, they themselves have [limitations] with the systematic reviews and everything and as the dialogue progressed that was really notable.* [Local NGO 2]

3.6 Communication: a common challenge

Whoever their stakeholders, interviewees emphasised the challenge of communicating with them.

Visualisation works well with people who have limited education. It also works well with busy professionals who lack the time to read longer narrative documents. It is widely combined with attentive listening as part of human-centred design, developing a theory of change, conducting a framework synthesis or sharing the findings of research.

Attentive listening: Attentive listening is at the heart of drawing out people's understanding of the problems they face and identifying possible solutions. It involves turning full attention to the speaker, listening carefully to what they are saying, and checking understanding with feedback and questions. This happens when working intensively with locals, such as farmers and seed agents, to flesh out the details within a theory of change, and is at the heart of human-centred design for primary research and framework synthesis when generating research evidence.

Whether the purpose is to engage stakeholders in doing research or using it, rapid interaction (orally and visually) is better suited to developing ideas together than extended text.

Written or oral communication: Monitoring, evaluation and research is commonly circulated in written documents to invite comment. For these and oral presentations, interviewees are challenged to find the right balance between the brevity preferred by some stakeholders and depth of content.[19] Interviewees who aim for their local or contextual knowledge to inform decision-makers or wider stakeholders have endeavoured to tailor the delivery of their evidence to different audiences. In general, this has involved condensing content in order for it to be more digestible.

> *We're getting better at knowing our audiences and … [know]ing what types of products are being used by what types of people, and where … For instance, most of our [longer] reports are read by global partners, not in-country people. In-country people get our data from our*

[19] iNGO 3.

> *workshops and in-person meetings. Sometimes they will look at our maps, etc., but mostly they [receive relevant information through] in-person information sharing.* [iNGO 2]

Technology has allowed for the information to take several forms, depending on the target audience.

> *Sometimes you need [to present evidence] in slides, in videos, or in infographics to give [your audience] the feeling of the reality.* [Health services researcher]

Interviewees expressed a keen understanding of the need to account for the limits on their audiences' time and effort in their approach to sharing information.

> *Some people don't see reading research as part of their job … We have online components showing the three main findings [of our longer research] translated into practical recommendations. After this blog was posted, people said it was really useful and practical, even those who hadn't read the report itself. Sometimes having less content, but more critical content is more likely to have an impact.* [Local NGOb]

> *I always consider timing. You have to prepare people who you want to [present your research findings to] … if they're in a rush then probably it is not a good time.* [Health services researcher]

3.7 Clusters of approaches to stakeholder engagement

The different approaches to stakeholder engagement discussed by the interviewees seemed to cluster into two groups: those that prioritise widespread interests and those that prioritise local interests (Table 2).

Whether the engagement is with decision-making or research, approaches that prioritise widespread interests also privilege evidence that is generalisable. These approaches encounter uncertainty in terms of which research areas or questions to address, or uncertainties in the existing literature about the accuracy, precision or meaning of research findings or the meaning of key concepts.

When engagement is with local interests, the emphasis is reported to be on locally relevant, locally rooted, experiential or tacit knowledge.

The forms of interaction with stakeholders, in terms of the numbers involved, and the medium, timing and recurrence of interaction, differ more with the **degree of uncertainty about key concepts or contexts**, rather than the focus on generalisable or local evidence. These were all recognised in the earlier study as key distinctions between different approaches to stakeholder engagement (Oliver *et al.*, 2018b).

In the current study, in regard to discussion with individuals or groups of stakeholders, more emphasis was placed on other distinctions between these two clusters of approaches. Prioritising widespread interests was found to suit the state sector, with its better access to academic and statutory data – access which is enhanced further by growing organisational or professional norms – whereas prioritising local interests was found to suit the voluntary

sector, which accesses local populations and their experiential knowledge – which is similarly enhanced by organisational norms. Whether the focus of interest is widespread or local, stakeholder engagement requires both technical and soft skills. A focus on widespread interests tends to emphasise the technical skills of finding and appraising research, and the soft skills of knowledge brokering, whereas a focus on local interests tends to emphasise the technical skills of stakeholder mapping, monitoring and evaluation collection, and the soft skills of interviewing and facilitating local discussions.

Two new distinctions were recognised during the current study. The focus on widespread interests or generalisable evidence was associated with cycles of research and decision-making that tend to be slow, allowing for longitudinal, prospective studies (often controlled trials) to be conducted before decisions are made. This typically very clearly separates research from decision-making, sometimes by many years. However, the two can be blended in some circumstances, such as when guideline development panels frame questions, commission systematic reviews and make decisions within a matter of months. In contrast, the focus on local interests tends to allow fast cycles of research and decision-making, often blending the two – for instance, in participatory action research.

The features that distinguish these clusters of approaches confirm the main dimensions of the original framework. The current work provides more detail about the similarities and differences between the two clusters in terms of communication routes and methods. The two new distinguishing features – namely the speed of research/decision-making cycles and the blending of research and decision-making – provided the basis for developing the framework further (see Table 2).

Table 2: Approaches to stakeholder engagement: dimensions of difference

	Prioritising widespread interests	**Prioritising local interests**
Emphasis of interest	Generalisable, codified knowledge from research	Locally relevant, locally rooted, experiential or tacit knowledge
Uncertainty encountered	About accuracy, precision or meaning of the research findings or the underlying key concepts	About the context where decisions are to be applied: consensus and predictability
Organisational and professional norms	Favours engagement with research findings	Favours engagement with local populations or practitioners
Forms of interaction	Variation in terms of: numbers involved, and medium, timing and recurrence of interaction	
Communication infrastructure	Knowledge management infrastructure: 'libraries' or	Forums for oral interactions and networks

	Prioritising widespread interests	Prioritising local interests
	databases, evidence maps, knowledge brokers	
Communication methods	Visualisation, attentive listening, brief documents, compelling stories	
Technical skills	Finding and appraising research	Stakeholder mapping, monitoring and evaluation collection
Soft skills	Knowledge brokering, committee chairing, small group facilitation	Interviewing and facilitating local discussions
State or voluntary sector setting	State sector has better access to academic evidence and statutory data	Voluntary sector has better access to local populations and their experiential knowledge
Cycles of research and decision-making	Slower	Faster
Blending research and collective decisions	e.g. evidence-informed guideline development panels	e.g. participatory action research

3.8 Summary of findings

Listening to the interviewees talk about engaging with evidence and uncertainty, and about engaging with other stakeholders, offered new terms which could be used to search for systematic reviews about their engagement practices. This learning therefore extended our earlier work with additional approaches to stakeholder engagement, namely human-centred design and positive deviance inquiry, and related systematic reviews.

Engaging predominantly with generalisable evidence is key to collating the evidence base and making it widely available – which international development and humanitarian organisations see as valuable. Engaging with local evidence alone is typical of local NGOs. Combining generalisable and local evidence occurs in international NGOs and hospitals.

Whether working internationally or locally, common features for communicating evidence include: written documents inviting comment or discussion; visualisation to communicate ideas; convening formal and informal meetings; attentive listening and prompts for thinking and discussion; technical skills for evidence-literacy and soft skills for communication; and cycles of action and reflection, which may be fast or slow.

Distinguishing features tend to cluster into two interest groups. Widespread interests tend to favour engaging with research findings to access generalisable, codified knowledge. Here uncertainty is encountered in terms of research priorities, research findings or the underlying key concepts. Widespread interests require technical skills for finding and appraising research (where the state sector has better access), and soft skills for facilitation/knowledge brokering and effective committee/group chairing. Cycles of research and decision-making are typically slow, although the two activities can be blended – for instance, by evidence-informed guideline development panels – and accelerated with the preparation of rapid evidence briefs.

In contrast, local interests tend to favour engaging with local populations or practitioners to access locally rooted, experiential or tacit knowledge. Here uncertainty is encountered in regard to when decisions are to be applied in unfamiliar or unpredictable contexts. Local interests require technical skills for stakeholder mapping, monitoring and evaluation collection, and soft skills for interviewing and facilitating local discussions (where the voluntary sector has better access to local populations and their experiential knowledge). Cycles of research and decision-making are typically fast, and the two can be blended in operational research or participatory action research.

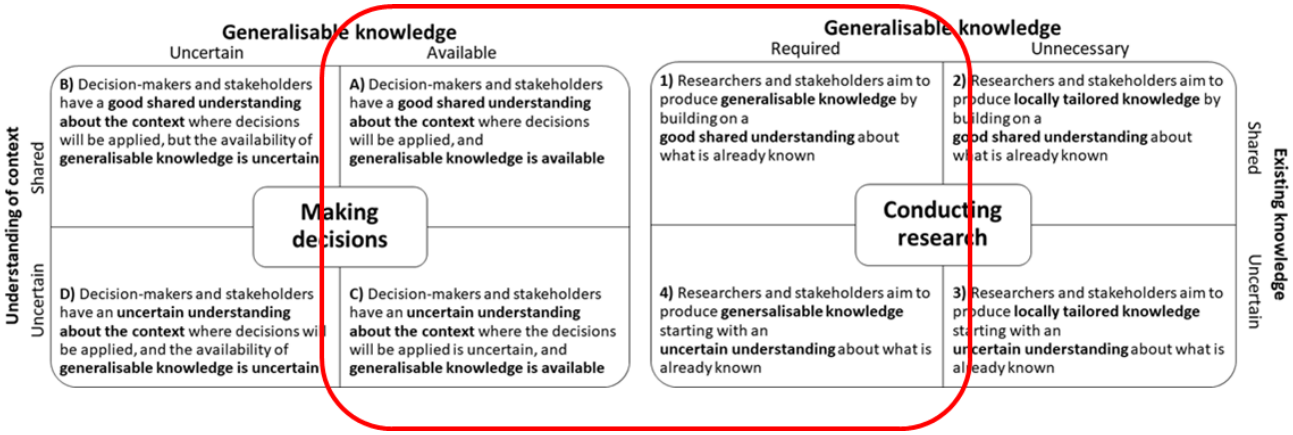
Some local stakeholders see the lack of engagement with generalisable evidence as a shortcoming, and would appreciate the opportunity to engage in this way.

The next two sections (Sections 4 and 5) present the systematic review evidence about stakeholder engagement according to these different tendencies to engage with generalisable or context-specific evidence, rather than according to the original primary distinction of making decisions and conducting research, as is typically made in the knowledge exchange literature.

4. Findings: engaging with generalisable evidence

This section describes the key distinctions when different approaches to engaging stakeholders with generalisable evidence, whether engagement is for the purpose of policy decision-making or conducting research. The section focuses on the central part of the framework, where decision-making can draw on available generalisable evidence, and research can be conducted to produce generalisable evidence (Figure 2). The section is supported by Appendices 1 and 2, which signpost systematic reviews of the underpinning evidence and examples of tools to support stakeholder engagement. Evidence and tools are publicly accessible in the online toolkit, including an interactive map of evidence and tools.

Figure 2: Stakeholder engagement when generalisable knowledge is privileged



4.1 Engaging with generalisable evidence to make decisions

The primary stakeholders here are people making collective decisions with policy remits ranging from the international to organisational. Effective strategies to support them engaging with generalisable evidence for decisions include:

- **facilitating access to research evidence** (e.g. communication strategies and evidence repositories)
- **building their skills to access and make sense of evidence** (e.g. critical appraisal training programmes), and enhancing their motivation
- **fostering changes to decision-making structures and processes,** so that use of evidence is embedded into routine ways of working (Langer *et al.,* 2016).

Ready access to generalisable evidence is provided by electronic repositories such as Health Systems Evidence,[20] Social Systems Evidence,[21] and the 3ie development evidence portal.[22] However, access alone is insufficient. The complementary skills of research literacy are

[20] www.healthsystemsevidence.org/
[21] www.socialsystemsevidence.org/
[22] https://developmentevidence.3ieimpact.org/

required to make use of those repositories, to find and appraise the quality and relevance of evidence. While policy makers may develop sufficient skills to understand the principles of appraising research, they may also draw on researchers who do much of the work for them, either inside or outside of government.

Although individuals can access and make sense of evidence, working in groups is more common. Individuals rarely have the time to refer to research for their own decisions. More efficient are small groups making sense of the research and developing guidelines together, as the World Health Organization (WHO) (2014a) does. Bringing a mix of experience to the task has additional benefits. Although individuals can develop the technical skills to assess whether measures vary or lack precision, or whether the methods underpinning them are unreliable, groups who bring a range of perspectives are better at noticing whether important issues are missing. This is the role of knowledge translation platforms working inside or outside of government, bringing together policy makers, researchers and other stakeholders to discuss evidence summaries as policy is being developed (Partridge *et al.*, 2020). Such deliberative dialogues require an environment that is conducive for meeting (timeliness, resources, transparency, preparation, facilitation and follow-up), participants with skills and commitment (fewer for maximising participation, more for maximising diversity), and up-to-date summaries of relevant research evidence (Boyko *et al.*, 2012).

Thus, the added value of working in groups to engage with generalisable evidence requires both technical skills and interpersonal skills. Time and good facilitation is required for small groups to share and discuss knowledge, achieve mutual learning and, if necessary, make good decisions (Brodbeck *et al.*, 2007; Oliver *et al.*, 2018a).

Where the context of implementation is less well understood, or views vary, the uptake of evidence requires more tailoring to the context by including local research, extensive stakeholder engagement and community participation (Clar *et al.*, 2011). Large numbers of stakeholders can be selected for their diversity of viewpoints for widespread consultation, facilitating discussion and deliberation, and capturing mutual learning to critique evidence, policies and programmes in light of context-specific knowledge – although this necessarily extends the timeframe of work. Knowledge brokers are particularly valuable for this work. Knowledge brokering involves individuals, organisations or structures acting as an intermediary or agent, to negotiate, interpret, communicate or commission work between researchers and decision-makers, serving the needs of both in an equitable relationship to make research and practice more accessible for each, taking into account research evidence and other forms of knowledge, such as tacit or procedural knowledge that reside in individuals and organisations (Ward *et al.*, 2009; Bornbaum *et al.*, 2015).

4.2 Engaging with generalisable evidence to conduct research

The primary stakeholders here may be researchers wishing to conduct their own research, or other stakeholders wishing to influence what research is conducted.

Research teams can inform their work by accessing, appraising and making sense of existing research, as described for decision-makers above (Section 4.1). Even though the purpose is to produce generalisable evidence, the process of doing so necessarily involves drawing on other knowledge held by people with relevant experience: those who might use the findings

for decisions, those who might implement those decisions, and those who might be affected by the subsequent changes. Therefore, to complement the technical aspects of producing generalisable evidence, there are the social aspects of involving other stakeholders in the research process: choosing research priorities and guiding individual studies.

Consensus development methods are widely used to set research priorities (Viergever *et al.*, 2010; Rudan *et al.*, 2017; Fadlallaha *et al.*, 2020). This is possible with small numbers of individuals, drawn from key organisations (e.g. convening committees, interviewing key informants, partnering stakeholder organisations), where the meaning of key concepts is largely clear and agreed in advance. More inclusive approaches that reach out to potentially excluded groups, such as service users and the general public, include consultations and Delphi studies.

Research teams engaging other stakeholders with individual studies can refer to evidence similar to that about how policy makers engage other stakeholders with evidence (Section 4.1). Studies of scientific advisory committees conclude that there is a need for the following: enough members to bring diversity and credibility, but not so many to risk quieter members conforming rather than participating; clear protocols; training; and support (Behdinan *et al.*, 2018).

Engaging stakeholders in producing generalisable evidence for decision-making can take the form of participatory systematic reviews (Tricco *et al.*, 2017). Framework synthesis combines existing knowledge with stakeholder involvement, often through visualisation (Brunton *et al.*, 2020). Stakeholder engagement in these circumstances is possible with small numbers of individuals drawn from key organisations, to help shape the review by bringing to bear different perspectives, through interviews or participation in advisory groups.

Where researchers and stakeholders have a limited shared understanding of existing research, organisational or tacit knowledge, knowledge brokering can, again, help bridge understanding across different standpoints (Ward *et al.*, 2009; Bornbaum *et al.*, 2015).

4.3 Generating and using generalisable evidence simultaneously

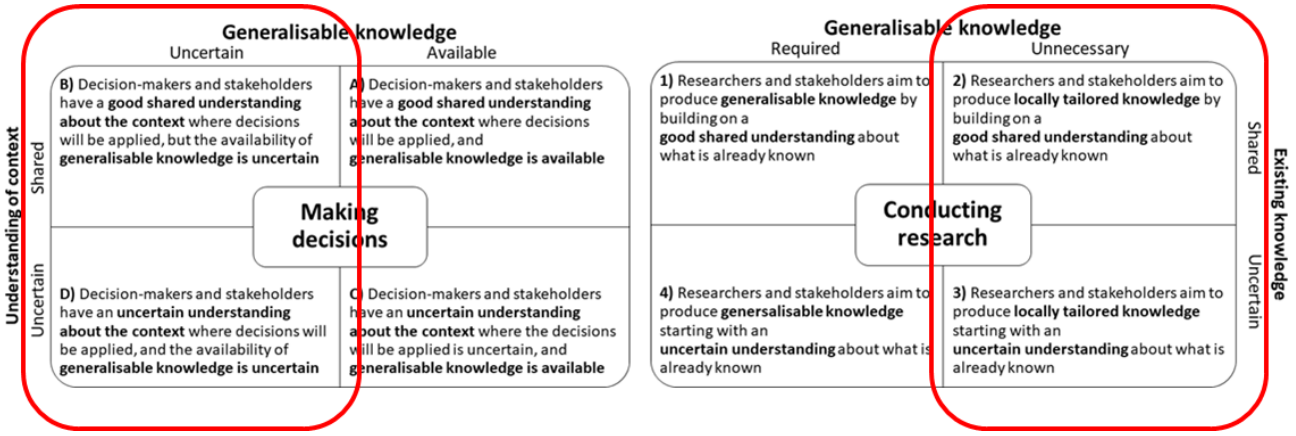
The juxtaposition of generating (right-hand side of the framework, Figure 1) and using (left-hand side) generalisable knowledge emphasises their close connections – connections so close that the boundary between them sometimes almost disappears. For instance, knowledge-to-action frameworks present an action cycle of applying knowledge in practice by addressing barriers and facilitators when adapting that knowledge to the local context, all centred around the creation of generalisable knowledge (Field *et al.*, 2014). Similarly, guideline development panels, as national and international bodies using generalisable research, also commission, shape and interpret the findings of new research during the guideline development process, when that research is not already available. For instance, addressing the problem of indoor air pollution included WHO (2014b) both commissioning research and using the findings to develop guidelines for indoor air quality, all firmly based in structures supporting the production and use of generalisable evidence.

A central emphasis on generalisable knowledge suits organisations that particularly value technically rigorous research and so appraise evidence for its methodological strengths.

Indeed, national and international research networks and knowledge management systems for developing and making available a generalisable evidence base for policy decisions are widely recognised markers for research capacity (Cooke, 2005; Oliver *et al.*, 2015). Research networks (which coordinate research methods) and knowledge management systems (which coordinate research dissemination and access) work together to facilitate and sustain international standards for evidence for policy decisions.

Placing ideas about 'what works' at the centre of the framework may leave ideas about what works 'for whom' and 'in what context' at the edge (Figure 3). The WHO (2014) panel overcame this risk by incorporating local knowledge through qualitative research alongside the generalisable knowledge.

Figure 3: Stakeholder engagement when generalisable knowledge is privileged: implications for locally rooted knowledge



4.4 Conclusions

Collating systematic review evidence about stakeholder engagement with generalisable evidence, as emphasised by some interviewees, highlights some commonalities between methods for engaging stakeholders in making decisions and conducting research. It also highlights the importance of complementing generalisable evidence with context-specific evidence for both making decisions and conducting research – and the role of interpersonal skills in making this possible.

Engaging stakeholders with generalisable evidence can be initiated by many different stakeholders for their own decision-making; by decision-makers with international, national or more limited remits; by researchers for their own studies; or by any of these for the purpose of seeking to influence what research is done.

Many knowledge management resources, such as research repositories or journals, support engagement with generalisable evidence for both making decisions and conducting further research.

Many of the research literacy skills required (understanding the purpose of research, and the principles for appraising its relevance and quality) are sufficient for stakeholders who are not

researchers, whether they are engaging with decisions based on research or engaging with the research process to produce new knowledge. Similarly, using or producing research requires the same skills and resources, and a similarly conducive environment, as small group decision-making.

When the aim is to make decisions that are informed by research, small groups of diverse stakeholders, representative of their wider networks, are sufficient and credible so long as they hold a reasonably clear and shared understanding of the context for implementing the decision. When the context for implementing the decision is less well understood, or implications flowing from the decision are far-reaching, more time is required to consult more stakeholders.

Similarly, when the aim is to conduct research to produce new knowledge, small groups of diverse stakeholders, representative of their wider networks, are sufficient and credible so long as they hold a reasonably clear and shared understanding of the existing knowledge. When the existing knowledge is less well understood, or it is contested by different groups of stakeholders, again, more time is required to consult more stakeholders.

In practice, engaging with generalisable evidence is not isolated from engaging with the context-specific evidence that is brought by various stakeholders. While the emphasis is on generalisable evidence, context-specific evidence is marginalised but is still influential (Figure 3). While context-specific evidence can be found in local research and local data, because much of it is held by local stakeholders as procedural or tacit knowledge, context-specific evidence is accessed through both technical approaches and well-facilitated social interaction.

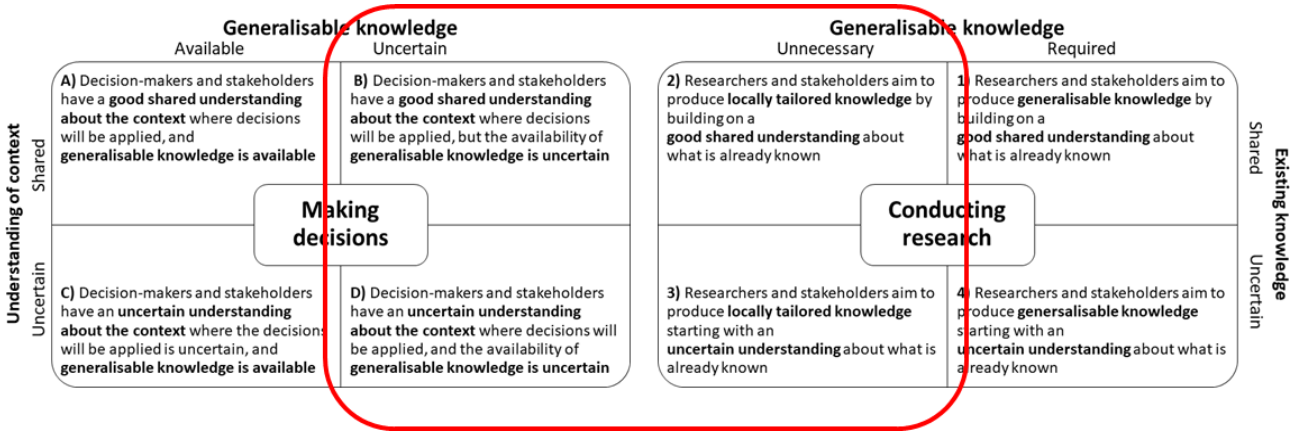
5. Findings: engaging with context-specific evidence

Section 4 illustrated how the framework emphasises engagement with generalisable evidence. This section describes approaches to engaging stakeholders with context-specific evidence, whether they are doing so for the purpose of policy decision-making or conducting research. An emphasis on context-specific evidence suits contexts where generalisable evidence is sparse and research is difficult to conduct, such as humanitarian settings.

The framework as presented above emphasises generalisable evidence by placing it at the centre of the landscape (Figure 2), and thereby splits context-specific evidence and places it at the margins to the left and right of generalisable evidence (Figure 3). This emphasis may be overlooked by readers more familiar with the 'evidence' discourse because it aligns so neatly with the direct one-way movement of research in knowledge transfer models, or the direct two-way movements of knowledge exchange models. However, readers familiar with linear knowledge transfer or knowledge-to-action models may already be disorientated by the fact that the framework aligns the 'research' with the right-hand side and 'policy' with the left-hand side, thereby reversing the convention of reading research dissemination from left to right. In these linear models, generalisable evidence is such a priority that context-specific knowledge barely features (Best and Holmes, 2010).

In this section we draw out more learning about stakeholder engagement by inverting the framework to emphasise context-specific evidence visually (Figure 4). This section is supported by Appendices 1 and 2, which signpost systematic reviews of the underpinning evidence and examples of tools to support stakeholder engagement, using the original orientation of the framework. This set of evidence and tools can also be found in the online toolkit.

Figure 4: Stakeholder engagement when locally rooted knowledge is privileged



5.1 Engaging with context-specific evidence to make decisions

The primary stakeholders here are people making collective decisions with local remits, often focused on specific organisations or programmes. Engaging with context-specific evidence is particularly a priority when generalisable evidence is lacking, or cannot be applied locally. In these circumstances, decision-makers can learn from shared understandings held by key informants, local leaders or organisations. This evidence can be held in the form of local data or tacit knowledge.

This situation suits adaptive or iterative learning, whereby decisions are informed by direct experience, and good practice is shared within and across organisations and cultures, through coaching, mentoring or demonstration (Webster *et al.*, 2018). Practitioners, particularly in humanitarian settings, often make decisions based on their understanding of the context, rather than relying on formal evaluation and reporting which they see as slow and having little to offer practitioners on the ground. They need efficient ways of developing and sharing knowledge based on experience, such as 'action learning – the structured use of question-based exercises combined with cycles of action designed to test emerging hypotheses and insights' and sharing tacit knowledge through communities of practice and mentorship (Abbott *et al.*, 2020, p. 50). Also appropriate is participatory action research, which involves communities in cycles of action and reflection facilitated by a researcher. Participatory action research lacks a precise definition and is part of a continuum that also includes action research and community-based participatory research (Shamrova and Cummings, 2017).

Partnerships for culturally and logistically appropriate participatory research, through better recruitment, professional capacity and stakeholder group competence, can lead to constructive conflict and negotiation, enhanced outputs and outcomes, sustained project goals, and the creation of system changes and new opportunities (Jagosh *et al.*, 2012).

Stakeholders' experiences and values can be captured and integrated into new solutions by listening intently to them and by involving them directly in the interactive process of human-centred or user-centred design (Bazzano *et al.*, 2017; Holeman and Kane, 2019).

Engaging small numbers of stakeholders is frequently adopted for the following: citizen participation in supporting good governance and the transparency of evaluations assessing the effectiveness of interventions (Lynch *et al.*, 2013); formal structures and processes at local level for holding organisations to account by communities (Westhorp *et al.*, 2014); and remote management, whereby external aid agencies employ local staff and take advantage of their local knowledge by sharing responsibility with them for decision-making (Rivas, 2015).

Stakeholders can be invited in small numbers to participate in committee membership, key informant interviews or longstanding partnerships between key organisations or within an organisation (for instance, when developing a learning culture) because there is consensus over the understanding of the context for implementing decisions. The question remains, however, 'which local stakeholders?' Depending on the circumstances, they may be aid agencies and local employees who are sharing decisions through delegation and partnership (Rivas, 2015), or different aid agencies sharing information between themselves (Lotfi *et al.*, 2016). A systematic review of providing basic services to slums found that national

government, NGOs and civil society organisations all had distinct contributions to make (Devkar *et al.*, 2019).

When decision-makers and stakeholders have a limited shared understanding of the context for implementing decisions, engaging with context-specific evidence requires larger numbers of stakeholders who are selected for their diversity of viewpoints (e.g. widespread consultation, facilitating discussion and deliberation, capturing mutual learning) to pool multiple understandings of the context or allow understanding to emerge from discussions for implementing decisions: for instance, positive deviance inquiry – in other words, discovering positive deviants who are those 'individuals or other social entities who unexpectedly achieved desired outcomes' (Albanna and Heeks, 2018, p. 4; Herington and van de Fliert, 2018). Working with larger numbers can be time-consuming so action may be delayed or may lack important local information. However, big data methods, such as using mobile phone records, social media or remote sensing data to identify both positive deviants and the factors influencing their superior performance, may reduce time, cost and effort (Albanna and Heeks, 2018).

The methods considered in this section all engage stakeholders with context-specific evidence without reference to generalisable evidence. Often generalisable evidence is lacking, or cannot be applied locally. Nevertheless, the citations above make clear that there is increasing availability of generalisable evidence about engagement for developing local solutions (e.g. for intervention design or governance arrangements), or sharing context-specific knowledge (e.g. through mentoring, communities of practice or organisational partnerships). Without engaging with this generalisable knowledge, time and energy may be lost by 'reinventing the wheel' or 'starting from scratch', rather than building on each other's learning. This confirms the interviewees' suggestions (in Section 3) regarding a greater role of generalisable evidence in domains that typically emphasise context-specific evidence.

5.2 Engaging with context-specific evidence to conduct research

The primary stakeholders here are research teams who may adopt or extend many of the same methods applied by policy makers mentioned above (Section 5.1).

Methods that are used to gather local information for policy decisions, such as positive deviance inquiry (Albanna and Heeks, 2018) and human-centred design (Bazzano *et al.*, 2017), can also be used as part of formative evaluation when developing interventions. For instance, context-specific evidence was collated from more than 30 healthcare facilities, including over 90 stakeholders across three countries, in order to understand various approaches for health record-keeping. Local knowledge came through 'interviews and workshops with key stakeholders, stakeholders analyses, interviews with health workers, health facility data verification exercises and shadowing of health workers (observation)… [and collecting] all forms, registers, tally sheets and monthly reports used at primary health care as part of their paper-based [health information systems]'.[23] This is human-centred design on a large scale (Bosch-Capblanch 2021). Section 6.3 discusses the next stage of this process as an illustrative case of engaging with context-specific and generalisable evidence sequentially.

[23] http://paperbased.info/wp-content/uploads/2018/06/PHISICCWS3_OnePager_FINAL_21June2018.pdf

When context-specific knowledge is collated in a more limited way, there is a risk of excluding important voices. Working with smaller numbers may result in a lack of important local information because sampling to capture a broad range of experience in an unfamiliar setting may be difficult. For instance, a review of academic research documenting local, lay, and traditional knowledge about climate change in the circumpolar Arctic revealed that some studies employing purposive sampling with snowballing missed knowledge about subsistence practices and household security. These studies typically engaged male knowledge-holders, usually hunters and elders, and so missed the knowledge held by women about their work (Hitomi and Loring, 2018). A similar imbalance happens when young people have been engaged with peacebuilding: the voices of marginalised groups, such as women and girls, young mothers, disabled people, ethnic minorities and residents of rural areas, have been heard much less than those of privileged, older male youth (Lopes Cardozo *et al.*, 2015).

When contextually relevant evidence is required, research can be driven by the priorities of local stakeholders. This does not necessarily preclude engaging with generalisable evidence. Where generalisable knowledge already exists in the form of systematic reviews, but does not address the precise questions of local interest, rapid systematic reviews offer a practical approach. Section 4.2 described stakeholders engaging with generalisable evidence to produce participatory systematic reviews (Tricco *et al.*, 2017), including through framework synthesis and visualisation (Brunton *et al.*, 2020). This approach is often adopted for rapid systematic reviews for local use. A few stakeholders drawn from key local organisations can inform research processes to suit a local perspective through interviews of advisory groups.

5.3 Generating and using local information simultaneously

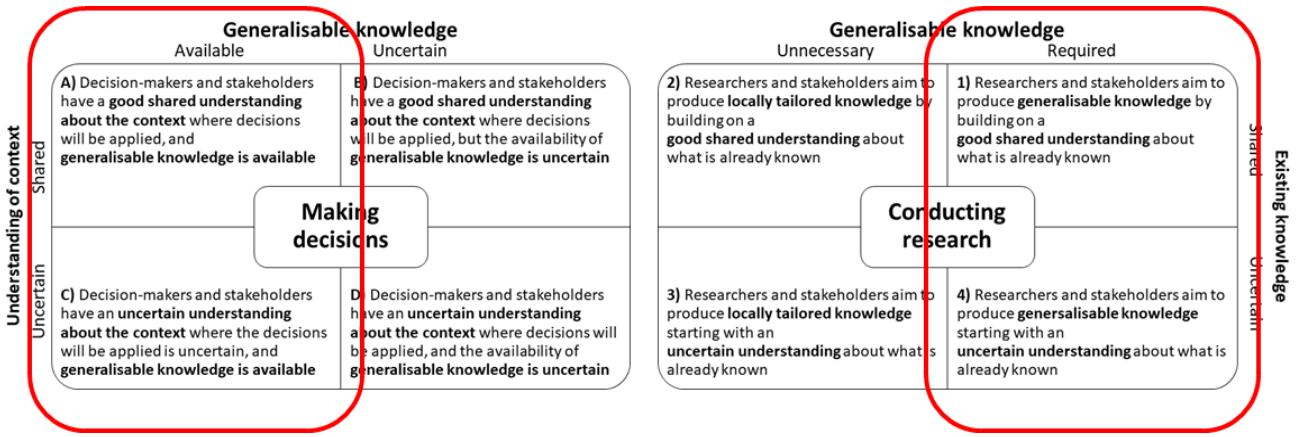
Although placing generalisable evidence at the centre inevitably places local evidence at the margins, either to the left or right, the framework can be flexed to offer an alternative. Local interests can be highlighted by inverting the framework to focus centrally on local interests (Figure 4). This is the standpoint of organisations that particularly value locally rooted evidence. These are organisations that emphasise the influence of politics on how decisions are made and implemented, rather than the technical appraisal of evidence; they are often the organisations with the most local influence.

The juxtaposition of collating (right-hand side) and using (left-hand side) local knowledge emphasises their close connections; again, these are connections that are so close that the boundary between them sometimes almost disappears. For instance, cyclical approaches that span the boundary while emphasising knowledge held by local people include participatory action research (Shamrova and Cummings, 2017) and action research (Cordeiro and Soares, 2018). Another example is the plan-act-observe-reflect cycle that is at the heart of both organisational change and action research; both can involve the formal collection and analysis of data (Lilford *et al.*, 2003).

However, putting locally rooted knowledge at the centre has implications for generalisable evidence. Local evidence can be collated and used, while generalisable evidence from elsewhere may be overlooked. Although the WHO guidelines for indoor air (section 4.3), which were firmly based in structures supporting the production and use of generalisable evidence, also included local knowledge through qualitative research, we have been unable to find a matching example of the converse situation, where initiatives that are firmly based in

structures supporting the production and use of local knowledge (e.g. participatory action research, or community development) also engaged stakeholders with generalisable evidence. Generalisable evidence is marginalised (Figure 5).

Figure 5: Stakeholder engagement when locally rooted knowledge is privileged: implications for generalisable knowledge



5.4 Conclusions

Collating the systematic review evidence about stakeholder engagement with context-specific evidence, as emphasised by some interviewees, highlights some of the commonalities between methods for engaging stakeholders with making decisions and conducting research. It also highlights the opportunities for complementing context-specific evidence with generalisable evidence for both making decisions and conducting research; and the role of interpersonal skills in making this possible.

A key distinction is between engaging a small number of representative stakeholders acting as advocates for their organisation or network, and engaging larger numbers of individual stakeholders speaking for themselves and their immediate family, friends and community.

Small numbers of representative stakeholders suits situations where the context of implementing the decision, or the existing knowledge that a new study will build on, is generally clear and agreed among stakeholders. Large numbers of individual stakeholders suits situations where there is little shared understanding. However, the degree to which understanding is clear and agreed may not be apparent when work is just beginning, and may only become so after considerable discussion.

In practice, engaging with context-specific evidence is not necessarily isolated from engaging with generalisable evidence. Generalisable evidence is available to guide how stakeholders are engaged with context-specific evidence; and rapid reviews designed for specific contexts often draw on existing systematic reviews. So, with the emphasis on context-specific evidence, generalisable evidence is marginalised but can still be useful (Figure 5).

Some interviewees recognised the value of using both generalisable and place-based knowledge – either by recognising the advantages, or by recognising the lack of one or the

other. We found similar published examples where development initiatives drew on generalisable and place-based knowledge, either sequentially or simultaneously. This raises the question of where to start – a dilemma that is explored in Section 6.

6. Findings: choosing between models of engagement

Section 4 considered turning first to generalisable evidence. This is more common when plenty of this evidence is available – which occurs more often in the health sector than in other policy sectors. However, once found, generalisable evidence may not always be judged relevant. Section 5 considered turning to context-specific evidence, which is more common where research has been sparse, such as in areas of natural or man-made crises, although evidence generated elsewhere, if appraised, could be judged relevant. This raises the dilemma of where to start, and with what assumptions.

This section explores the assumptions that underpin decisions about which stakeholders to engage, how many and in what ways; whether those assumptions are explicit or implicit; and what implications flow from them.

6.1 Assumptions underpinning options for engaging stakeholders

The analysis of stakeholder engagement presented so far suggests that the appropriate methods of choice depend on whether engaging with generalisable or context-specific evidence has the most to offer. One cluster of methods assumes that generalisable evidence is available, reliable and relevant; and another set of methods assumes that it is either unavailable, unreliable or not relevant to the situation being faced.

However, those making such assumptions can be subjective, either in principle or in practice. Generalisable evidence might exist, while being available to some people but not others. It might be reliable, but it might require technical skills to judge whether the methods are sound and the research findings consistent and trustworthy. Judging whether the evidence is relevant to a situation, or is missing important concepts (thereby making the resulting knowledge incomplete), is particularly subjective.

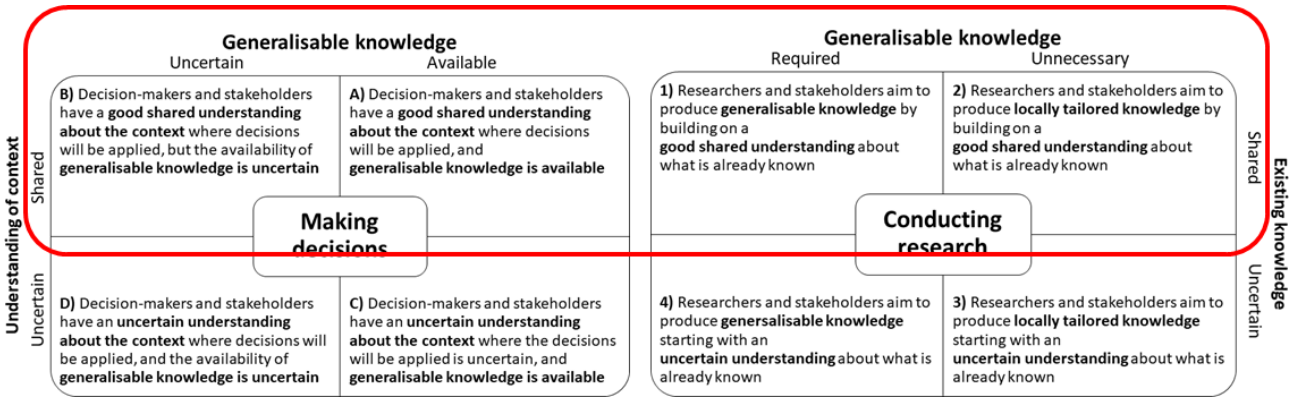
So, who makes these judgements? When facing a policy decision, how can policy makers know whether other stakeholders share their views on what is important, and whether all the important issues are included in the available evidence? Similarly, when planning a study or evaluation, how can a research team know whether other stakeholders share their views on what is important, and whether all the important concepts are included in the study design? Judging completeness is not a task for individuals, or for small groups of people bringing similar experience. Important missing concepts are more likely to be noticed by larger numbers from diverse groups with a stake in the decision or the research.

The rest of Section 6 explores cases of stakeholders engaging with evidence and uncertainty: some cases started with generalisable knowledge that was taken to key decision-makers; some cases started with decision-makers who were supported by researchers; and some started with the uncertainty and unpredictability of a social system.

6.2 Starting with generalisable knowledge: knowledge transfer

When the focus of interest is clear and agreed in advance (the top row of the matrices), whether that is the context of implementing a decision (left-hand side of matrix) or the key concepts of existing knowledge (right-hand side of matrix), engagement methods can rely on engaging small numbers of stakeholders drawn from key organisations (e.g. committee membership, key informant interviews, or partnering stakeholder organisations) (Figure 6).

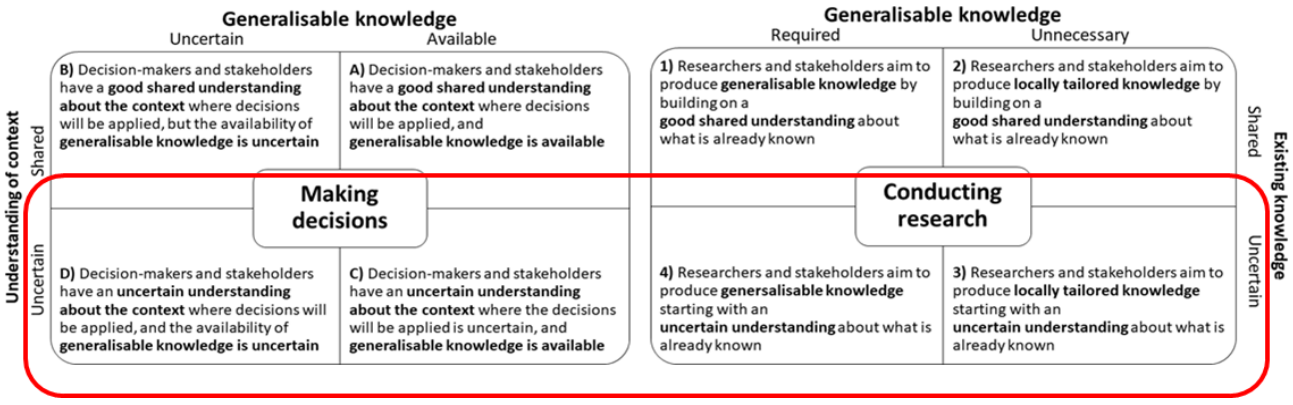
Figure 6: Stakeholder engagement when focus of interest is clear and agreed



In contrast, if the focus of interest is unclear, variable, or contested (bottom row of matrices) – whether that focus is the context of implementing a policy decision (left-hand side) or the key concepts of existing knowledge (right-hand side) – additional effort is required to understand the issues being addressed from a variety of standpoints. In these circumstances, engagement methods of choice involve large members of stakeholders, selected for their diversity (e.g. widespread consultations, or facilitating large group discussion and deliberation) (Figure 7). However, investing in larger-scale efforts takes more time, which may not be possible within important deadlines.

For both doing and using research, the clarity and consensus regarding what is known may change to such an extent that approaches to stakeholder engagement also need to change.

Figure 7: Stakeholder engagement when focus of interest is unclear, variable or contested



This challenge is encountered when the development of international guidelines is followed by the development of national policy. This is illustrated by two examples: when WHO identified its list of essential medicines, followed by Ghana's Ministry of Health adapting this list to suit Ghana's national programme for drugs (Box 1); and when WHO recommended women hold their own, and their children's, health records, followed by the Afghan Ministry of Health piloting – and then rolling out – this policy in Afghanistan (Box 2).

Box 1: **Starting with generalisable evidence for global then national policy: essential medicines**

WHO, the United Nations Population Fund (UNFPA) and UNICEF engaged with generalisable evidence (top row, left-hand matrix, cell A) about public health relevance, comparative effectiveness, safety, cost and regulatory status, before deciding which children's medicines should be considered essential (World Health Organization, 2011). However, the use of these medicines faced additional barriers when it was considered by a committee of experts in Ghana, in the context of the Ghana National Drugs Programme (Sinclair et al., 2013).

Stakeholder engagement involved training Ministry of Health staff to retrieve, appraise and interpret systematic reviews in order to prepare evidence summaries tailored to Ghana for a national expert committee to discuss (top row, left-hand matrix, cell C).

Thus, professional stakeholders refined international guidance for their national context by considering the effectiveness evidence underpinning that guidance in light of context-specific knowledge about burden of disease, relevant subgroups, practice variation, cost effectiveness and medicine supply chains.

The model of convening a committee with a small number of stakeholders suits both international and national policy development addressing access to medicines. In the case of essential medicines lists, at the international level the stakeholders engaged with evidence of medicines' effectiveness that was sufficiently clear and agreed; their remit did not extend to implementation, so they were able to ignore contextual factors. When national policy was subsequently developed for Ghana, a small number of professional stakeholders could bring their own context-specific evidence about Ghana's burden of disease, specific populations, local prescribing practices and medicine supply chains to complement the generalisable evidence.

A similar story comes from the case of WHO developing a policy internationally about home-held health records, and then that being implemented nationally, but here the context-specific knowledge required was held not within relevant professions but by mothers (Box 2).

Box 2: Starting with generalisable evidence for global then national policy: home-held health records

WHO had recommended that mothers hold their own, and their children's, healthcare records (2018a). An international guideline group made this decision based on generalisable effectiveness evidence showing that this leads to better antenatal care and fewer pregnancy complications, better patient–provider communication, enhanced women's feelings of control and empowerment, and higher rates of childhood vaccination (Magwood et al., 2019). This was supported by qualitative evidence of health providers feeling better connected to their patients, and mothers finding home-held records helpful during primary care (Magwood et al., 2018).

Although evidence was lacking, the guideline group noted that home-held records may be particularly helpful in remote, fragile contexts with dynamic population movements. On the strength of this, Afghanistan's Ministry of Public Health developed and distributed a home-based record handbook across two pilot districts. After achieving almost universal coverage, irrespective of mothers' age, education or economic status, the Ministry committed to scaling up handbook use country-wide (Saeedzai et al., 2019).

The case of developing and implementing home-held health records shows a changing emphasis from generalisable evidence to context-specific evidence. However, this story is not yet finished because uncertainties remain. Addressing questions about the best design, system integration and effectiveness in LMICs (Brown *et al.*, 2019) will require returning to practitioners and patients to ask how they use (or not) home-held records, and acknowledging the lack of consensus about the components of home-held records.

A similar challenge was encountered when developing and implementing policy on an international scale relating to cookstoves for cleaner air (Box 3).

Box 3: When starting with generalisable evidence for global decisions fails: cleaner cookstoves

To consider the harm from cooking on open fires, and potential solutions with safer alternatives, WHO collated evidence that was built on clear concepts and measures available for solid fuel use, indoor pollution, morbidity and mortality (World Health Organization, 2006). To predict the impact of households using alternative cleaner stoves and fuel, the variable contexts for implementation were understood in terms of the prevalence of disease, the economics of alternative cleaner stoves and fuel, health service accessibility, and wider environmental and climactic conditions. With these concepts and contexts clear and understood, a policy recommendation was made by a few stakeholders from practice, policy, donor, academic and business networks (top row, left-hand matrix). They concluded that more households cooking with better stoves and cleaner fuels would significantly improve health and more than recoup the costs involved.

However, when it came to the next step, widespread implementation, the clear concepts, measures and data available were insufficient to understand how social contexts varied and influenced uptake of new technologies around the world (bottom row, left-hand matrix). This required a better conceptual understanding of barriers to sustained uptake across various contexts. WHO concluded that involving users, particularly women, is crucial because 'too often, cooks fail to adopt, use or maintain equipment provided in intervention programmes, because it does not meet their needs' (World Health Organization, 2006, p. 32).

In summary, evidence about engineering and physiology was sufficiently clear and agreed for a small group of professionals to recommend the use of cleaner cookstoves to reduce indoor air pollution. They could draw conclusions about the need and goals for an intervention based on shared understandings of epidemiology, economics and physical geography (top row, left-hand matrix). However, how these cookstoves were used (or not) proved very unclear. Successful implementation of the original policy decision requires developing a better understanding of social contexts by engaging with much larger numbers of cooks, artisans, shops and markets (bottom row, left-hand matrix).

The sequential decisions about essential medicines and home-held health records described above illustrate the linear model of knowledge transfer that starts with generalisable evidence that is packaged and disseminated to knowledge users (Best and Holmes, 2010). However, the cookstove story shows how strategic decisions made with important long-term goals in mind can be subsequently thwarted by everyday operational decisions in contexts that are poorly understood. This undermines the linear model, which better suits situations where the following holds: the knowledge brings clear advantages to low-complexity settings, and using the knowledge brings low risks and costs and an opportunity for trying it out; there is strong support throughout the process from decision to application; and there is a culture that is conducive to making use of the new knowledge. The linear model of knowledge transfer was sufficient for decisions about essential medicines (with institutional support) and about home-held records (with institutional support and a pilot study) but was not for cookstoves (where household practices were not conducive to using cookstoves).

The mirror image of the linear model of knowledge transfer is a linear model of public contributions to generalisable research. Such projects are generally designed by scientists, who invite members of the public to contribute data (Shirk *et al.*, 2012). This model, also known as citizen science, is typically adopted to facilitate widescale data collection for robust environmental studies (Conrad and Hilchey, 2011; Turreira-García *et al.*, 2018). It has also been used to support genome research (Nunn *et al.*, 2019) and has contributed to research addressing the Sustainable Development Goals (particularly the goals for life on land, sustainable cities and communities, good health and wellbeing; and clean water and sanitation) (Fraisl *et al.*, 2020).

6.3 Starting with decision-makers, supported by researchers: knowledge relationships

An alternative to starting with the available generalisable knowledge is to start with the stakeholders and their relationship. This is a model adopted by guideline development panels. These national and international bodies rely not only on existing generalisable research but also on panel members bringing their own knowledge to clarify the problem being faced, and to commission research to address outstanding questions. The panel members work with research teams to shape and interpret the findings of new research during the guideline development process. This approach is illustrated by the next stage of the cookstove story, described in Box 4.

Box 4: A guideline panel commissioning research about cookstoves

The cookstove story above illustrates how engaging organisational stakeholders was sufficient to decide that cooking with cleaner stoves and fuel would improve health at scale, but that implementation also required knowledge from local communities. A WHO guideline development group brought the two sets of knowledge together. The guideline group drew members from relevant fields within health, engineering, air pollution and economics; and it was overseen by a steering group with members from all six WHO regions. They used evidence already available; where there were gaps they 'worked to define key questions, priorities and systematic review methods, served as the authors of the systematic reviews, and worked to draft the recommendations, determine the strength of these, and respond to external peer review comments' (World Health Organization, 2014b, p. 31). Evidence for implementation, including local communities' knowledge, both of which were largely missing from earlier work, was introduced into the process through a systematic review of factors influencing the large-scale uptake by households of cleaner and more efficient household energy technologies (Puzzolo *et al.*, 2013).

In summary, the original linear model of knowledge transfer, which failed to lead to sustainable change, was replaced by a model that started with the decision-makers. It was the guideline panel members who decided what they needed to know to make a decision and who then commissioned the required research.

The cookstove story of research–policy relationships that combined generalisable and context-specific evidence to develop international and national policy has echoes at the

organisational level. The linear model of providing evidence or evidence-informed technical guidance to frontline workers is not enough to improve health services and their use in low- and lower middle-income countries. Rather, more consistent improvement came from complementing technical guidance with health sector policy and strategic management-level changes, and community mobilisation (Willey *et al.*, 2013).

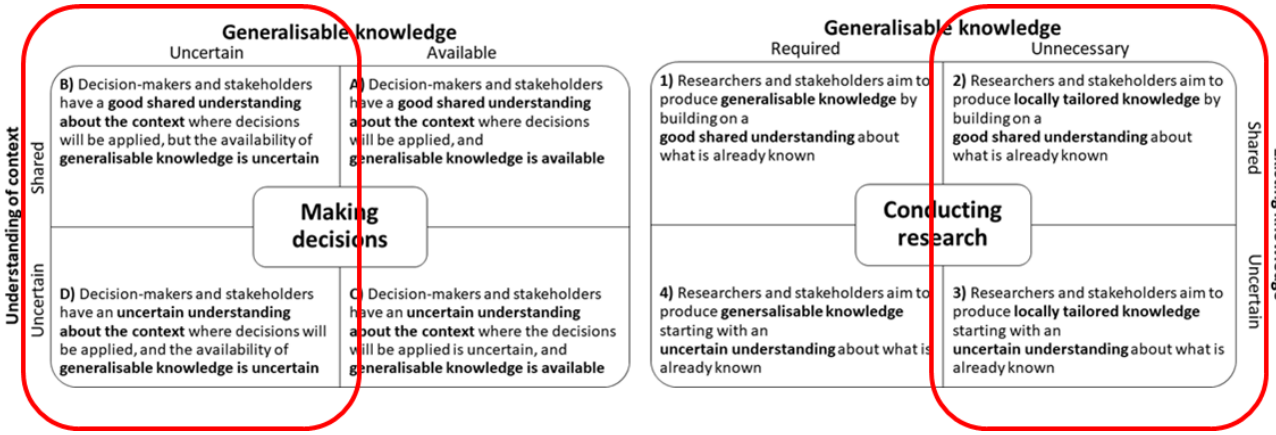
The successes experienced in both implementing cookstoves and quality improvement in organisations were aligned with the relationship model for knowledge and action (Best and Holmes, 2010). The relationship model incorporates learning shared through networks, partnerships and close collaboration in both creating and using knowledge. It suits situations where the following holds: decision-makers and opinion leaders accept that complex problems require systems to support changes in behaviour; the organisational culture is open to using generalisable evidence alongside context-specific evidence for planning and budgeting; and structures and resources support a stable research agenda and collaborative efforts.

Combining generalisable evidence with context-specific evidence has been formalised as a cyclical process of developing change, akin to action research, while creating knowledge by drawing on generalisable evidence and tailoring it for the context of interest (Graham *et al.*, 2006). This knowledge-to-action framework has been applied in a variety of healthcare, public health and academic settings (Field *et al.*, 2014).

Comparing the literature available about this model with the literature available about two other cyclical models (Section 5.3) for working with context-specific knowledge – participatory action research (Shamrova and Cummings, 2017) and action research (Cordeiro and Soares, 2018) – reveals some gaps. The knowledge-to-action framework for engaging stakeholders with generalisable evidence is generally applied in professional organisations in high-income countries (Field *et al.*, 2014). In contrast, participatory action research and action research have a track record of reaching beyond professional organisations to engage neighbourhoods and civil society organisations, and in LMICs, but without drawing on generalisable evidence (Shamrova and Cummings, 2017; Cordeiro and Soares, 2018). Problems can arise from this lack of attention to knowledge held by unfamiliar communities, whose responses to policy change can be uncertain.

The mirror image of the relationship model for turning knowledge into action is collaborative research. Collaborative research projects are usually designed by scientists who invite stakeholders to help refine project design, analyse data, and/or disseminate findings (Shirk *et al.*, 2012). See Section 4.2 for examples of engaging stakeholders with setting research priorities, advising studies and rapid systematic reviews.

Figure 8: Stakeholder engagement when generalisable knowledge is privileged: implications for locally rooted knowledge



6.4 Starting with the uncertainty of a social system: knowledge mobilisation

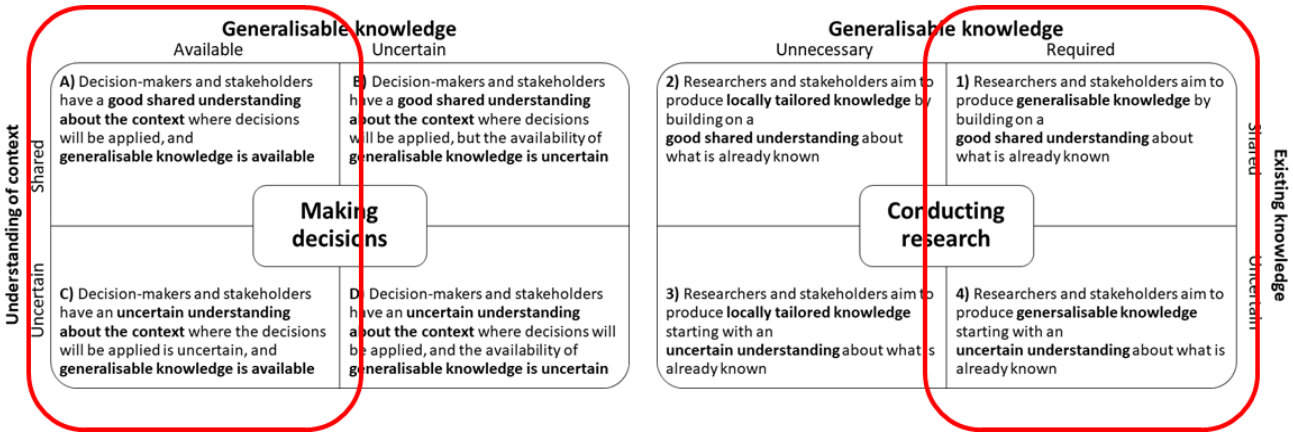
Recommendations to engage communities beyond organisations have arisen in cases where policy has failed. Two systematic reviews have emphasised the importance of community knowledge and practices for policy success with clean water and sanitation. Sustained adoption was influenced by norms and nurturing, age and gender, and costs, durability and maintenance (Hulland *et al.*, 2015). For these reasons a WHO guideline panel recommended that 'demand and supply of sanitation facilities and services should be addressed concurrently to ensure toilet adoption and sustained use and enable scale' (World Health Organization, 2018b, p. 11). However, participatory approaches by NGOs were only effective for implementing local sanitation solutions, and were insufficient for tailoring infrastructure for supplying water, sanitation or electricity to suit community needs (Annamalai *et al.*, 2016).

This situation calls for a systems model for knowledge and action that recognises social systems as dynamic, adaptive and often unpredictable, with key stakeholders shaping the knowledge and action system, and in turn being influenced by it (Best and Holmes, 2010). Systems models require all the key stakeholders to participate as active collaborators in problem-solving, and for partnership organisations to invest time and resources in developing a model that is integrated with organisational change. Yet the empirical literature reveals that these conditions are rarely met for all stakeholder groups.

Knowledge translation platforms offer an opportunity to involve wider society in stakeholder dialogues specifically about evidence and policy, although details are sparse (Moat *et al.*, 2013; Partridge *et al.*, 2020). Case studies have offered few details about how civil society has been involved, or its influence (Berman *et al.*, 2015; Kasonde and Campbell, 2012; Ongolo-Zogo *et al.*, 2018; El-Jardali *et al.*, 2020). The main challenge is lack of capacity: the capacity of convenors to host and facilitate debate by a mix of stakeholders, and the capacity of stakeholders to bring their group perspectives to debate the relevant evidence (Robert *et al.*, 2020).

Mobilising knowledge from civil society is stronger for other approaches – positive deviance inquiry (Albanna and Heeks, 2018; Herington and van de Fliert, 2018), participatory action research (Shamrova and Cummings, 2017), action research (Cordeiro and Soares, 2018), and human-centred design (Bazzano *et al.*, 2017; Holeman and Kane, 2019) – but without engaging civil society with generalisable evidence.

Figure 9: Stakeholder engagement when locally rooted knowledge is privileged: implications for generalisable knowledge



The mirror image of the systems model for translating knowledge into action is the co-creation model for research. Co-created research is designed collaboratively by researchers and communities, with some members of the public deeply involved throughout (Shirk *et al.*, 2012). Accepting Best and Holmes' (2010) description of social systems as dynamic, adaptive and often unpredictable, with key stakeholders shaping the knowledge and action system, and in turn being influenced by it, requires starting with uncertainty at a fundamental level (for both knowledge-to-action and for conducting research), by acknowledging the wider influences of interests, institutions and ideas. This approach is illustrated by the most recent episode in the cookstove story (Box 5).

Box 5: Transdisciplinary research and development of cookstoves

More recently, a more radical solution has been developed to not only ensure women's views inform the implementation of cleaner cookstoves, but (more radically) to ensure they inform their design. Engineers and anthropologists are working together with household cooks to test the usability of stoves in terms of 'fuel processing and collection habits, cooking performance, stove operability, maintenance, comfort and aesthetic considerations, and location-specific needs' (Moses *et al.*, 2019, p. 161). Elements of the testing protocol have been incorporated into the ISO/TC 285 international standard for cookstove field testing, to improve awareness among engineers and implementers of the need for usable designs (International Organization for Standardization, 2019).

As a reminder, the original linear model of knowledge transfer, which failed to lead to sustainable change, was replaced by a model that starts with the decision-makers. It was the guideline panel members who decided what they needed to know in order to make a decision, and who then commissioned the required research. As an example of co-creating knowledge, it was the household cooks who decided what features would make a stove sufficiently appealing to encourage their continued use.

This episode of the cookstove story started with uncertainty regarding how people organise their lives, and including them in designing improvements. A similar approach of cross-disciplinary problem-based research has been taken with designing health record systems (Box 6).[24]

Box 6: Gathering evidence from practitioners first: health record systems

Work began by seeking to understand the variety of tools and processes in use across three African countries, by engaging many, diverse stakeholders through human-centred design methods (bottom row, right-hand matrix). Human-centred design is a process that is 'based on the use of techniques which communicate, interact, empathize and stimulate the people involved, obtaining an understanding of their needs, desires and experiences' to develop solutions' (Giacomin, 2014, p. 610). It is recognised for its 'central tenets of design thinking research, like iteration, tolerance for ambiguity, pivots, and rapid prototyping' although specific definitions vary' (Bazzano *et al.*, 2017, p. 14). Once various tools and processes in use were well understood, a much smaller advisory group of stakeholders was required to guide the designing of an enhanced paper-based health information system and to test its effects on the quality and use of data, and, ultimately, on patient and public health (top row, right-hand matrix).

In the course of moving from concepts that were variable and poorly understood to concepts that were well-characterised and ready for testing, inevitably the focus moved from gathering local 'real-world' evidence (bottom row, right-hand matrix) to mounting a cluster randomised controlled trial to produce generalisable evidence (top row, right-hand matrix).

When addressing a lack of clarity and consensus regarding the nature of paper-based records, the research team engaged stakeholders (using different languages), to gather their local knowledge in three African countries: Côte d'Ivoire, Mozambique and Nigeria (bottom row, right-hand matrix). Once clarity about the key concept was achieved, a randomised controlled trial was conducted in all three countries to produce generalisable knowledge (top row, right-hand matrix).

These two examples of co-design are unusual because the literature about co-creation or co-production has focused more on co-implementation (Voorberg *et al.*, 2015). More recently, in the area of climate science, there has been more consultation than co-creation (Galende-Sánchez and Sorman, 2021). Co-creation of knowledge aims to enhance the quality of knowledge, enhance the relevance and implementation of that knowledge, and align with values of accountability and public service – or, alternatively, is used for the political purposes of profiling inclusive practices and legitimising science (Oliver *et al.*, 2019). In practice, there are concerns about indigenous knowledge in the Global South being overwhelmed by ways of knowing that have been developed to suit the Global North (Fransman, 2018). Projects often engage with uncertainty only within the confines of mainstream science. Indeed, co-

[24] https://paperbased.info/

production can reproduce or even exacerbate inequalities through the confidence placed in 'the rationale of science-based impacts', without addressing hierarchies among stakeholders, and seeking consensus for rational solutions without exploring alternative views, and without engaging with the wider political context (Turnhout *et al.*, 2020).

6.5 Summary of findings

The analysis of stakeholder engagement presented so far suggests that the appropriate methods of choice for engaging stakeholders depend on whether generalisable evidence is available, reliable and relevant – judgements that can turn out to be mistaken. Technical skills are sufficient for judging whether the methods are sound and the research findings consistent and trustworthy. Judgements about relevance or completeness vary with perspective and may attract controversy.

A linear model for engaging with evidence is more applicable to policy decisions where the relative advantage of an innovation is clear and widely agreed, the risks and costs are low, and the innovation can be piloted in settings that lack complexity. Similarly, a linear model can also suit research where the knowledge gap and the related key concepts are clear and widely agreed before large numbers of the general public are engaged to provide data.

A relationship model for engaging with evidence to inform policy is more applicable when decision-makers have the resources and commitment to learn from other stakeholders who understand complex problems in different ways and from different perspectives. Conversely, collaborative research projects typically involve scientists with the resources and commitment to collaborate and learn with other stakeholders when designing studies, and when analysing and sharing findings.

A systems model requires all the key stakeholders to participate as active collaborators in problem-solving, and for partnership organisations to invest time and resources in developing a model that is integrated with organisational change. The mirror image is the co-creation model for research. However, whether for making decisions or conducting research, approaches that are both very inclusive and well engaged with research evidence are rare. Reports of co-creation are often limited to co-implementation, and the science framing of initiatives often entrenches hierarchies and inequalities – rather than challenging them – by overriding alternative views or ignoring the wider political context. The implications of these challenges are considered in Section 7.

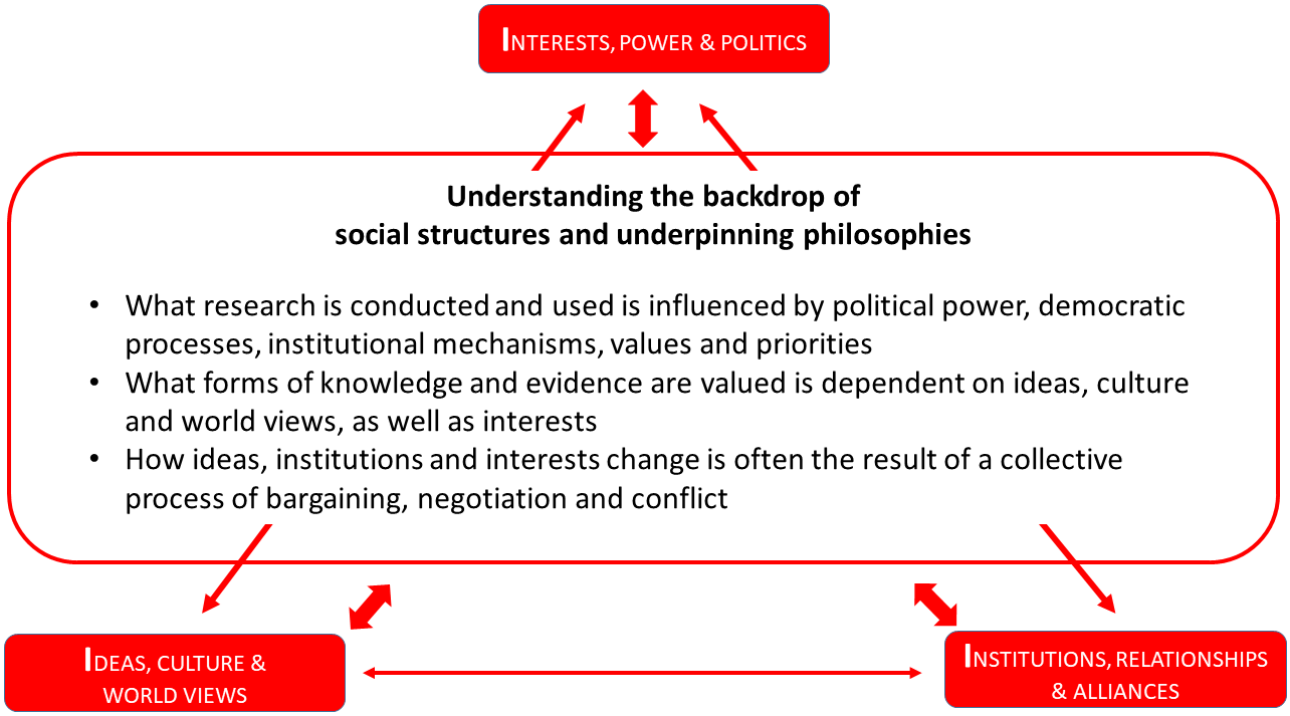
7. Findings: political analysis for stakeholder engagement

This section takes into account the wider contexts in which decisions are made and research is conducted: in particular, political power, democratic processes, institutional mechanisms, values and priorities.

The original orientation of the framework emphasises internal validity over external validity, and generalisable evidence over context-specific evidence, and overlooks the possibility that 'evidence of effect may not reflect the political priority of an intervention' (Parkhurst, 2017, p. 94). Indeed, overemphasis on 'what works' may draw attention away from political priorities, where readily available generalisable evidence is lacking. Although inverting the framework places local knowledge at the centre, as in participatory studies and action research, the local knowledge of interest typically comes from communities and service delivery organisations, with researchers more often retaining control over how this is shaped (Shamrova and Cummings, 2017; Cordeiro and Soares, 2018). In this section we look at the larger scale, where researchers have less influence, to explore how politics and other broader social structures and philosophies provide an important context for producing evidence as well as using it (Figure 10).

The use of evidence in health policy is affected by political governance arrangements and democratic processes, by institutions and bureaucracies, by relationships between researchers and decision-makers, and by values and priorities (Liverani *et al.*, 2013). These factors match the interests, institutions and ideas framework of political analysis, as illustrated by the red arrows forming triangle connecting the three boxes in Figures 1 and 10.

Figure 10: The real-world context for engaging stakeholders: the socio-political backdrop



Indeed, it was the triangle of interests, institutions and ideas in our framework that attracted most attention from the stakeholders we interviewed, who were trying to influence local decision-makers or trying to generate local knowledge. The framework mirrored the experience of one local NGO in Latin America, as discussed below.

7.1 Interests, power and politics

While there are many different understandings of both politics and power, a broad conception of politics is that it concerns the process of mediating the diverse interests of those with different abilities and power to promote their preferences. Whether the focus is on producing evidence, or using evidence, power is unequally distributed. The research that is available is influenced by interests and money, and decision-making committees are influenced by hierarchies (Oliver *et al.*, 2018a).

The experience of dealing with inequities varied among our webinar participants. While the presentation of the framework prompted questions around the challenges raised for local engagement by the culturally sensitive aspects of inequity, some participants had a more positive experience.

> *Building understanding around equity has been easier than building a common understanding around evidence.* [Local NGO 2]

This local NGO used an equity framework that is increasingly applied to generalisable evidence, for setting systematic review priorities (Nasser *et al.*, 2013), conducting systematic reviews (O'Neill *et al.*, 2014) or for setting priorities for translation (Tugwell *et al.*, 2017). This framework, called PROGRESS, is a mnemonic that is loosely based on the social determinants of health.

> *So the PROGRESS framework, it's a really nice framework in order to assess equity … We also capture a lot of ideas about culture and world views using this progress while engaging stakeholders: and this has been really, really useful for us.* [Local NGO 2]

Moreover, priority-setting exercises are developing more inclusive, equity-sensitive approaches. Yet, even when explicitly addressing equity, inclusive approaches are limited. While healthcare providers and researchers are generally well represented, public policy makers, funders, and affected populations (such as patients and their representatives, caregivers and the general public) have been far less involved (Fadlallaha *et al.*, 2020; Manafò *et al.*, 2018). Indeed, patient involvement in priority-setting has only been reported in high-income countries, with little attention to ethics or evaluation. (An exercise in this area that has recently started in Uganda is currently on hold because of COVID.)[25] Whatever the technicalities of these exercises, they all involve small groups making decisions which are inherently hierarchical in terms of positions and knowledge held; solutions come from having sufficient time and good facilitation to share all members' knowledge and to make good decisions (Oliver *et al.*, 2018a).

[25] http://safri.ac.ug/mnhpsp/

UNICEF's guide for designing and managing equity-focused evaluations (available in five languages) is available as an exemplar resource.[26] It offers eight real-world case studies and guidance for identifying evaluation stakeholders, including the worst-off groups (Bamberger and Segone, 2011).

Power analyses are increasingly seen as pre-requisites for development programmes – when they start and when planning major changes (Coulby *et al.*, n.d.) – so much so that tools have been developed to help community groups map decision-makers. Such tools help community groups consider whom they wish to influence, or who influences them, so they can focus their energy on where it makes the greatest impact (The Change Agency, n.d.), and 'to help frontline development practitioners make quick but politically-informed decisions' (Hudson *et al.*, 2016). Our analysis suggests that stakeholder engagement processes for both the generation and use of evidence might also make effective use of such tools.

7.2 Institutions, relationships and alliances

Institutions are often defined as the formal and 'informal rules of the game' which shape how organisations and people think and act, and which frame how politics is done. They tend to reflect the existing power relations in a given society. Collective action, alliances and coalitions, bargaining and political settlements, are usually central in determining whether the rules of the game in particular settings are maintained or change.

The work of producing and using research for making decisions is also shaped by these rules, while simultaneously contributing to their evolution. These rules and ways of doing things become embedded in organisational systems. Universities or research institutes often see these processes very differently to policy makers, given their different priorities and organisational cultures. This means that considerable effort is required to overcome such differences to facilitate the use of research for decision-making (Oliver *et al*., 2014a). Some of the widely available guidance for academics on overcoming these differences, such as making research relevant and readable, and building relationships with policy makers (Oliver and Cairney, 2019), is practical within the context of commissioned research. Indeed, commissioned research with constructive communication between the research and policy teams might be expected to produce more useful and readable outputs. However, 'most of these tips focus on the individuals, whereas engagement between research and policy is driven by systemic factors' (Oliver and Cairney, 2019, p. 8).

Much more is written about systems and practices for making use of generalisable evidence (Langer *et al.*, 2016) than about systems and practices for producing useful generalisable evidence. A multidisciplinary review of health policy and systems research in LMICs (Koon *et al.*, 2013) found that uptake of research depended less on the research itself, and more on the characteristics of the organisations producing that research: their reputation and capacity to produce evidence, and the quality and quantity of their connections to decision-makers and other stakeholders. A systematic review of organisations working at the interface of policy and research (often summarising research and convening debates about it) concluded that promising features include high-level political support, models that have evolved in their

[26] www.betterevaluation.org/en/resource/guide/design_manage_equity_focused_evaluation

host countries, strong, independent advisory or governance structures, and well-trained, proactive staff (Partridge *et al.*, 2020).

All of this suggests that there is much more to stakeholder engagement than more effective participation of diverse groups in research processes or improved communication of research findings to decision-makers. At the heart of many successful research–policy cases is a high level of relational work, i.e. the building of relationships of mutual trust and respect across organisations, sectors and institutions, as well as in some cases the construction of effective networks, alliances and coalitions to promote findings and engage decision-makers directly or indirectly.

7.3 Ideas, cultures and world views

The importance of ideas, values, beliefs and world views in shaping how individuals and organisations behave and interact is increasingly recognised as central to how power relations and institutions are experienced and structured (Hudson and Leftwich, 2014). In this sense, we use the term 'ideas' to cover the range of conventions, norms, and ways of understanding the world which are considered 'normal' or habitual by a given group or stakeholders. These norms are shaped not only by an individual's beliefs but also by what they think others do, and what they think others expect them to do.

Most countries are home to a vast array of ideas and cultures; those countries with a history of colonisation and immigration often have an even richer diversity of world views. When stakeholders are involved, their ideas, cultures and worldviews can clash, but they can also be synthesised in ways that make an important difference. As Agarwal notes, however, the recent interest in the role of ideas in shaping institutions and policy has tended to ignore 'a much older and very rich body of work in the field of development studies, which focuses on participative planning and policymaking, and an equally significant body of work on the diffusion of rural innovations' (Agarwal, 2019, p. 5). Although cyclical participatory methodologies are designed to include stakeholders and their ideas, how these methodologies are applied in practice varies. Even when explicitly addressing inequities with mostly African American and/or Latino communities in the United States, whether community-based participatory research led to changes in environmental and occupational health depended largely on who influenced the work.

> *[Those] projects that led to action are much more likely to have been initiated by the affected community or by government scientists/ agencies than by academic researchers.* (Cook, 2008, p6)

Action research in the Global South has operated more at the collective level, rather than at individual or organisational levels, and has put greater emphasis on political and economic issues (Cordeiro and Soares, 2018). Researchers in Canada seeking to draw on indigenous ideas, cultures and world views have found that this requires the following:

> *a. Contextual reflection, in that the researchers must situate themselves and the Indigenous Peoples with whom they are collaborating in the research process.*

> *b. Inclusion of Indigenous Peoples in the research process in a way that is respectful and reciprocal as well as decolonizing and preserves self-determination.*
>
> *c. Prioritization of Indigenous ways of knowing.* (Drawson *et al.*, 2017, p15)

Similarly, a global systematic review of indigenous community-led legal interventions to control alcohol noted that '[i]ndigenous-led policies that are developed or implemented by communities can be effective in improving health and social outcomes', while 'controls imposed unilaterally without Indigenous consultation have often been discriminatory and harmful in practice' (Muhuntan *et al.*, 2017, p. 1). Nevertheless, the authors also noted that '[l]ocal Indigenous knowledge and systems of governance, which could provide insights into policy innovation and a sustainable shift in social norms, remain neglected areas of public health research to date' (Muhuntan *et al.*, 2017, p. 2).

This approach is not easy. Considerable effort has gone into integrating indigenous and 'Western knowledge' in water research and management (Stefanelli *et al.*, 2017). Most studies have encountered policy and governance barriers, and have recognised the need for institutional co-management regimes. In such cases, scientific knowledge was combined with rich environmental knowledge about sustainable management held by indigenous people through effective and meaningful community-based participatory research that was based on mutual respect and co-design to balance power, foster trust, and share ownership of the research process. Major challenges were language differences, and the narrow scope and short time span of water governance structures, as indigenous worldviews apply spiritual as well as functional significance to water across timespans measured by generations rather than decades. A review of the literature recommended the following: joint leadership; joint agenda setting; ongoing relationships and sharing of ideas; and a discursive space that allows new paradigms to emerge, rather than indigenous knowledge being an add-on to Western science, or vice versa.

7.4 Combining political analysis and knowledge exchange

A political science framework has proved helpful for analysing wider influences on perceptions of 'evidence briefs' for policy deliberation that combine generalisable evidence (mainly from systematic reviews) and local knowledge (Moat *et al.*, 2013). This analysis found that policy makers' and other stakeholders' views of evidence briefs were influenced by ideas about the value of research and social collectivism, institutional relationships between research producers and users, and their degree of interest in research knowledge.

Extending the analysis to particular issues, it was found that whether the ideas addressed in evidence briefs were salient, familiar or polarising (in other words, lacked consensus) influenced how the briefs were viewed by both those producing them and those using them. Highly salient issues can raise the demand for evidence. They may be new (and unfamiliar problems) that raise the demand for evidence, or longstanding (and familiar) problems that raise the demand for evidence about new solutions. Polarising issues raises the demand for evidence that addresses complexity in a reliable or trustworthy way.

Issues that are highly salient or highly polarising are also highly political, which makes the 3Is framework of interests, institutions and ideas applicable to individual issues, as well as evidence briefs as such.

7.5 Summary

In this section we have explored how power, institutions and world views combine in complex ways to shape evidence gathering and use.

Power analyses are increasingly seen as pre-requisites for development programmes, but less so for studies firmly embedded in research methodology. When policy organisations, development organisations, academics and wider society work in fundamentally different ways, working together requires serious investment in relationships to overcome these differences. This investment is important because the uptake of research can depend less on the research itself and more on a research organisation's reputation and its active links with decision-makers and other stakeholders. Organisations working successfully at the boundary of policy and research require both high-level political support and a workforce with the appropriate technical skills for preparing evidence summaries. Despite all these efforts to link research evidence to societal needs and change, collaborative efforts led by academic researchers are more likely to advance knowledge, while collaborative efforts led by affected communities or by government scientists/agencies are more likely to lead to change.

8. Conclusions

This section summarises the development of the framework and associated toolkit, notes the strengths and limitations of the work, and offers some overarching conclusions.

8.1 Summary of developments

The development of the framework was informed by listening to practitioners: this changed it from being a static framework to being a flexible framework, and it was thereby populated with a greater range of methods for engaging stakeholders either in making decisions or in conducting research. Pivoting the two matrices to allow alternative orientations recognises situations that emphasise either generalisable evidence or local knowledge. This pivoted orientation better illustrates situations where research and policy or practice decisions occur either simultaneously or in rapid cycles.

Populating the framework with a greater range of methods revealed how similar many methods are, whether they are applied to making decisions or to conducting research. It is the clarity and consensus regarding the context in which a decision will be applied, or the clarity and consensus regarding knowledge before research begins, that indicates the appropriate methods for engaging stakeholders, more than whether the work involves making collective decisions or conducting research. Although engagement methods are available for a broad spectrum of (un)certainty, in practice, where generalisable evidence is emphasised, wider society is less engaged. Conversely, where engaging wider society is emphasised, less attention is paid to generalisable evidence. There is a need therefore for tools that encourage researchers and decision-makers to consider drawing on a wider range of methods for engaging with evidence and stakeholders.

The framework now provides the foundation for a toolkit (see appendices) that distinguishes major differences in stakeholder engagement, illustrates pathways for choosing appropriate methods for stakeholder engagement, signposts evidence and practical tools to support stakeholder engagement, and provides guidance for identifying and understanding stakeholders and their relationships. Stakeholders from local and international organisations can locate their activities within the framework, and were involved in the most recent round of its development. The toolkit offers evidence and tools to support stakeholders with technical skills and 'soft' communication skills.

8.2 Strengths and limitations

The draft tools are informed by systematic review evidence and interviews with a purposive selection of stakeholders. Reviews and stakeholders brought perspectives from academics, government and NGOs. The NGOs, which provided in-depth information, included organisations that were familiar and unfamiliar with generalisable evidence, for either international or national/local purposes. Between them they spanned health, social and economic development, and humanitarian aid.

The scope of this work is exceptionally broad, embracing stakeholder engagement with experimental designs (controlled trials) and practitioner and community knowledge. For this

reason, the systematic review evidence and tools collated in the toolkit are illustrative rather than comprehensive. They have yet to be tested for their utility in guiding choices during projects.

In its current design the framework is not understood intuitively. More work is required if the framework and toolkit are to be presented without the need for clear guidance.

8.3 Conclusions

Our analysis of practitioners' accounts and organisations' websites confirms our earlier analysis of systematic reviews about stakeholder engagement that were authored by academics and NGOs (Oliver *et al.*, 2018b). It is not policy sectors or academic disciplines that determine approaches to stakeholder engagement (indeed, stakeholder engagement shares many features across both); rather, the choice of engagement approaches depends more on (a) the balance of interest between generalisable evidence and local evidence, and (b) how much consensus there is about what is known when collaborative work begins. Generalisable and local evidence are applicable for both international and local-level responsibilities. For local issues, they are sometimes used sequentially or in parallel for different problems, or generalisable evidence may be omitted altogether. Nevertheless, within the past decade, FCDO and iNGOs have invested in knowledge management structures for curating generalisable evidence, while also providing motivation for their own workforce and publicly available resources to combine generalisable and local evidence for local action. Some local NGOs who base their learning on local evidence alone acknowledge their lack of attention to generalisable evidence as a shortcoming. Bringing together generalisable evidence and local knowledge means navigating different epistemologies and understanding the influence of inequalities.

8.4 Implications for practice

Decision-makers and researchers are encouraged to be open-minded regarding the possibility that other stakeholders do not share their understanding of the context of interest (where decisions will be applied) or existing knowledge (when initiating research). Judgements about shared understanding need to take into account both the core concepts of any potential policy, programme or study, and the socio-political context that will influence what studies are meaningful or what decisions are implementable. Overconfidence about the consensus of understanding may lead to poor implementation of policies or disappointing research findings.

Once judgements are made about clarity and consensus researchers are encouraged to navigate the framework and toolkit to choose the evidence and tools that are most appropriate for their circumstances. To support these choices we offer a heuristic for choosing between the major sets of engagement methods (Figure 11). Questions to be asked before making a decision include the following:

1. For making decisions:

- If generalisable evidence might be relevant, where can it be found?

- Who are the stakeholders who can offer relevant experience or perspectives? How can the pool of stakeholders be extended if the context for implementation is unfamiliar, unpredictable or contested?
- How can the stakeholders be identified and supported to critique the generalisable evidence and/or offer context-specific knowledge?

2. For conducting research:

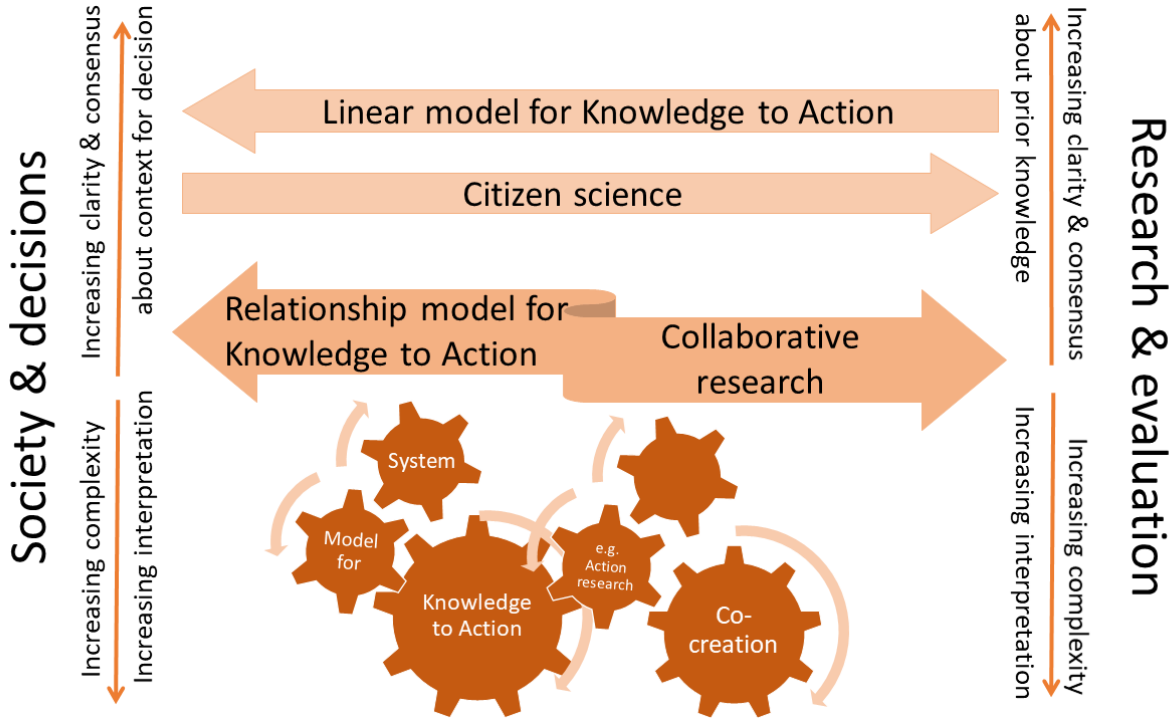
- If time is available, might producing generalisable evidence be useful?
- Who are the stakeholders who can offer relevant experience or perspectives? How can the pool of stakeholders be extending if the key concepts are unclear or contested?
- How can the stakeholders be identified and supported to critique the research plans, or pilot research tools or provide data?

Where a project starts with clarity and consensus that is likely to be retained even if a more diverse group of stakeholders are engaged, linear models are sufficient either for implementing research findings or for inviting stakeholders to contribute to research.

As clarity or consensus decreases, more collaborative models are required to draw on wider experience, whether the aim is to make decisions that are informed by evidence, or to conduct research to generate evidence.

When clarity or consensus is particularly elusive at the start of a project, suitable approaches involve iterative or cyclical models that involve a greater range of stakeholders as complexity increases, whether this is for making decisions or conducting research.

Figure 11: Heuristic for choosing between major sets of engagement methods



8.5 Recommendations for research

The stakeholder engagement framework, and the simpler heuristic, have been developed by listening to policy makers and practitioners, and by reflecting on our own experience in order to analyse systematic reviews and tools retrospectively. The next step is to pilot the use of the framework, toolkit and heuristic prospectively.

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Appendix 1: Toolkit development

This appendix discusses what was learnt from presenting the framework and toolkit to different sets of stakeholders, and the subsequent changes that were made. The resulting toolkit is publicly accessible here: https://africacentreforevidence.org/blog/engaging-stakeholders-with-evidence-and-uncertainty/

A1.1 Responsive framework development

The framework was originally developed as an analytical tool that could be used to make sense of the extensive literature on stakeholder engagement with evidence: where evidence is adequate and where there are gaps (Oliver *et al.*, 2018b). An early-career researcher attending a seminar spontaneously described the double-matrix framework as a decision aid for choosing approaches to stakeholder engagement.

Repeated opportunities to present the framework to different stakeholders led to clearer explanations, changes in language and new insights.

There was a call for 'case studies' to illustrate the framework, to take time into account with regard to the journey from conceptualisation through research and implementation, and the implications for the type of stakeholders and how they are involved. In response, we have provided three working examples: the development and implementation of cookstoves; the policymaking regarding, and implementation of, home-held health records; and the design and evaluation of paper-based health records (see Section 6).

The importance of understanding historical backgrounds was raised when work in progress was presented at a public lecture,[27] so we have provided more examples from indigenous populations in colonised countries (see Section 7).

Presentations elicited comments about the terminology applied to different types of knowledge. Suggestions included removing the 'local' prefix, as it is unnecessary, and the idea that a more appropriate counterpart to 'local knowledge' would be Western knowledge. Although generalisability was noted to be a contested term, there was no consensus on the use of language so no changes were made.

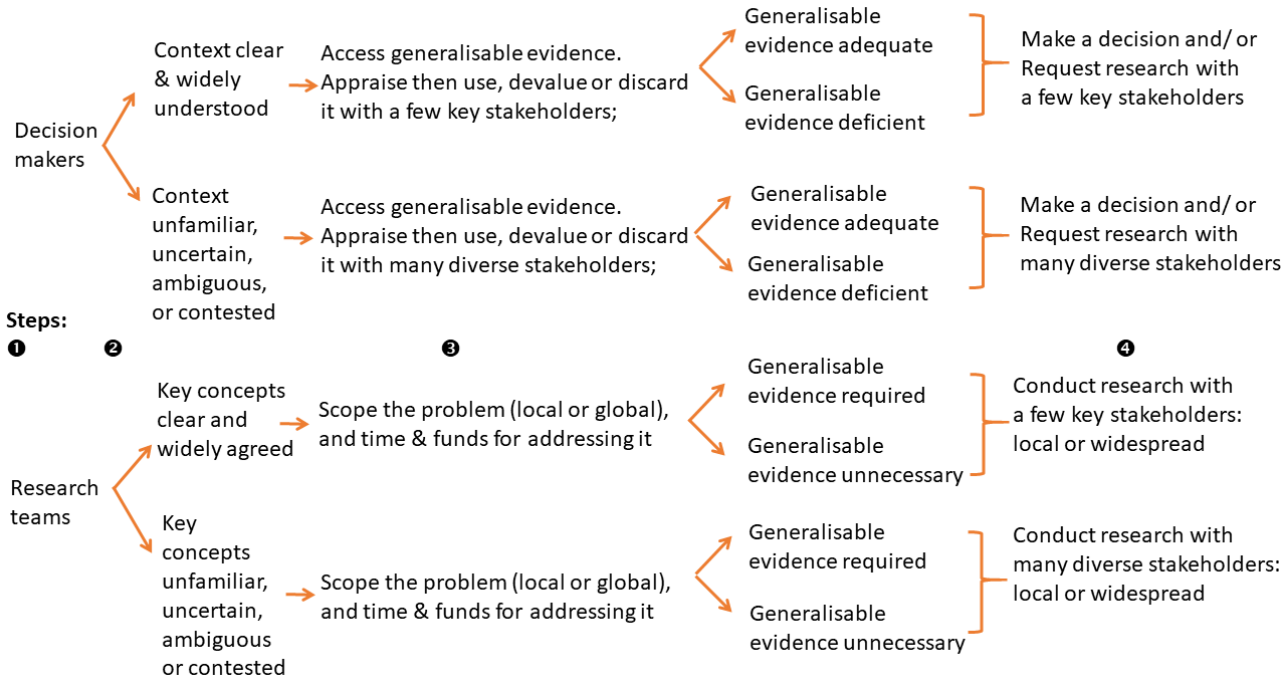
Discussing the framework with different stakeholder groups at conferences and workshops, and in postgraduate classes, confirmed that the framework was understood, with many stakeholders able to locate their work within it, and some of them expressing an aspiration to add generalisable knowledge to their more familiar context-specific knowledge. When applying the ideas to their own work participants at workshops recognised the implications of evidence analysis and evaluations being gender blind, and saw opportunities to change engagement methods to suit different stages of a project.

[27] Oliver, S. (2019) 'Stakeholder Engagement for Development Impact Evaluation and Evidence Synthesis', London School of Hygiene and Tropical Medicine, https://lshtm.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=4eac15a1-7f1d-496e-9efc-2a87b3bdc1c7

A1.2 Responsive toolkit development

Although workshop participants could locate their own activities within the framework, doing so without discussion as a guide was often found to be difficult. We therefore added a flow chart, and explanations, as a practical step-by-step guide to recognising a specific working context, in order to choose appropriate stakeholder methods (Figure 12).

Figure 12: `A flow chart to recognise the working context for a specific task



This flow chart (Figure 12) helps the user to navigate the framework, with a series of choices about a specific task to be done, and about existing shared understanding and generalisable evidence.

Step 1: Is the task making a policy decision or conducting research?

Step 2, for policy decisions: Decide whether the context from implementing a decision is (a) clear and widely understood, or (b) unfamiliar, uncertain, ambiguous or contested.

Step 3, for policy decisions: Access generalisable evidence, appraise it with stakeholders and decide to discard it, devalue it or use it – working with a few key stakeholders (following step 2(a)) or many diverse stakeholders (following step 2(b)).

Step 4, for policy decisions: If generalisable evidence is adequate, make a decision. If generalisable evidence is deficient, request more research if time allows, and make a decision – working with a few key stakeholders (following step 2(a)), or many diverse stakeholders (following step 2(b)).

Step 2, for conducting research: Decide whether the key concepts underpinning the research are (a) clear and widely understood, or (b) unfamiliar, uncertain, ambiguous or contested.

Step 3, for conducting research: Scope the research problem, particularly whether the aim is to produce generalisable evidence or locally tailored evidence.

Step 4, for conducting research: Conduct an impact evaluation or synthesis – working with widespread stakeholders for generalisable evidence, or local stakeholders for locally tailored evidence, and working with a few key stakeholders (following step 2(a)), or many diverse stakeholders (following step 2(b)).

Following these steps, and this flow chart, should lead to understanding where any particular task sits within this landscape, and the appropriate general approach for stakeholder engagement. Once this is clear, the interactive guide (see Tool 3) can signpost users to the most appropriate engagement methods for the task concerned.

Those with an 'evidence' background, whether academic or policy, found the familiar concepts of the visual framework and the evidence map more readily understandable and appealing. To make the toolkit more widely accessible, changes made during user testing made clearer who and what the toolkit is for – particularly what problem it is meant to solve. Navigating the toolkit has been made easier with better signposting.

The interactive guide (Figure 13) included pop-up boxes to signpost systematic reviews and tools (Figure 14); these were considered a nice detail.

For evidence and engagement enthusiasts, more content would be appreciated.

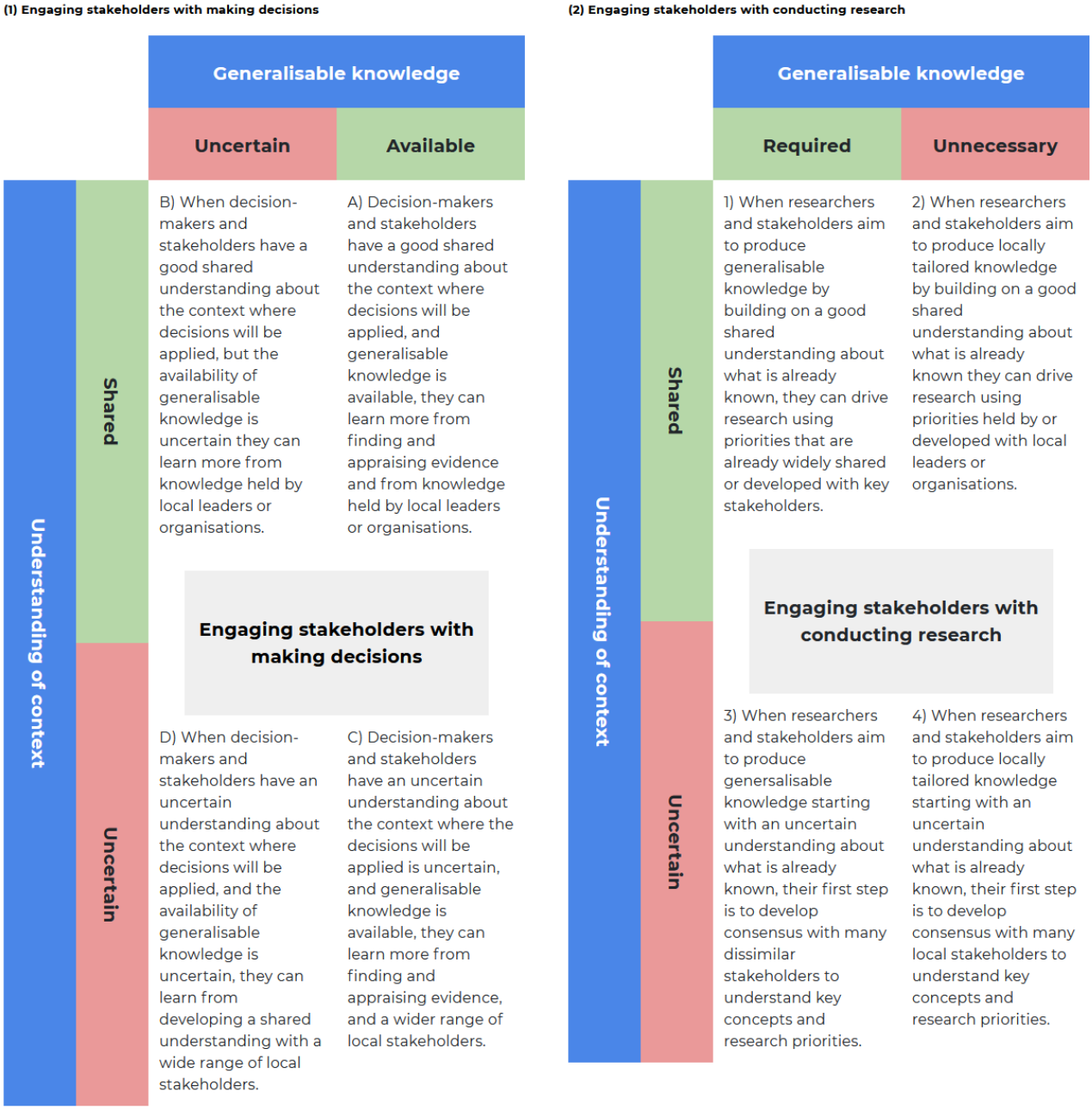
> *I would like to see more, more evidence and more tools because this will be useful for us.* [Local NGO 2]

> *I expect to see some tools to match the … tips [of the triangle].* [Knowledge broker]

Although meant to be illustrative rather than comprehensive, the number of systematic reviews and tools has been increased, and each cell and the points of the triangles in the framework have content to match.

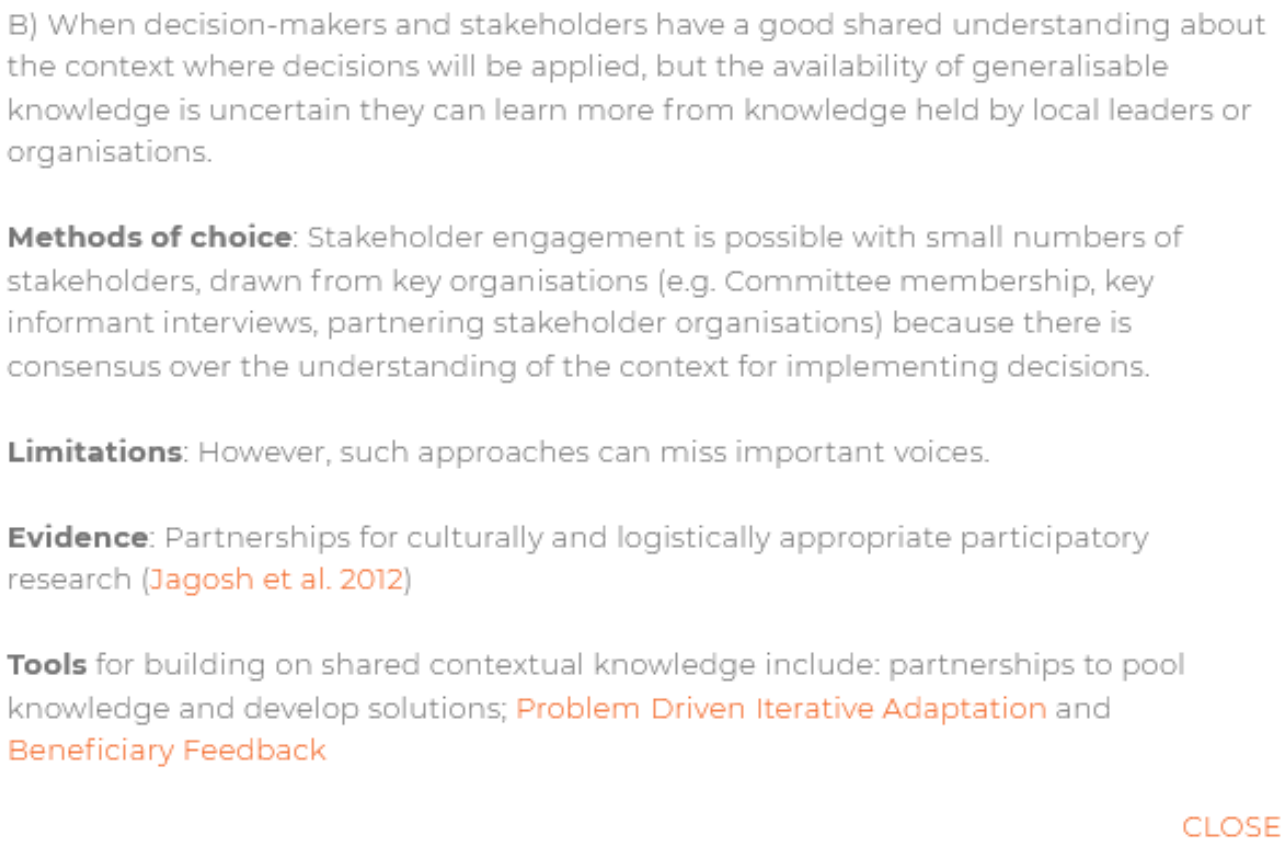
A request for evidence or tools for 'scaling up' highlighted a challenge of working across policy sectors and disciplines that still needs to be addressed. The toolkit includes content that is suitable for 'scaling up' but it is framed in terms of transferability or refining logic models for new contexts.

Figure 13: Opening view of the interactive guide



Tool 4: A map of evidence and tools for stakeholder engagement

Figure 14: Pop-up box for Cell A in left-hand matrix



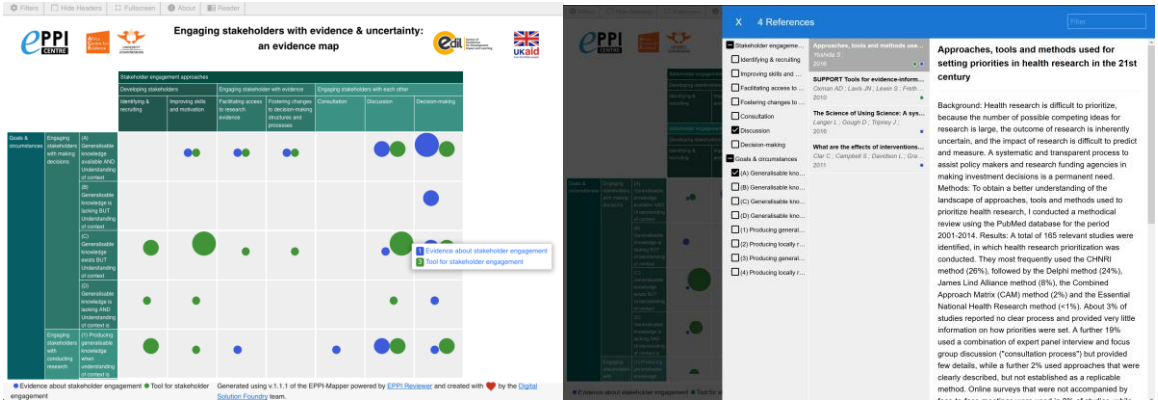
Translating a complex framework into a two-dimensional map was challenging. The key dimensions of the matrices that bound the different circumstances for engaging stakeholders were all placed on the Y axis (similar to the placement of interventions on most other evidence maps). The final choice of outcomes for the X axis (as is conventional for evidence maps) resulted from iterative rounds of coding the items within the map, with successive amendments, as typically happens with mapping research literature.

The final outcome domains for approaches to stakeholder engagement were:

- developing stakeholders, as a group and as individuals, by
  - identifying and recruiting stakeholders
  - improving stakeholders' motivation and skills
- engaging stakeholders with (producing or using) evidence, by
- facilitating access to research evidence
  - fostering changes to decision-making structures and processes
- engaging stakeholders with each other, through
  - consultation
  - discussion
  - decision-making

Tools to support the use of stakeholder engagement have also been identified, to supplement the systematic reviews. Both tools and reviews are included in an interactive evidence map (see Figure 15 for a static screen shot and this link for the interactive version).

Figure 15: Map of stakeholder engagement evidence and tools (static image)



A1.3 Summary of development

The dimensions of the framework for stakeholder engagement developed by Oliver *et al.* (2018b) have been confirmed, and the language refined, during discussions with policy makers, researchers and practitioners. Approaches to stakeholder engagement not identified in the original work, such as human-centred design, have been identified by interviews with practitioners. Systematic reviews underpinning these additional approaches has been identified.

The toolkit now includes the following:

1. A **flexible framework**, spanning the whole field of stakeholder engagement, that explains the key dimensions that distinguish major differences in stakeholder engagement.
2. A **flowchart** illustrating pathways for choosing appropriate methods for stakeholder engagement.
3. An **interactive guide** that matches key contextual features of engagement methods to tasks and circumstances.
4. An **evidence map** that signposts systematic reviews and practical tools and guidance.
5. **Guidance** for identifying and understanding stakeholders and their relationships.

The toolkit has yet to be tested for its utility in guiding choices during projects.

Appendix 2: Evidence and tools for decision-makers engaging stakeholders

This section describes the key distinctions for different approaches to engaging stakeholders with policy decision-making. It also signposts systematic reviews of the underpinning evidence and examples of tools to support stakeholder engagement.

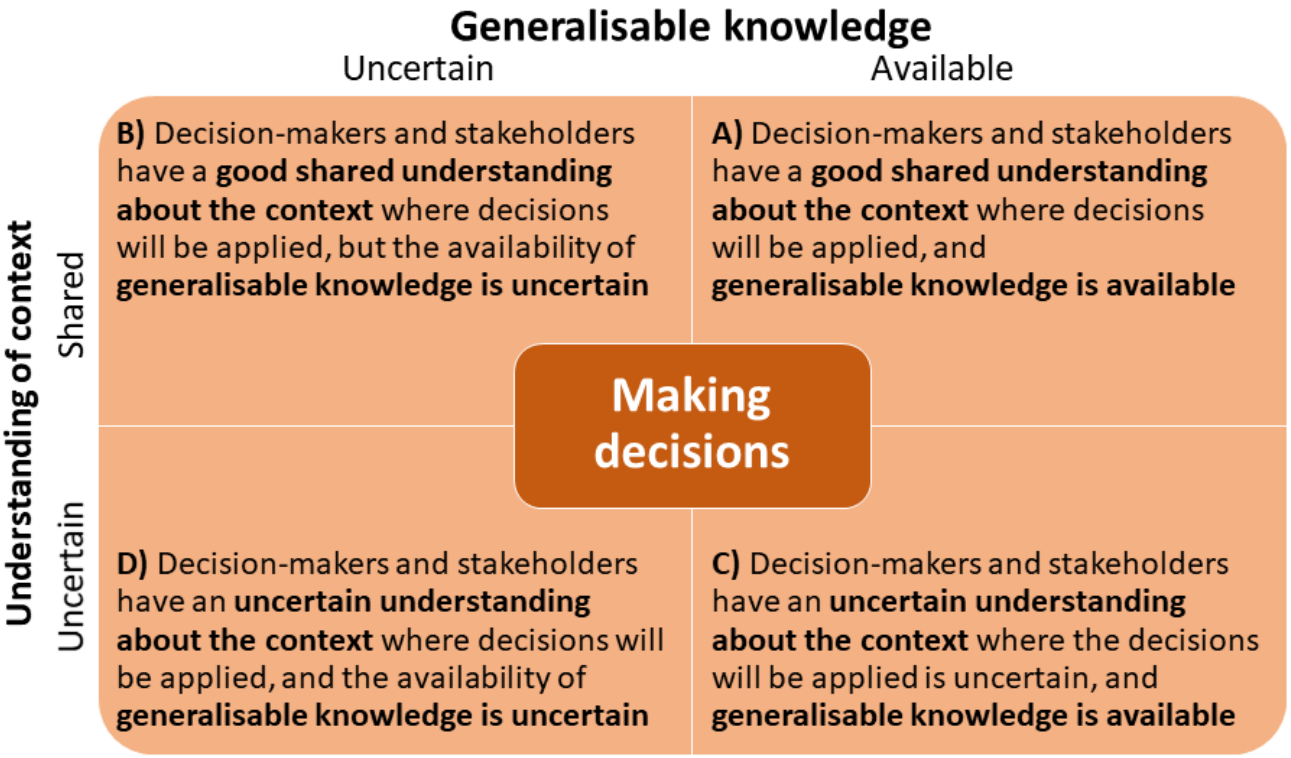
A2.1 Decision-making when the context for implementation is clear and agreed

The matrix below (Figure 16) helps decision-makers, researchers and other stakeholders choose methods and tools for engaging with evidence and each other, depending on:

- whether the decision can draw on generalisable knowledge (right-hand column) or not (left-hand column)
- whether knowledge about where a decision will be applied is clear and agreed – in other words, if there is a shared understanding of the context (top row) or uncertainty (bottom row)

As the appropriate choice of methods and tools for engaging with evidence and with stakeholders varies with these parameters, the first step is to locate the decision to be made in this matrix.

Figure 16: Making decisions by using generalisable and context-specific knowledge



Cell A: When decision-makers and stakeholders have a good shared understanding of the context for implementing decisions, they can learn from methods and tools for

engaging with each other and for finding generalisable evidence, appraising its quality and relevance, and making decisions, informed by or in discussion with relevant stakeholders.

Methods of choice: Teaching regarding the components of evidence-informed decision-making is well developed in healthcare (Young *et al.*, 2014). It includes making judgements about the transferability of health and social welfare evidence about interventions from where it was generated to where it might be applied, and it has been assessed by 25 different checklists that compare the original study context with the subsequent context of application in terms of population, intervention, implementation context (immediate), comparison intervention, outcomes, environmental context, and researcher conduct (Munthe-Kaas *et al.*, 2019). Such comparisons can be made using local data and local stakeholders. Small numbers of stakeholders, drawn from key organisations (e.g. committee membership, key informant interviews, partnering stakeholder organisations) are adequate where there is consensus regarding the understanding of the context for implementing decisions.

Limitations: However, such approaches can miss important voices.

Table 3 lists relevant systematic review evidence and practical tools.

Table 3: Evidence and tools for engaging stakeholders when there is good shared understanding of the context of implementing decisions and generalisable evidence is available

Evidence	Tools
• A systematic review of systematic reviews about the use of research by policy makers, practitioners and members of the public provides evidence about **facilitating access to research evidence** (e.g. communication strategies and evidence repositories); **building their skills to access and make sense of evidence** (e.g. critical appraisal training programmes); and enhancing their motivation. This could include **fostering changes to decision-making structures and processes** (Langer *et al.*, 2016).	• Electronic libraries, such as: Health Systems Evidence, Social Systems Evidence and the 3ie development evidence portal. • Tools and skills for finding and appraising the quality and relevance of evidence, such as those hosted by the Centre for Homelessness Impact. • Integrating evidence in organisational decision-making procedures, e.g. the WHO Handbook on developing guidelines.

Cell B: When decision-makers and stakeholders have a good shared understanding of the context for implementing decisions, but generalisable evidence is lacking, or cannot be applied locally, decision-makers can learn from local shared understandings held by key informants, local leaders or organisations.

Methods of choice: This situation suits adaptive or iterative learning, whereby decisions are informed by direct experience, and good practice is shared within and across organisations and cultures, through coaching, mentoring or demonstration (Webster *et al.*, 2018). This is presented as preferable to formal evaluation and reporting, which influence policy slowly and offer little directly to practitioners on the ground. Also appropriate is participatory action research, which involves communities in cycles of action and reflection facilitated by a researcher. Participatory action research lacks a precise definition and is part of a continuum that includes action research and community-based participatory research (Shamrova and Cummings, 2017). These methods employ small numbers of stakeholders, drawn from key organisations (e.g. committee membership, key informant interviews, partnering stakeholder organisations), or from within an organisation (e.g. developing a learning culture), because there is consensus regarding the understanding of the context for implementing decisions.

Limitations: Working with larger numbers can be time-consuming so action may be delayed or important local information may be lacking.

Table 4 lists relevant systematic review evidence and practical tools.

Table 4: Evidence and tools for engaging with stakeholders when there is good shared understanding of the context of implementing decisions but generalisable evidence is lacking

Evidence	Tools
• Partnerships for culturally and logistically appropriate participatory research, through better recruitment, professional capacity and stakeholder group competence, can lead to constructive conflict and negotiation, to enhance outputs and outcomes, sustain project goals, and create system changes and new opportunities (Jagosh *et al.*, 2012).	• Form partnerships to pool knowledge and develop solutions. • Adopt problem-driven iterative adaptation. • Beneficiary feedback/community accountability or participation.

A2.2 Decision-making when the context for implementation is NOT clear and agreed

Sometimes decisions are made about contexts that are less well understood.

Cell C: When decision-makers and stakeholders have a limited shared understanding of the context for implementing decisions or implementation is required in many different contexts, in addition to finding and appraising generalisable evidence there is a need to draw on local understanding by involving more stakeholders in making the decisions, and monitoring the implementation.

Methods of choice: Effective interventions to increase the uptake of evidence are likely to be those that are tailored to the context and that include local research, extensive stakeholder engagement, and community participation (Clar *et al.*, 2011). Large numbers of stakeholders can be selected for their diversity of viewpoints (e.g. widespread consultation, facilitating discussion and deliberation, capturing mutual learning) to critique evidence, policies and programmes in light of context-specific knowledge.

Limitations: Working with larger numbers of stakeholders can be time-consuming so action may be delayed or important local information may be lacking.

Table 5 lists relevant systematic review evidence and practical tools.

Table 5: Evidence and tools for engaging with stakeholders when there is limited shared understanding of the context of implementing decisions but generalisable evidence is available

Evidence	Tools
• Interventions to improve the uptake of evidence from health research into policy in LMICs (Clar *et al.*, 2011). • Knowledge brokering (Bornbaum *et al.*, 2015). • Deliberative dialogue (Abelson *et al.*, 2003).	• Deliberative dialogue. • Guidance for listening to potential beneficiaries, using logic models or theories of change for developing complex interventions.

Cell D: When decision-makers and stakeholders have a limited shared understanding of the context for implementing decisions, and generalisable evidence is lacking, the immediate need is to develop local shared understanding.

Methods of choice: In this situation, progress depends on local knowledge alone. This may be achieved by engaging large numbers of stakeholders selected for their diversity of viewpoints (e.g. widespread consultation, facilitating discussion and deliberation, capturing mutual learning) to pool multiple understandings of the context for implementing decisions – for instance, using positive deviance inquiry or discovering positive deviants (in other words, those 'individuals or other social entities who unexpectedly achieved desired outcomes' (Albanna and Heeks, 2018, p. 4; Herington and van de Fliert, 2018)). Alternatively, working with smaller numbers includes citizen participation in supporting good governance and the transparency of evaluations assessing the effectiveness of interventions (Lynch *et al.*, 2013); formal structures and processes at local level for holding organisations to account by communities (Westhorp *et al.*, 2014); and remote management, whereby external aid agencies employ local staff and take advantage of their local knowledge by sharing responsibility with them for decision-making (Rivas, 2015).
Limitations: Working with larger numbers can be time-consuming so action may be delayed or important local information may be lacking. Engaging local stakeholders is appropriate.

However, for these circumstances (and others) the question remains 'which local stakeholders?' A systematic review of providing basic services to slums found that national government, NGOs and civil society organisations all had distinct contributions to make (Devkar *et al.*, 2019).

Table 6 lists relevant systematic review evidence and practical tools.

Table 6: Evidence and tools for engaging with stakeholders when there is limited shared understanding of the context of implementing decisions and generalisable evidence is lacking

Evidence	Tools
• Positive deviance inquiry. • Gathering and applying local tacit knowledge (Abbott *et al.*, 2020). • Decisions shared between aid agencies and local employees through delegation and partnership (Rivas, 2015). • Information shared between different aid agencies (Lotfi *et al.*, 2016). • Human-centred design (Bazzano *et al.*, 2017; Holeman and Kane, 2019).	• Positive deviance inquiry – guidance and tools. • Using human-centred design – FCDO and NESTA.

A2.3 Summary of findings

When making decisions for policy or practice, stakeholder engagement methods of choice depend on whether there is a good shared understanding of the context for implementing decisions. When there is, engagement requires small numbers of stakeholders from key organisations. With small numbers, and sufficient training, stakeholders may engage directly with, and debate, the evidence. Without a good shared understanding of the context for implementing decisions, larger numbers of stakeholders are required, and fewer methods engage large numbers of stakeholders directly with the evidence.

Appendix 3: Evidence and tools for researchers engaging with stakeholders

This section describes the key distinctions for different approaches to engaging stakeholders in conducting research. It also signposts systematic reviews of the underpinning evidence and examples of tools to support stakeholder engagement.

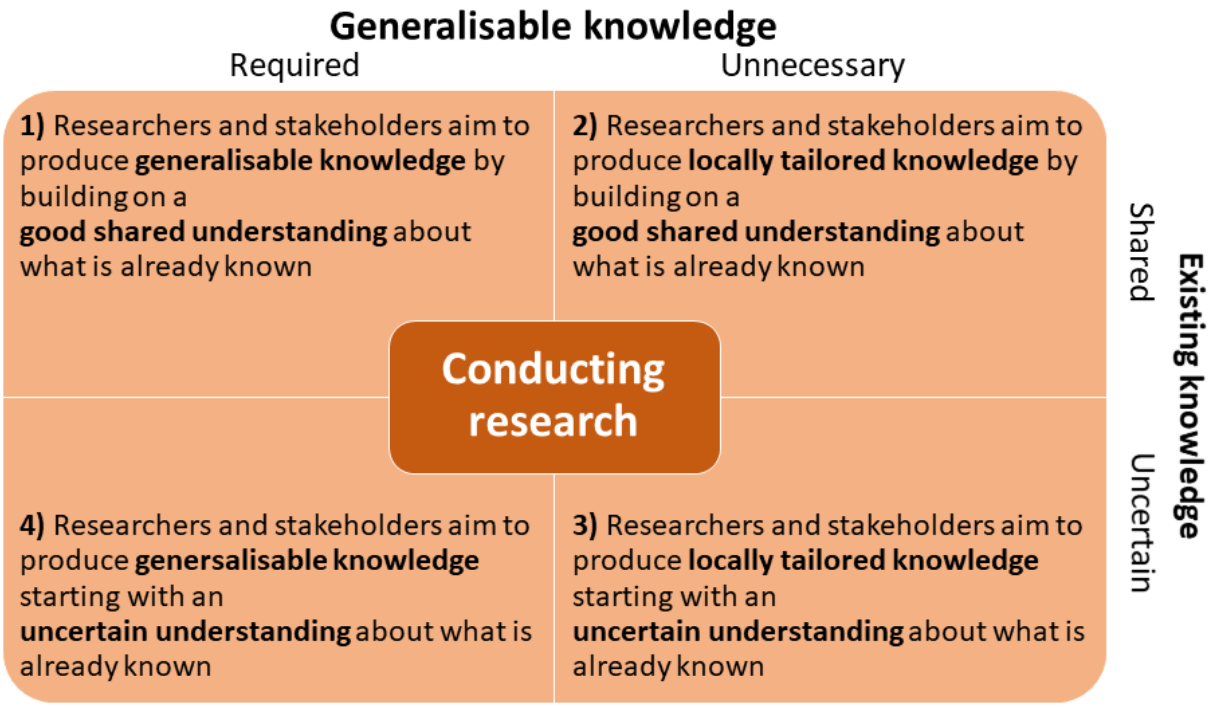
A3.1 Conducting research when prior knowledge is clear and agreed

A mirror image of the matrix relating to decision-making described above is the matrix below (Figure 17) relating to conducting research. This matrix helps researchers and other stakeholders to choose methods and tools for engaging with the research process and each other, depending on whether they plan to:

- produce generalisable knowledge that might be widely applied (left-hand column) or knowledge that is tailored to local circumstances (right-hand column); and
- whether there is clarity and consensus regarding the knowledge that the research will build on (top row), or whether existing knowledge is ambiguous (bottom row)

As the appropriate choice of methods and tools for engaging stakeholders in the research process varies with these parameters, the first step is to locate the research to be done within this matrix.

Figure 17: Conducting research to produce generalisable or locally tailored knowledge



Cell 1) When generalisable knowledge is required, and researchers and stakeholders have a shared understanding of existing knowledge, research can be driven by developing widely shared priorities based on their values.

Methods of choice: Consensus development methods are widely used to set research priorities (Fadlallaha *et al.*, 2020). This is possible with small numbers of individuals, drawn from key organisations (e.g. committee membership, key informant interviews, partnering stakeholder organisations) because the meaning of key concepts is largely clear and agreed in advance.

Limitations: However, such approaches can miss important voices if effort is not made to reach out to potentially excluded groups, such as patients and their representatives, caregivers, and the general public, for example (Fadlallaha *et al.*, 2020).

Table 7 lists relevant systematic review evidence and practical tools.

Table 7: Evidence and tools for engaging with stakeholders to produce generalisable knowledge when there is a good shared understanding of prior knowledge

Evidence	Tools
• Consensus development methods to identify shared research priorities (Viergever *et al.*, 2010; Rudan *et al.*, 2017). • Committees and advisory groups are embedded in the governance of science (Behdinan *et al.*, 2018; Oliver *et al.*, 2018a).	• Guidance for consensus development is available from the James Lind Alliance. • Research teams can draw on existing taxonomies developed by professionals and communities together (e.g. core outcome sets).

Cell 2) When locally relevant evidence is required, and researchers and stakeholders have a clear, shared understanding of existing knowledge, research can be driven by local priorities.

Methods of choice: Where generalisable knowledge already exists in the form of systematic reviews, but does not address the precise questions of local interest, rapid systematic reviews offer a practical approach. Framework synthesis combines existing knowledge with stakeholder involvement, often through visualisation, to tailor the research to local needs (Brunton *et al.*, 2020). Stakeholder engagement in these circumstances is possible with small numbers of individuals, drawn from key organisations (e.g. committee membership, key informant interviews, partnering stakeholder organisations) who can inform research processes from local perspectives.

Limitations: However, such approaches can miss important voices.

Table 8 lists relevant systematic review evidence and practical tools.

Table 8: Evidence and tools for engaging with stakeholders to produce locally tailored knowledge when there is a good shared understanding of prior knowledge

Evidence	Tools
• Committees and advisory groups are embedded in the governance of science (Behdinan *et al.*, 2018; Oliver *et al.*, 2018a). • Participatory rapid reviews (Tricco *et al.*, 2017).	• A practical guide for rapid reviews to strengthen health systems.

A3.2 Conducting research when prior knowledge is NOT clear and agreed

Sometimes research is conducted when prior knowledge is less well understood or is contested.

Cell 3) When locally relevant evidence is required, and researchers and stakeholders have a limited shared understanding of existing knowledge, research begins by working with people who hold local knowledge.

Methods of choice: The aim is to collate and build on local knowledge, which is often tacit knowledge or insights held by local populations about what influences their lives, and thereby to recognise examples of exceptional coping capabilities in challenging circumstances; these examples are known as positive deviance. Methods that are used to gather local information for policy decisions, such as positive deviance inquiry and human-centred design, can also be used as part of formative evaluation when developing interventions. Albanna and Heeks (2018) systematically reviewed both traditional methods for recognising positive deviance (interviews, focus groups and observation) and novel methods of recognising positive deviance via big data (e.g. mobile phone records, social media, remote sensing data). In this way, multiple understandings of key issues are pooled from large numbers of stakeholders selected for their diversity of viewpoints (e.g. widespread consultation, facilitating discussion and deliberation, capturing mutual learning).

Limitations: Working with larger numbers can be time-consuming so action may be delayed. Working with smaller numbers may result in a lack of important local information because sampling to capture a broad range of experience in an unfamiliar setting may be difficult. For instance, some academic research documenting local, lay, and traditional knowledge in the circumpolar Arctic about climate change missed knowledge about subsistence practices and household security through purposive sampling with snowballing. If they reported their methods, these studies typically engaged male knowledge-holders, usually hunters and elders, more than women (Hitomi and Loring, 2018).

Table 9 lists relevant systematic review evidence and practical tools.

Table 9: Evidence and tools for engaging with stakeholders to produce locally tailored knowledge when there is a limited shared understanding of prior knowledge

Evidence	Tools
• Positive deviance inquiry. • Gathering and applying local tacit knowledge (Abbott *et al.*, 2020). • Human-centred design (Bazzano *et al.*, 2017; Holeman and Kane, 2019).	• Positive deviance inquiry – guidance and tools. • Using human-centred design – FCDO and NESTA.

4) When generalisable knowledge is required, and researchers and stakeholders have a limited shared understanding of existing knowledge, research effort is required to gather local stakeholders and bring their knowledge to bear on the research.

Methods of choice: Knowledge brokers can provide valuable support for bridging understanding from different standpoints. Knowledge brokering involves individuals, organisations or structures acting as an intermediary or agent, to negotiate, interpret, communicate or commission work between researchers and decision-makers, serving the needs of both in an equitable relationship to make research and practice more accessible for each, taking into account research evidence and other forms of knowledge, such as tacit or procedural knowledge that reside in individuals and organisations (Ward *et al.*, 2009).

Large numbers of stakeholders can be selected for their diversity of viewpoints (e.g. widespread consultation, facilitating discussion and deliberation, capturing mutual learning) to critique evidence, policies and programmes in the light of context-specific knowledge.

Limitations: Working with larger numbers can be time-consuming so action may be delayed or important local information may be lacking.

Table 10 lists relevant systematic review evidence and practical tools.

Table 10: Evidence and tools for engaging with stakeholders to produce locally tailored knowledge when there is little shared understanding of prior knowledge

Evidence	Tools
• Rapid reviews supported by knowledge brokers (Moore *et al.*, 2017) (in this case, small numbers of local stakeholders).	• Involving stakeholders in programme evaluation.

A3.2 Summary of findings

When conducting research, methods of choice for stakeholder engagement depend on whether there is a good shared understanding of the underpinning concepts. When there is, engagement requires smaller numbers of stakeholders from key organisations. With small numbers, and sufficient training, stakeholders may engage directly with, and debate, the research process. Without a good shared understanding of the key concepts underpinning the research, larger numbers of stakeholders are required, and fewer methods engage large numbers of stakeholders directly with the research process.

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