Reporting lessons learned to help improve institutional practices for evidence-informed policymaking

The crafting of policy is influenced by a wide range of factors and considerations, many of which cannot be accounted for in the scientific process. Even so, the use of "evidence" in public policymaking is fundamental to reducing inefficacy and the risk of errors. Errors that can have significant societal or financial consequences.

Decisions that can entail such consequences should be based, as much as possible, on the "best information available", produced through a valid methodological process. The processes guiding policy decisions should be made so that such information is systematically prioritized over subjective reasons and perceptions, beliefs or political interests. Ultimately, this is what the principle of "evidence-informed policymaking" (EIPM) is about.

New strategies to increase evidence use

In 2019, PEP launched a new research program (3rd funding round of the PEP PAGE II initiative[1]) – funded by the International Development Research Centre (IDRC) of Canada – which aimed to support existing policy processes through the analysis of actual (implemented or planned) policy solutions to issues related to women's employment and economic empowerment in Africa (14 projects in 11 African countries).

To ensure that the research would embed directly into the relevant policy processes, the program introduced a set of innovative strategies and features designed to not only facilitate collaborative working between local researchers and target government institutions, but also to strengthen capacities (on both sides) for evidence-informed policy advice. These included, chiefly:

- Coproduction of the research (projects were conducted by mixed government-research teams)
- Workshops to review best practices for evidence-informed policy advice and communication
- Development of a policy paper – i.e., presenting an analysis to position the PEP research and findings within the broader national policy contexts and decision frameworks (see text box below).

In addition to relevant literature[2], the design of these new features was informed by the recent experience of a UNESCO-PEP initiative to support West African government officials in improving their respective institutions' practices related to evidence-informed policymaking (EIPM).

PEP also used this program to survey the supported project members (researchers and government officers involved) about the practices of their respective/affiliated institutions with regards to EIPM.

[1] The program constituted the third and final funding round of the PEP research and capacity building initiative to support locally-led projects of "Policy Analysis on Employment and Growth (PAGE) II", initially launched in 2016: www.pep-net.org/page-ii-round-3
[2] From the (relatively new) field of "evidence-based policymaking", including lessons drawn from the UK Aid-funded BCURE program.

The policy paper analysis model

In 2019, PEP developed and introduced a new kind of reporting template, including detailed instructions, to help researchers position their research work and findings into the broader national policy contexts, strategies and decision frameworks[3].

The template is based on (but an adapted version of) the analytical model of the "policy paper" developed by Young and Quinn (2002). This model postulates that to be effective, and useful for the decision-maker, the communication of policy advice must be presented as the result of a comparative evaluation (pros and cons, harms and benefits) of the main options available for policy action around a specific issue, after stating why action is indeed required to tackle this particular issue.

Summary and outline

The purpose of this report is to provide a set of recommendations to help institutions involved in crafting and/or advising policy improve their practices related to the use of scientific evidence to inform decisions. These recommendations are based on conclusions drawn from the analysis of:

- Survey data collected from 114 members of PEP-supported project teams in 11 African countries,
  - including 50% working in academic institutions, 43% in government institutions, and 7% in "other types" of institutions.
- The growing literature related to the field of evidence-informed, or evidence-based, policymaking (see "References", page 19)
- PEP's experience in working at the interface between science and policy, with academics and government institutions, through various initiatives.

The first part of the report defines the general concepts and processes related to EIPM, including notions to which the subsequent sections refer.

The second part reviews the specific lessons learned from the survey, experience and anecdotal information reported by the 14 PEP project teams supported under the 3rd PAGE II funding round.

The third part provides a general overview of what has been identified, across all data and knowledge bases, as key challenges faced by government institutions to achieve or systemize the use of evidence in policy advisory processes. These are distinguished between the "**operational level**" and the "**decisional level**" of the policymaking process, and a set of solutions are proposed, in the form of "recommendations", for each category of challenges.

Generally, these recommendations focus on the two main following strategies:

1) The establishment of institutional procedures and mechanisms or structures, and
2) The support and development of capacities related to the use of scientific evidence to inform policy processes.

[3] Find it here: https://www.pep-net.org/sites/pep-net.org/files/typo3doc/pdf/PEP_official_documents/templates/Template-PEP_Policy_Paper_English.docx

1. What is "evidence-informed policymaking"

At first glance, questioning whether governments should craft policy based on evidence seems senseless. Why wouldn't we want programs to be based on tested and sound information before we spend millions on them? How can we disagree with the idea of using scientific knowledge and innovations to inform policy interventions? Isn't this just the norm? Plus, it is generally acknowledged nowadays that nearly all policy challenges have some scientific dimension(s), and that every field of science produces usable knowledge.

But strange as it may seem to people outside government, the emphasis on applying scientific standards of proof to policymaking is a recent and still-disputed phenomenon.

Genesis

While the notion of using science to inform decision-making can be traced as far back as ancient Greece, a general search for the concept of "evidence-based policy" almost systematically leads one to references from the field of medicine or health. The concept of "evidence-based practice" emerged in the 1980s, and is defined as "the conscientious, explicit and judicious use of the best scientific knowledge available to decide how to care for their patients" (Sackett & al., 1996).

Over the years, growing recognition of the need to extend such principles to other spheres of decision-making has given rise to the notion of "evidence-based policymaking" (EBPM)[4].

What is EBPM? EBPM is a discourse or set of methods that informs the policy process, rather than aiming to directly affect the eventual "goals" of the policy. It advocates for a more rational, rigorous and systematic approach to informing policy advisory and decision processes.

The pursuit of EBPM is based on the "premise that policy decisions should be better informed by available evidence and should include rational analysis. This is because policy which is based on systematic evidence is seen to produce better outcomes." (Sutcliff & Court, 2005)

Why is it important to advocate for evidence use in policymaking?

Due to a variety of constraints and systemic failures (discussed below), policies are often designed without sufficient, or even any sort of scientific scrutiny or evidence base.

The crafting of policy is influenced by a wide range of factors and considerations that are not necessarily accounted for in the scientific process. Further, the many actors, rules and norms, party lines and ideological beliefs that continually exert influence over policy orientations are often not aligned with the

[4] The concept was initially popularized by the Blair Government, in the United Kingdom, who said they wanted to end the ideological led-based decision making for policymaking. The notion was initially picked up by various advocacy movements, first in relation with anti-poverty policies, but also in the areas of education and development more generally (Laurent et al., 2009). The rise of the concept eventually led to a myriad of institutional innovations, such as best practice guidelines and the philanthropically funded Coalition for Evidence-Based Policy in the US, or the Cochrane and Campbell collaborations at the international level[4]. There is now an extensive network of intermediary (national, regional and international) organizations dedicated to bringing research knowledge to the world of policy making.

interests of the "majority". Not to mention changes in administrations that can suddenly shift objectives, pressing for actions to be taken quickly and thus leaving no time nor room for proper analysis.

"The science should not stand in the way"
White House Press Secretary, Kayleigh McEnany, 17 July 2020

"The dirty secret of almost all government is that we don't know whether we're doing the right thing"
David Halpern, 2018[5]

The use of scientific evidence in public policy is fundamental to reducing inefficacy and the risk of errors - errors that can have significant societal or financial consequences (IRPP-CAE, 2016). Decisions that can entail such consequences should be based, as much as possible, on the "best information available", produced through a valid methodological process. The processes guiding policy decisions should be made so that such information is systematically prioritized over subjective reasons and perceptions, beliefs or political interests. Ultimately, this is what the principle of "evidence-informed policymaking" is about.

Because science is designed to be disinterested, if a policy question involves (..) "what will happen if one policy is implemented instead of another", science is generally a more dependable and defensible guide than informed hunches, analogies, or personal experience
Prewitt & al, 2012

What is "evidence" for policy

Some have promoted particular types of evidence as 'best' for policymakers to consider, including experimental evaluation studies such as "randomized controlled trials" (RCTs) to identify programs and practices capable of improving policy-relevant outcomes[6].

However, policy issues are usually far removed from the controlled environment of a lab[7], and most areas of policy-relevant knowledge are not well served by quantitative research. The field thus now increasingly acknowledges that a variety of methods and instruments - applied in social sciences - can still produce what can be considered as the "best possible evidence" under a given set of circumstances (Cartwright and Hardie, 2012; Prewitt & al., 2012).

There are also many cases where there is no scientific evidence available concerning a particular issue. And yet in those cases decisions should be made based on what can be objectively assessed as the "best knowledge available" – and what qualifies as such should be clearly defined and accepted both within and across institutions.

[5] Found in *"Evidence-based policymaking: is there room for science in politics? | Apolitical - Retrieved 13 July 2019:* https://apolitical.co/solution_article/evidence-based-policymaking-is-there-room-for-science-in-politics/
[6] Using an RCT, researchers can determine whether a "target population" fares better or worse under a specific social intervention than a "control group" does without it. If it does, the program can be said to work, and can then be rolled out to more people, etc. If it doesn't, the results can help identify required adjustments.
[7] Results from the experimental evaluations (such as RCTs) of programs and policies – which are necessarily conducted in very specific locations and contexts, with small population groups – may not be scalable (applicable in a broader, nation-wide context) and thus potentially lead to unexpected effects. See https://www.economist.com/finance-and-economics/2019/06/15/why-an-anti-poverty-programme-in-bangladesh-failed

"In the end, whether it is data analytics, behavioural insights, horizon-scanning, or research from the 'hard' sciences, all these types of evidence are valid, as long as they are trustworthy and useful for governments".
(Breckon, 2016)

"Good data, analytical skills and political support to the use of scientific information, as such, are typically seen as the important elements of an evidence-based approach."
(Head, 2009)

There are various sources/types of information that can be considered or qualify broadly as evidence, or "best knowledge available", to inform policymaking – e.g. **experiential or practice-based information[8], contextual information or information by citizens[9], raw data[10], grey literature[11] and, of course, scientific literature or research-based information.**

The types of knowledge to be prioritized as inputs depend on the nature of the issue. However, the concept of evidence-informed policymaking implies that, **when available, there should be the systematic and rigorous consideration of evidence derived from scientific literature or research activities** (Sutcliffe & Court, 2005). "Rigorous consideration" also entails the need to avoid biased and erroneous applications of evidence for political ends. To achieve this, clear rules and procedures must be put in place at the systemic level.

From "evidence-based" to "evidence-informed"

Of course, the development of public policies is an area that, by nature, requires the mobilisation of a variety of knowledge, and the purpose of promoting this approach is not to reduce the policy process to a scientific problem-solving exercise.

Indeed, the growing literature on the topic now generally agrees that when it comes to influencing policy, scientific evidence:

- Will never be more than one of the inputs to the policy process—alongside ethical, fiscal, political, and other considerations—and therefore is not the only source of information that a policy analyst needs to consider;
- Does not necessarily need to be derived from experimental methods to be considered a valid input for policymaking;

[8] Referring to the idea of "know-how", or knowledge acquired through experience and that a person or an organisation will rely on to consider solutions. In the development of a public policy, this kind of information is usually referred to as **"expert opinions"**.
[9] Citizens are stakeholders who hold information, gained through their own experience, about a specific context, the culture, the people and their challenges, etc. This type of knowledge can either be the result of the democratic process itself or must be collected systematically and methodically (to avoid biases), through consultations, interviews, deliberative processes, etc.
[10] Referring to qualitative or quantitative data, presented without context or analysis, in the form of databases; the most common is administrative or population data (e.g. from censuses or household surveys), but it can also refer to more specialised fields, such as meteorological data, poverty maps, etc.
[11] This information corresponds to materials and research produced by organisations outside of the traditional commercial or academic publishing channels. Common publication types include reports, working papers, government documents, white papers and evaluations. Organisations that produce grey literature include government departments and agencies, civil society or NGOs, academic centers and departments, as well as private companies. The products can either be made available to the public or distributed privately, and the standards of quality, review and production can vary considerably.

- Always carries a certain degree of uncertainty, even in the best-case scenario, whether regarding the conclusions of a study or how to interpret results and adapt them to a different context.

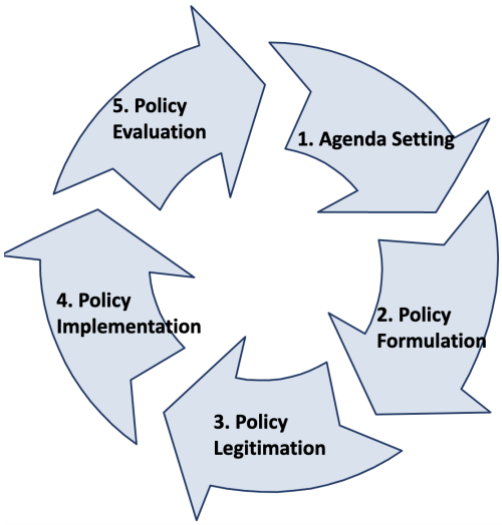
Recognition of these realities has led to a language shift towards the use of "evidence-informed", to replace "evidence-based", when referring to policymaking. This language shift allows continued thinking about **the underlying desire to *improve* evidence use in terms of its rigor or quality**, while avoiding some of the key limitations or reductionist ideas at times seen with the evidence-based language.

Uses and processing of scientific evidence to inform policy

Although the term "evidence" is frequently encountered as claims about predicted or actual consequences—effects, impacts, outcomes or costs—of a specific action, that is but part of the story. Science can be used as evidence for early warning of a problem to be addressed, for target setting, for implementation assessment, and for evaluation (effectiveness, efficiency, unexpected outcomes).

Some of the potential roles and contributions of scientific evidence to inform policy processes include:

Stages of the policymaking cycle



(1) identifying problems,
(2) measuring their magnitude and seriousness;
(3) reviewing alternative policy interventions;
(4) assessing the likely consequences of particular policy actions (intended and unintended)
(5) evaluating what, in fact, results from policy.

Evidence therefore has the potential to influence the policymaking process at EVERY STAGE OF THE POLICY MAKING PROCESS, from agenda-setting to formulation, and implementation to evaluation.

Of course, in practice, the process of policymaking is anything but linear, and it can also begin and be abandoned, or altered, at any point of the cycle.

There are basically **two ways to gather or procure "evidence"** to inform policy processes; either by:

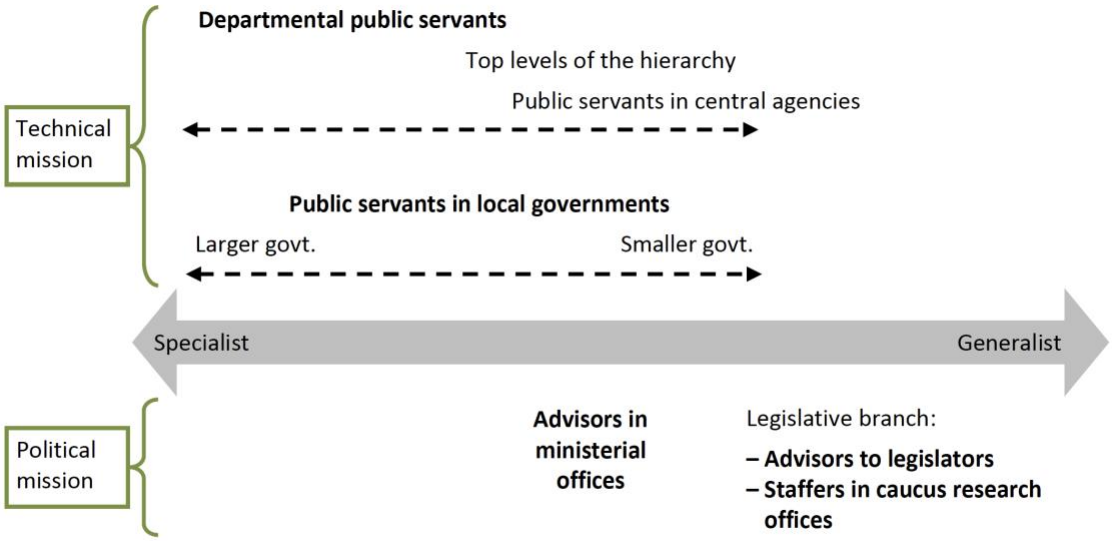
1) seeking and using existing knowledge and data, e.g., from literature, databases, experts, etc.
2) producing new knowledge, e.g., through conducting evaluation or other analytical processes.

Both present their own set of challenges, as discussed in section 2.1.1 below.

The tasks related to processing evidence into policymaking—which are detailed in the two following sections—can either be **led by "individuals" or "structures" (e.g. units or departments).**

The parties (both individuals and structures) involved in the process of advising policy can also generally be categorized (as per the illustration below – p.7) by:

1) the nature of their "mission" (whether it is technical, or political) and
2) their level of specialization (from generalists to specialists).



(Morestin, 2017)

When it comes to the science advisory ecosystem more specifically, the providers of "specialized" knowledge can either be **part of the internal policy advisory process** (within a government institution), **or external consultants/bodies.** The table below lists different types of institutional entities and roles that can be involved in a science advisory ecosystem:

	Knowledge generators	Knowledge synthesizers	Knowledge brokers	Policy Evaluation
Individual academics	+++	++		+
Academic societies/professional bodies		+		
Government employed practicing scientists	+++	+		++
Scientist within regulatory agency	+	++	++	
Independent think tanks		+++	+	+
What works units etc		+++	+	++
National academies		+++	+	
Government advisory boards/science councils		++	+	
Science advisors to executive of government		++	++++	
Science advice to legislators		+	++	±

(Gluckman, 2019)

We also note that such roles can be engaged in a **more or less regular** fashion (i.e. according to institutionalized procedures) **or** rather **on an ad hoc basis.**

While this overview is clearly an oversimplification of the many, complex concepts and processes involved in the notion of EIPM, its purpose is to provide a general picture of what we are referring to in the following sections.

2. Lessons from PAGE II-Round 3 projects

What the beneficiaries had to say

As part of the survey conducted at the end of the project cycle with members of the PAGE II-Round 3 project teams, PEP questioned respondents on the impact of their PEP experience and training on their:

- "sensitization" to the needs and constraints related to the achievement of EIPM
- "development of capacities" in various practices related to EIPM

The responses can be summarized as follows:

Sensitization: The PEP training and experience had a major influence or impact on the respondent's…	Researchers	Government officers	**All**
Perception of the importance to promote or use scientific evidence to inform policymaking	61%	80%	**70%**
Understanding of the needs and processes related to the production and use of evidence to inform policymaking	65%	70%	**68%**
Understanding of the knowledge/skills required for the production of scientific evidence	63%	61%	**62%**
Understanding of the knowledge/skills required for the communication of evidence to inform policymaking	57%	66%	**61%**
Will to promote the use of scientific evidence within their institution	59%	77%	**68%**
Institutional practices (or practices within their institutions) related to the use and promotion of scientific evidence to inform policy and decision-making processes in general	39%	52%	**46%**
Average results	57%	68%	**63%**

Capacity development: The PEP training and experience has allowed respondents to acquire or improve their own "capacity" related to:	Researchers	Government officers	**All**
Experience of scientific research	63%	80%	**71%**
Understanding of the methodology or analytical process used to produce evidence for policymaking	70%	77%	**73%**

Understanding of the scientific or technical jargon	57%	66%	**61%**
Understanding of the policy (decision) contexts - e.g. constraints and needs of decision-makers	65%	61%	**63%**
Ability to synthesize and/or simplify technical knowledge and to relate to its policy implications	76%	66%	**71%**
General communication skills	37%	48%	**42%**
Average results	61%	69%	**64%**

The overall scores are generally similar between sensitization and capacity development, with slightly more positive results amongst the government officers (vs researchers).

The most outstanding results are highlighted below; some of which can help draw lessons for future PEP programs:

- The program was particularly successful in improving the beneficiaries' "experience of scientific research", especially amongst government officers.
    - Given the nature and training activities embedded into the PEP research support program, this result is not surprising.
- PEP was also successful in increasing awareness (of the importance) and will "to promote and use scientific evidence to inform policymaking", especially amongst government officers, as well as in improving the beneficiaries' understanding of the needs and processes related to EIPM. However, it seems the program generally failed at helping beneficiaries (especially researchers) understand their respective institutions' practices in this regard.
    - The same (failure) was also perceived by PEP staff during a group discussion held with government officers in Senegal, in September 2019, following a two-day workshop on "best practices for EIPM". Yet, through a previous survey, this workshop had been rated as the activity which had "most contributed to improving the participants" capacity to relate research to policy needs.
    - This would suggest that a more "customized", or individual, approach would be required to help beneficiaries link the general knowledge related to EIPM practices to their own institutional contexts.
- Another contradiction is noted in the results (especially amongst researchers), between the success in improving their ability to translate scientific evidence into useful inputs for policy, and the failure to improve their general communication skills.
    - Indeed, only 30% of the contents of the workshop in "best practices for policy briefing" —held at the end of the research cycle (before dissemination), in September 2020—was dedicated to "general communication skills", while the rest focused on the "contextualization of research-based evidence into the relevant policy decision frameworks".

What we can learn from the (reported) impact on institutional practices

As part of the standard PEP monitoring and evaluation (M&E) system, all PEP grant recipients are also required to fill out periodic surveys, using a series of questionnaires focused on different areas of project

outcomes: from capacity building to career impact, and policy engagement to influence on decisions and practice amongst local institutions.

From the various "impact stories[12]" reported by the PAGE II-Round 3 project teams, we note a few specific trends in how the PEP projects/approach have influenced the local institutions involved, either through the teams' engagement or their members' direct affiliation.

These include:

- **The appointment of local researchers to join special government working groups or advisory committees** (either permanent or ad hoc entities), to inform the development of specific policy/strategies or general decision processes.
    - This would suggest that the said government institutions were previously not aware of the researchers' expertise and availability to assist in such advisory processes.
- **The request by several (both government and research) institutions for PEP project members to train their (other) staff in the use of policy papers** as a tool to convey policy advice, or to advise general institutional practices related to EIPM.
    - This would suggest acknowledgement, by the institutions, that there are gaps or shortcomings in the existing (internal) practices, methods and instructions related to EIPM, and specifically in the development and communication of policy advice.
- Another key, noteworthy event amongst the various outcomes of the PAGE II-Round 3 program is the decision made by the heads of several government agencies[13] and a local research institution[14] working on "energy issues" in Nigeria, to jointly develop a **new collaborative communication framework that would encourage and facilitate the exchange, integration and co-production of knowledge**. A similar decision was made in Benin in 2019, regarding the coordination of agencies working on the issue of youth employment, as result of another PEP project supported under the first round of PAGE II.
    - This suggests acknowledgement of the lack of coordination between experts and/or agencies working on a common issue in one country.

3. Challenges and related recommendations to increase or systemize evidence use in the policymaking process

As stated in the introductory section of this document (see "summary and outline", page 1), the following section is based on the combined lessons drawn from the experience of the PEP PAGE II-Round 3 program, of other/related initiatives to support EIPM in West African government institutions, as well as from the analysis of relevant literature.

- N.B. In this section all references to data collected from the survey of PEP-supported project teams are highlighted in blue text.

[12] Find there here: https://www.2020pepannualreport.com/2021-pep-impact-stories
[13] REA, Energy Commission of Nigeria, Ministry of Power, and Ministry of Science and Technology
[14] the Center for Petroleum, Energy Economics and Law (CPEEL)

In order to effectively support practitioners in the implementation of recommendations for institutional EIPM practices, we chose to distinguish between the "operational level" and "decisional level" of policymaking.

In the context of EIPM,

- The "**operational level**" refers to units/staff mandated to gather and report information, in a broad sense and upon request, to feed into the policy advisory process. This level is also in charge of implementing policy decisions.
- The "**decisional level**" refers to those in charge of processing the information to produce specific recommendations for decision-making. At this level, the recommendations will also usually take account of political considerations (election cycle, interests of specific/strategic groups, etc.).

3.1. Processing evidence into policymaking at the "operational level"

3.1.1. CHALLENGES AT THE OPERATIONAL LEVEL

With regards to procuring and using evidence to inform policymaking, the key issues that can be identified[15] are (in order of importance, as per the PEP survey responses):

- Lack of access to existing scientific data and literature
- Absence or lack of policy- or context-relevant scientific data/evidence
- Lack of clear instructions/mandates and procedures, within government institutional processes, to seek or procure a relevant scientific evidence base
- Lack of internal capacity to appraise and synthesize information from scientific data/literature
- Lack of internal or local capacity to conduct rigorous analysis or evaluations
- Lack of coordination and collaboration between government institutions and local knowledge producers (research institutes, think tanks, etc.)
- Lack of capacity for effective communication of evidence as an input for policymaking

Access

The majority (75%) of all PEP survey respondents reported experiencing problems in accessing existing and/or relevant data and scientific literature – particularly amongst government officers (80%, vs 69% for academics). While this is known to be a particularly salient and generalized issue in developing countries, further inquiries may be needed to determine the root causes of the accessibility issue in different contexts, so as to identify and apply the appropriate solutions (see recommendations in 3.1.2. below).

For example, limitations in terms of funding (for subscription fees), or technology (mainly internet connectivity to access online repositories) are often cited as the main reasons for the lack of access to relevant databases in developing countries[16]. Although there are potential strategies that institutions can adopt to increase access despite budget limitations (as suggested in section 3.1.2), technology or connectivity in developing countries is often an exogenous factor that cannot be resolved through

[15] See Vogel & Punton (2018) for lessons from the BCURE initiative.
[16] See Ondari-Okemwa (2004; 2007)

institutional reforms, and thus is not addressed in this report.

In other cases, the problem of accessibility can be linked to "capacity gaps", as those in charge of seeking evidence and data may not have sufficient experience or expertise to identify and/or search the relevant sources; see the survey results related to capacities below.

Finally, another major challenge related to accessibility is the absence (as in "non-existence") of relevant data and evidence in relation to the (context-) specific issue at hand. The most obvious solution—conducting the research or analytical work to produce the needed evidence—implies an array of related challenges; the recommendations proposed in 3.2.2 focus mainly on those that can be overcome through institutional reforms or initiatives, e.g., those related to developing staff and organizational capacities. The challenges that depend on exogenous or more systemic factors (e.g., research funding and/or capacities, infrastructure, methodological applications) are not addressed in this report.

Capacities

Results from a review of empirical data from seven countries[17] (Morestin, 2017) suggest that the vast majority of individual public servants and policy advisors only rarely consult scientific literature and research data, and the main reason cited (for not doing so) is that they "do not feel they have the skills required either to assess quality/credibility and methodological aspects, or to interpret contradictory data." According to the same study, the top sources of knowledge used by advisors are "other people" (mostly colleagues), newsletters, government documents (grey literature), raw data and the media.

Amongst the PEP survey respondents, while all reported using "data" (either raw or collected and processed by another institution or consulting firm), only 39% of government officers reported using scientific literature, to inform decision making processes. And about 60% reported using grey literature or recommendations by recognized experts.

Also, 80% of all respondents consider that having research experience, and understanding methodological aspect of data collections, is essential when using scientific evidence to inform policy.

Moreover, despite the "technical nature" of their roles, amongst government officers:

- 66% reported having difficulties in assessing the quality of relevant results and related literature, and in comparing data issued from multiple sources
- 61% consider that their colleagues seriously or very seriously lack capacities in relation to "understanding the different analytical approaches applicable to assess (ex-ante or ex-post) the effectiveness or impact of policy or program interventions".

Communication and awareness

One of the widely acknowledged impediments to the uptake of research-based evidence to inform policy is the problem related to the "communication" of scientific knowledge, which is often associated with the use of technical jargon by "specialized" knowledge providers. This can be partly due to **limitations in terms of communication skills**, which aren't necessarily part of the job requirements, especially at the operational level (for "specialized" government staff).

[17] Australia, Canada, Finland, Germany, Ireland, the UK, and the US

All of the PEP survey respondents agree that communication skills in translating evidence into plain language is essential, and 60% of them (both academics and government) reported having difficulties communicating, summarizing and simplifying scientific evidence. The remaining 40% may be due to the fact that most people are not aware of their own limitations or failures in communication.

However, at the heart of this problem is the nature of scientific research itself, which is designed to focus on a single, specific aspect of an issue, regardless of the related policy context/considerations and specific conjunctures. The resulting products, and communications (by the "specialists"), thus provide information that, from the "generalists' perspective", may seem disconnected from the practical and contextual needs of policy decisions. In this sense, the main issue related to the communication of scientific evidence should rather be seen as a **"gap" in the process of analyzing or assimilating evidence as an input for policy advice.**

Indeed, through its cumulated experience of interacting with both sides (academic and government), PEP has observed that, when asked to communicate scientific evidence to policymakers, most "advisors" fail to properly contextualize or position the evidence (as an input) into the relevant policy decision frameworks. Indeed, the majority tends to relate the information exactly as reported in the source documents, without assessing, highlighting or explaining their implications for policy decisions.

According to the PEP survey results, this is mainly due to a **lack of awareness or understanding of policy needs and processes among those who are mandated to provide the scientific knowledge:**

80% of PEP survey respondents consider that understanding the institutional and political constraints is essential when using evidence to inform policy. Yet, 68% of them reported having difficulties:

- identifying or understanding the policy priorities and specific objectives within their institutions – even more so amongst government officers (72%, vs 65% for academics).
- understanding the decision process within their institution and the relevant pollical context leading to policymaking – particularly amongst academics (73%, vs 62% for government officers).

Also, while all respondents stated that their responsibilities entail either a technical or scientific component, only a third (30%) reported that they also include a "policy component". Paradoxically, all reported being implicated either at the agenda setting, definition, operationalization or evaluation phases of the policymaking process, with many being implicated at many phases.

These responses suggest that **"specialists" are not aware of their position or role** (or the role of the knowledge they provide) **within the policy advisory ecosystem** and related decision-making process. This lack of awareness may also in turn cause them to produce or provide information/inputs in a way that doesn't align with or respond to the relevant "policy questions".

Institutional arrangements

Civil servants and structures with mandates rooted in "technical or specialized knowledge" often tend to be **"peripheral" (vs central) to decision-making processes**, especially in sectors that are not embedded in "natural sciences", and within larger government institutions. 45% of all PEP survey respondents (both academic and government) feel their department, their superior or they themselves have no or little influence on policymaking.

But more importantly, most institutions are structured and organized in a way that leads to a significant and continual **divide between the specialists and the generalists**, as well as between sectors, who end up working in silos, with little to no opportunity to consult and collaborate with one another. 58% of PEP survey respondents (both academic and government) reported difficulties in coordinating 1) between/with sectors and stakeholders, and 2) with other agencies to achieve impact or influence over policy processes.

The **lack of interactions and collaborations** also contributes to aggravating the "awareness issue" discussed above; preventing both the specialists and generalists from understanding the other's needs, objectives and constraints.

Finally, another important issue with regards to internal institutional workings is the **lack of clearly laid-out procedures and guidance for staff** to adequately seek, appraise and synthesize evidence from relevant sources.

As indicated above, and despite the "technical nature" of their roles, 58% of PEP survey respondents reported having difficulties assessing the quality of relevant results and related literature, and comparing data issued from multiples sources. Also, half of them reported not knowing who is in charge of maintaining/producing relevant evidence in their specific context (institutions, regions, country, etc.). Suggesting a lack of capacities and an absence of structured (internal) guidance in processing scientific evidence into policy advice.

3.1.2. RECOMMENDATIONS FOR THE OPERATIONAL LEVEL

RECOMMENDATION 1 – ACCESS: Establish an **inventory of departmental needs.** Each department in a ministry indicates their needs, in terms of **access to existing scientific data and literature**, to identify commonalities, and concentrate available resources on securing access to the main/most important repositories.

RECOMMENDATION 2 – ACCESS: Prepare a **list of sector-relevant local/regional experts**—both within and outside government—who can be consulted by government. This is especially necessary in a context of missing or incomplete data or evidence to help gather the "best and most updated information available" to inform the policy advisory process around a specific issue/topic. The list should be organized by topic, or "thematic interests and specializations".

RECOMMENDATION 3 – ACCESS: Prepare an **inventory of free-access repositories**, including bibliographic and other databases relevant for a specific sector, to share with all relevant staff throughout one ministry. The document should include, descriptions of each listed resources, their relevance and potential uses for policy advisory (i.e. type of policy-relevant information to be found within), as well as instructions on how to search effectively.

RECOMMENDATION 4 – CAPACITIES, ACCESS: Organize and provide **trainings**—along with related **guidance materials**—for relevant government staff on how to:

- search for (sector-)relevant scientific literature or evidence base;
- understand the relative value and differences between different sources of evidence base, and identify the best available knowledge/information in the absence of scientific data;

- read, appraise (quality, credibility), understand and interpret (including contradictory) data from scientific articles or research reports;
- understand the different analytical approaches applicable to assess (ex-ante or ex-post) the effectiveness or impact of policy or program interventions.

RECOMMENDATION 5 – CAPACITIES, AWARENESS, INSTITUTIONAL ARRANGEMENTS: Develop **internal procedures** for the organization of periodic meetings, gathering both "specialists" and "generalists" working on the same issue, in order to:

- update staff on current policy needs, objectives and debates, and to clarify the specific role and position of their department/institution within the related decision/advisory process.
- identify the needs in terms of evidence base, and related requirements or tasks to procure the evidence.

When relevant, these meetings may include staff from different sectors/ministries, as well as external experts.

RECOMMENDATION 6 – CAPACITIES, COMMUNICATION:

- Organize and provide **trainings** for relevant government staff on **how to develop policy advisory or briefing notes** that effectively communicate the best available and most relevant evidence-based information around a specific issue, in a way that is useful/practical for the recipient to help brief decision-makers.
- Prepare **guidance materials**, including templates with detailed instructions, that staff should use **to develop the policy notes**, while ensuring that the contents align with and relate to the relevant policy needs, objectives and decision frameworks; see text box below.

RECOMMENDATION 7 – INSTITUTIONAL ARRANGEMENTS: Create new role/**position of "Chief Science Officer"**, in each department, to supervise and evaluate internal performance (individual staff and overall department) in the implementation of procedures and tools related to the use of evidence to inform the policy advisory process, such as those suggested in the preceding recommendations.

- This officer would also be in charge of updating, periodically, the tools, materials and procedures related to the process of evidence use, according to "best practices" acknowledged in the field – and thus **in charge of implementing most, if not all, of the above recommendations.**

3.2. Processing evidence at the decisional level

3.2.1. CHALLENGES AT THE DECISIONAL LEVEL

Lessons drawn from a 4-year international development program for Building Capacity to Use Research Evidence (BCURE)[18] show that, while there is a problem when civil servants don't understand statistics or how to weigh up which sources are reliable, fixing these skills will not help if there is no political space to bring evidence into decision making. Ultimately, the program's evaluation (Vogel & Punton, 2018) found that **building capacities for evidence use was really about introducing institutional reforms**; taking a wider system view of how evidence is used, incentivized and reinforced throughout the government and

[18] BCURE was a £15.7 million investment by the UK (through the Department for International Development) to build skills, incentives, and systems for evidence use in government across more than 12 countries in Africa and Asia.

parliamentary system by all the players—including by civil society—to challenge ineffective policy decisions.

While 63% of all PEP respondents consider that the use of relevant scientific knowledge and data ton inform policy processes is "encouraged" by their institution (both academic and government), only 42% consider that evidence use is "prioritized" – with a surprisingly slightly higher ratio amongst government officers (45% vs 40% for academics).

Also, 62% of all respondents (60% for academics and 66% for government officers) reported that political considerations are either the first or second most important driver of policy decision in their context, while only 37% reported that relevant evidence is considered a main driver. The latter was surprisingly higher amongst government officers (45%) than academics (31%).

As with most institutions, government agencies tend to apply a "top down" strategy to decision-making, as it allows them to achieve specific and immediate objectives more effectively. In addition to the influence of political considerations, the "decisional level" of institutions is also largely populated by "generalists", who are not necessarily versed in the needs and use of scientific analysis/knowledge, and are often constrained by a calendar that does not allow for proper inquiries to assess implications.

Moreover, while the basic institutional arrangements in sectors with mandates rooted in natural sciences include government-conducted and -managed research along with independent (e.g. university-based, corporate) research, such arrangements have not been developed in "social" sectors. Rather, the **production of social science knowledge for government use is situated primarily in the non-profit sector, and funded from a mixture of private and public sources.** This positioning has implications for the use of evidence from social sciences in policymaking, notably in the number and "interventions" of intermediary organizations—think tanks and advocacy organizations—as well as in the heavy presence of interested private funding (Prewitt & al, 2012).

The main constraints identified in the relevant literature in relation to the use of scientific knowledge to inform policy, and that can be associated with the "decisional level" of government institutions, include:

- Lack of awareness or low value given by decision-makers, or within the organisation, to scientific knowledge as an input to decision making (no "demand" from the top = no "incentives" for the advisors).
- Political economy factors that prevent decision-makers from supporting their decisions on scientific knowledge (crises, culture, commitments, etc.).
- Timeliness (or response time): either decision-makers do not seize the appropriate windows of opportunity to assimilate scientific knowledge into the decision-making process, or the data are not available in time for decision-making.
- Structural issues, such as lack of clear planning systems, procedures or practice guidelines, as well as no reinforcement mechanisms.
- Gaps or inadequacies in terms of resources and capacities (individual and organisational) to support or stimulate EIPM practice

3.2.2. RECOMMENDATIONS FOR THE "DECISIONAL LEVEL"

While PEP does not presume to have solutions that can help overcome all challenges, especially those rooted in endogenous factors, the suggestions below are focused on potential institutional arrangements that can contribute to promoting evidence use as part of an institution's organizational culture.

RECOMMENDATION 8

- Create **institutional frameworks** designed to enable, ensure and systemize consultations and collaborative working between all government agencies (department, units) and local research institutions or think tanks working on the same or connected policy issues; see example in text box below;
- **Mandate these groups** to produce recommendations on the production and/or use of evidence to support decision-making in this sector;
- **Provide** these groups with the **resources** to conduct or support outlook studies, designed to highlight long-term trends in the sector, as well as to identify emerging opportunities and challenges.

RECOMMENDATION 9 – Create new government units, or mandate existing ones, to **supervise and evaluate the work of** department-level staff referred to as **Chief Science Officers** in recommendation 7 above. Such units would also be mandated to document the government's achievements in terms of evidence-informed policymaking, and to promote related success stories, so as to encourage or strengthen the value attributed to scientific evidence as part of the organizational culture.

RECOMMENDATION 10 – Create a new position/**role of Chief Science (or Scientific) Advisor**, for each ministry (as well as for the government executive, where such a role does not yet exist), who would be mandated to give ministers (or the President/Prime Minister cabinet/office) strategic and operational advice on the use of scientific knowledge and evidence to inform policy decisions. Ideally, these should be enshrined in the constitution.

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