

INGSA-AFRICA - 2020 RESEARCH SURVEY REPORT ON THE ROLE OF SCIENTIFIC KNOWLEDGE IN POLICYMAKING: SCIENTISTS/RESEARCHERS AND POLICYMAKERS/PRACTITIONERS PERSPECTIVES

Overview of Survey

The research project carried out under the commission of the International Network for Government Science Advice (INGSA) and the International Science Council Regional Office for Africa (ISC-ROA), sought to sample the views of scientists/researchers and policy/decision makers across Africa on the role of scientific knowledge in policymaking. Research questionnaires were used in making statistical inferences and comprehending the perspectives of scientists/researchers and policy practitioners on the use of scientific knowledge and evidence in policymaking processes in Africa.

The study relied on similar but separate surveys specific to the participant's role as either a researcher or a policymaking practitioner. Respondents self-selected which of these camps they fell into. The surveys were largely similar to allow for direct comparison of responses.

A total of **1,223** participants were contacted across the African continent using the INGSA-Africa, and other network, databases.

In total, the survey was completed by:

- **118** Scientists / Researchers
- **27** Policymakers / Policy practitioners

Caveats / Considerations

Survey responses

The obvious caveat for the study was the disparity between the sample sizes. Considerable effort was put into securing policymaker submissions. Access to, and engagement of, working policymakers is considerably more difficult than accessing working scientists as the former are less likely to be a part of public professional networks. Scientists also tend to be more open to research surveys as they are a familiar medium.

This disparity between group engagement is likewise mirrored in INGSA's network numbers, with researchers making up the bulk of INGSA's members. Therefore, we consider 27 policy practitioner responses to be a reasonable response, and significant enough to draw some initial conclusions.

Types of respondents

As would be expected, 60% of the researcher respondents have a PhD. What was surprising, was that 44% of the policymaker respondents also claimed to have a PhD, indicating that the survey was not truly indicative of policymakers across government and across countries.

This is borne out by the fact that ~25% of policymaker respondents said that their primary area of work was ‘Science and Technology’. This indicates that the sample is disproportionately skewed towards science-literate and/or science-sympathetic policymakers. This is probably not surprising given the networks through which the survey was circulated.

While this general appreciation of science might explain some of the similarities between the groups’ responses – it is also valuable in highlighting the potential areas of conflict or further study where the responses between the two groups diverge.

Executive Summary

Across the sample group, there was considerable consensus on the value of Researchers in providing evidence into the policymaking process. When asked ‘*Who informs policymakers on scientific evidence?*’ the overwhelming response from both parties was ‘Researchers’. When asked what the importance and influence of Researchers were on the provision of evidence Policymaker and Scientist groups agreed (67% and 68% respectively) that their role was Fairly Important or Most Important. This is a reassuring finding for the role of researchers in providing evidence.

Yet just because Researchers are one of the primary mechanisms for sourcing evidence, does not mean that evidence is necessarily widely being considered. When asked to rank the factors that are considered when developing new policy, the Policymaker cohort listed ‘Science research and evidence’ to be one of the least important factors, garnering only (7%) of responses. This would seem to indicate that while science has its place; it is not a primary driver or determinant of policy creation.

This finding was supported by the response to the question of whether there is a gap between science and policy. 75% of Scientists said there was a ‘Big Gap’ along with 81% of Policymakers. This indicates that the obstacles in the system are felt, even if they are not understood.

It was also shown that Think Tanks are a primary source of evidence to policy, with 77% of the Policymaking cohort listing them as Fairly Important or Most Important. Interestingly, Policymakers consistently indicated this primary role for Think Tanks, while the Scientist afforded them less influence.

One of the primary disparities uncovered by the survey was the difference in experience between policymakers directly engaging with scientists, and scientists being engaged by policymakers. When asked: “*Have you personally provided advice for formulating, or been involved in formulating, policy in your country?*” only 21% of scientists indicated they had ever provided advice for policy – 79% had never been in a position to provide evidence for policy.

This response is in stark contrast to the answers given by policymakers – with 89% of respondents indicating that they had “*Firsthand experience of seeking science advice from a scientist or researcher*”. Only 11% of the sample group did not.

It would seem that policymakers are comfortable engaging scientists to provide information, but that many scientists are locked out of the processes that policymakers use to source that advice.

Another key commonality between the groups that can provide a focus for interventions to improve evidence-to-policy mechanism was in response to the statement: “*There is a need for an intermediary to translate scientific evidence to politician and decision maker.*”

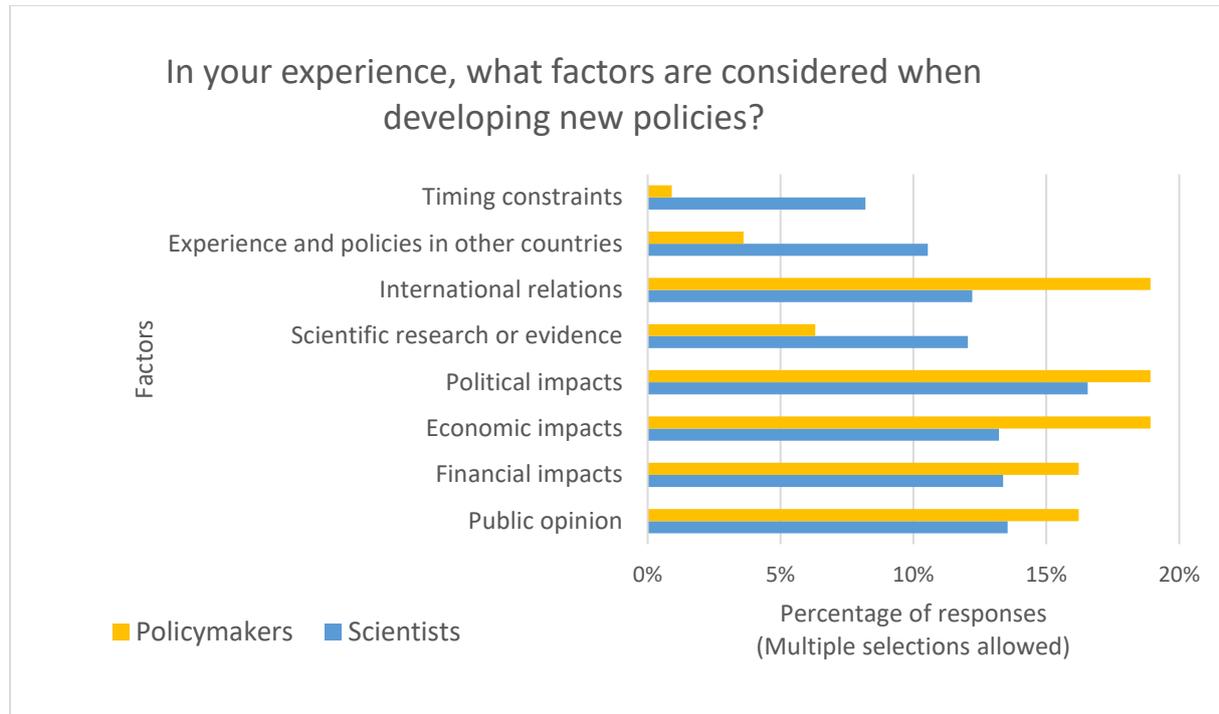
The vast majority of scientists (82%) ‘Agreed’ or ‘Strongly Agreed’ with this statement. Policymakers were also in very strong agreement (63%). This is a strong finding that scientists are either not confident in translating evidence into a format suitable for policy, or that they see the intermediary organisations as being more effective than individual scientists. Likewise, it seems that policymakers prefer to deal with intermediaries or knowledge transfer organisations rather than with scientists directly.

Given the trust both policymakers and scientists have indicated they have in intermediary organisations, this indicates that a key intervention point might be strengthening these institutions further.

Further to this, when asked “*What are the most appropriate mechanisms for an efficient knowledge transfer from researchers to policymakers?*” both Scientists and Policymakers most preferred methods of knowledge transfer that are active person-to-person mechanisms, rather than passive learning opportunities such as websites or journals. This underscores the need for active, participatory, and human interactions in order to build trust, understanding and the free flow of information.

Results:

Perception of inputs into policymaking



This question captures a general overview of what are considered the primary concerns of policymakers when developing new policies. It is interesting to note that the scientists give approximately equal weighting to all of the options, whereas there are some marked differences in the responses from policymakers.

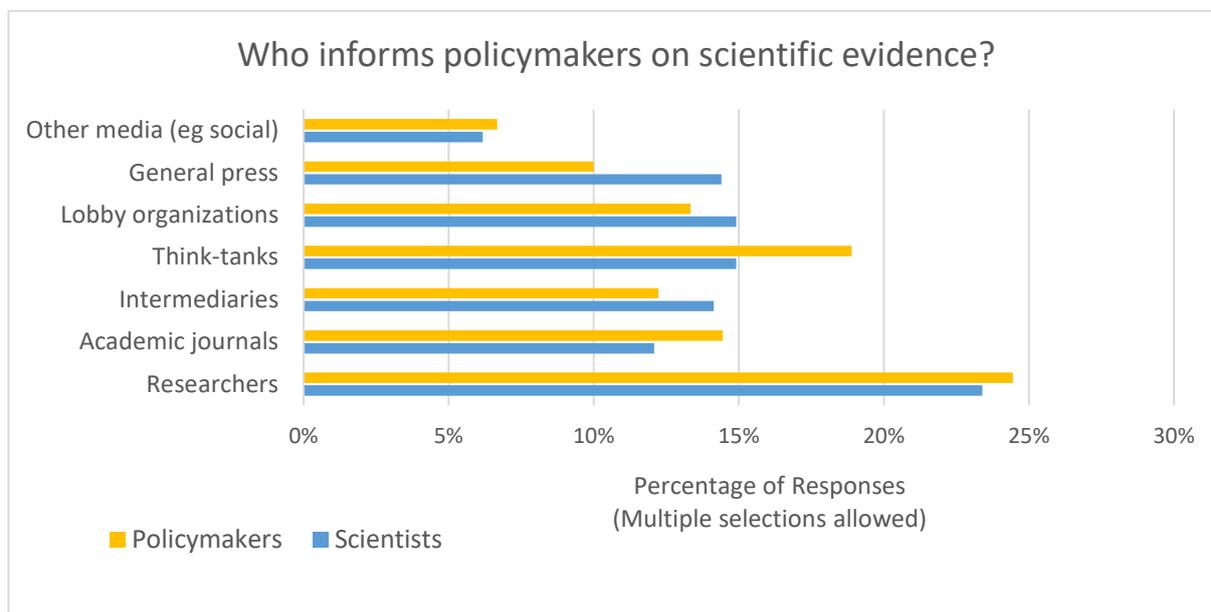
From the perspective of policymakers the Top 3 factors that tend to be considered when developing new policies were International Relations (19%), Political Impacts (19%) and Economic Impacts (19%).

Likewise, it is clear from the policymakers what are considered the least important factors in policy development: Timing Constraints (1%), Experience and policies in other countries (4%) and **Scientific research or evidence** (7%)

The clear indication that research and evidence is one of the least important factors in policy development is a particularly worrying outcome from this survey.

While policymakers give less credence to the Experience and policies of other countries (4%), they do consider the consideration of International *relations* to be of importance (21%).

On the issue of [where policymakers receive their scientific evidence from](#), there was a



large consensus between the two groups on the relative importance of Researchers in providing evidence to policymakers – 23% of the Scientist Cohort responses and 24% of the Policymaking responses.

There were 2 noticeable disparities between the groups’ responses – Policymakers indicated a greater influence of Think Tanks (Policymakers: 19% vs Scientists 15%) and that Scientists afforded greater influence to the General Press (Scientists: 14% vs Policymakers: 10%)

For Policymakers the Top 3 informers of scientific evidence into public policy were Researchers (24%), Think Tanks (19%), and Academic Journals (14%).

For Scientists, the Top 3 informers of scientific evidence into public policy were Researchers (23%), Lobby Organizations (15%), and Think Tanks (15%).

As a follow on to this question, participants were asked to rank these in order of importance and influence on a 5-point scale from ‘Not at all important’ (1/5) to ‘Most important’ (5/5)

1	2	3	4	5
Not at all important	Slightly Important	Important	Fairly Important	Most Important

For Scientists: (In order of perceived importance and influence)

- **Researchers** were considered ‘Fairly Important’ or ‘Most Important’ by 68% of responses.
- **Think Tanks** were considered ‘Fairly Important’ or ‘Most Important’ by 56% of the responses.

- **Lobby organizations** were considered ‘Fairly Important’ or ‘Most Important’ by 43% of the responses.
- **Academic Journals** were considered ‘Fairly Important’ or ‘Most Important’ by 40% of the responses.
- **General Press** were considered ‘Fairly Important’ or ‘Most Important’ by 34% of the responses.
- **Intermediaries** were considered ‘Fairly Important’ or ‘Most Important’ by 23% of the responses.
- **Other Media** were considered ‘Fairly Important’ or ‘Most Important’ by 21% of the responses.

For Policymakers: (In order of perceived importance and influence)

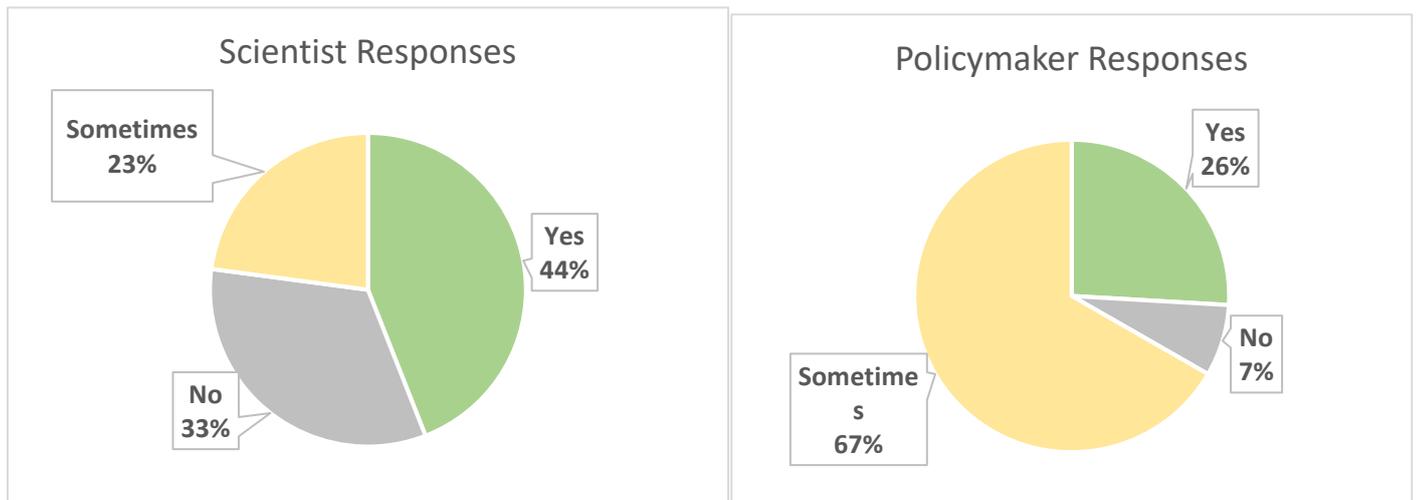
- **Think Tanks** – Strong consensus on Think Tanks with 77% saying that they were ‘Fairly Important’ or ‘Most Important’.
- **Researchers** were considered ‘Fairly Important’ or ‘Most Important’ by 67% of responses.
- **Lobby organizations** were considered ‘Fairly Important’ or ‘Most Important’ by 53% of responses.
- **General Press** were considered ‘Fairly Important’ or ‘Most Important’ by 50% of responses.
- **Other Media** were considered ‘Fairly Important’ or ‘Most Important’ by 50% of responses.
- **Intermediaries:** were considered ‘Fairly Important’ or ‘Most Important’ by 47% of responses.
- **Academic Journals** were considered ‘Fairly Important’ or ‘Most Important’ by 43% of responses.

Again, there was general agreement between the groups on the influence and importance of Researchers on the input of evidence to policymakers. Yet the important difference seems to be the very high recognition by policymakers of the role of Think Tanks, with 77% indicating their primary role in the evidence-to-policymaker processes.

The Policymaker group also felt that the role of both the General Press and Other Media were of Fair or Most importance (50% of responses for each). In contrast, the Scientists considered these less important – General Press (34%) and Other Media (21%) as being Fairly Important or Most Important.

While there was general agreement between the two groups on all of these metrics, Policymakers tended towards indicating that each of these were ‘Fairly Important’ (4/5) in impacting policy, whereas Researchers tended towards listing each of them as ‘Important’ (3/5). As such, the strength of opinion of policymakers seems to be higher.

Do policymakers in your country consult researchers directly (in their decision-making)?



In the previous section on perceived inputs into policymaking, there was clear agreement between the groups on the importance and the influence of researchers in policymaking.

Yet when asked whether policymakers consult researchers directly, there was a divergence in opinion. Only a small minority on the policymaking group said that researchers were never consulted (7%) – they were much more likely to cautiously indicate that scientists were consulted ‘Sometimes’ (67%).

The Scientists, on the other hand, were much more polarized with 44% indicating ‘Yes’ and 33% indicating ‘No’ and 23% indicating only ‘Sometimes’.

This disconnect is perhaps partly explained by the answers to the subsequent question, which asked Scientists if they had personally provided professional advice in some capacity, and asked Policymakers whether they had first-hand experience of commissioning advice.

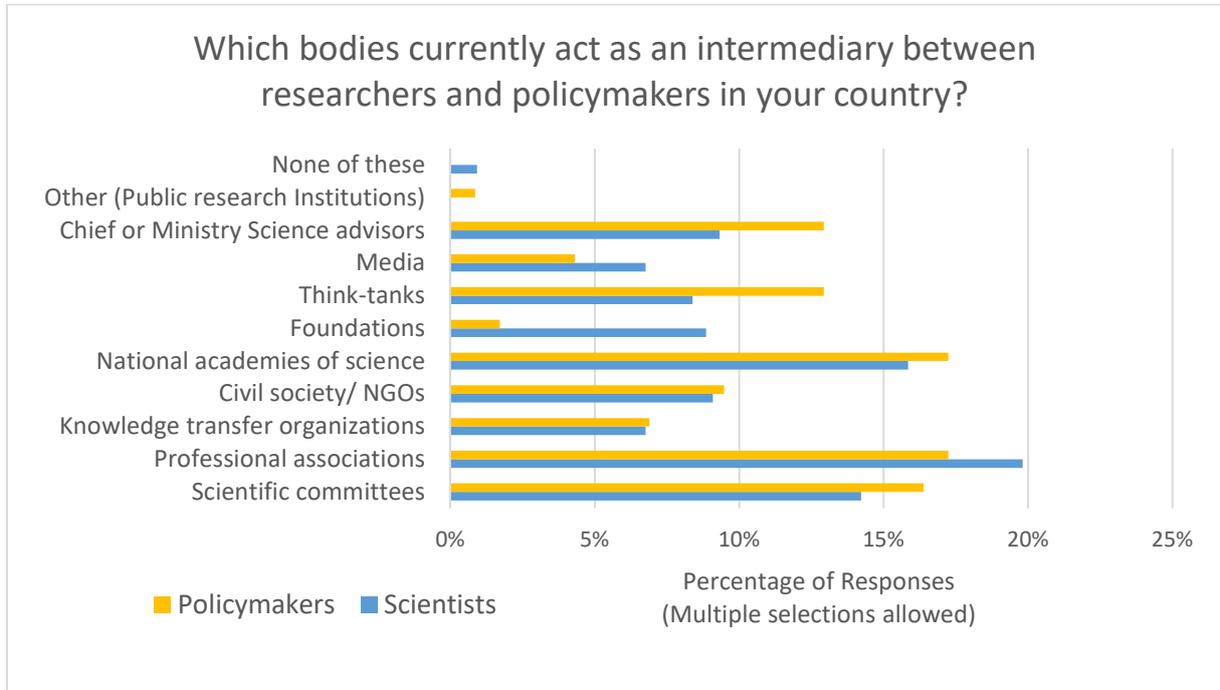
When asked: “*Have you personally provided advice for formulating, or been involved in formulating, policy in your country?*” only 21% indicated they had ever provided advice for policy – 79% had never been in a position to provide evidence for policy. Of the positive respondents, they tended to have provided advice through involvement in national advisory councils, with several having been involved directly with the legislative process.

This response is in stark contrast to the response given by policymakers – with 89% of respondents indicating that they had “*Firsthand experience of seeking science advice from a scientist or researcher*”. Only 11% of the sample group did not.

If this is indicative of wider experience, then it might help to explain why the above graphs diverge – as there is considerable mismatch between the experiences of the scientists (the majority of whom have not intersected personally with evidence provision) and policymakers (who largely have experiences engaging with the research community).

This might also indicate that policymakers are relying on certain people, organizations and mechanisms that do not reach the majority of scientists – leaving the provision of evidence to a minority of researchers.

Who are the bridging organizations?



Once again, there was general agreement across the board between the two groups

For both groups, the Top Three Intermediaries were: Professional Associations (Policymakers 17%; Scientists 20%), National Academies of Science (Policymakers 17%; Scientists 16%), and Scientific Committees (Policymakers 16%; Scientists 14%)

One thing that stands out once again, and that supports the findings of previous questions, is the greater influence that policymakers afford to the role of Think Tanks. 13% of Policymakers versus 8% of Scientists indicated they were important intermediaries.

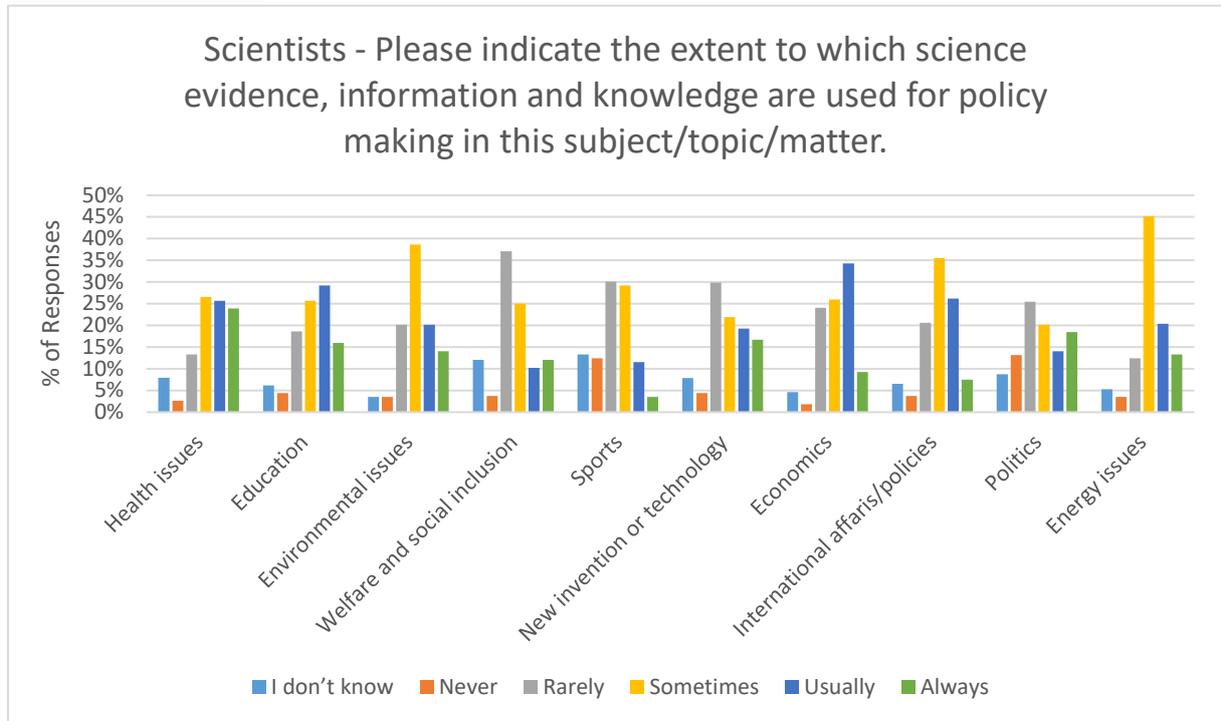
Interestingly, there is a similar disparity between the groups in their consideration of Chief or Ministry Science Advisors. 13% of Policymaker responses indicated their role as an intermediary, in contrast to only 9% of Scientists.

Also of note: Policymakers do not credit the role of Foundations as being an intermediary of evidence (only 2% of responses) versus 9% of Scientists.

Perception of Science Advice by Topic

In the survey, both groups were asked to rate the frequency that scientists and evidence were consulted across a range of topic areas. They were asked to comment on a scale from ‘Never’ through to ‘Always’, with an option of ‘I don’t know’.

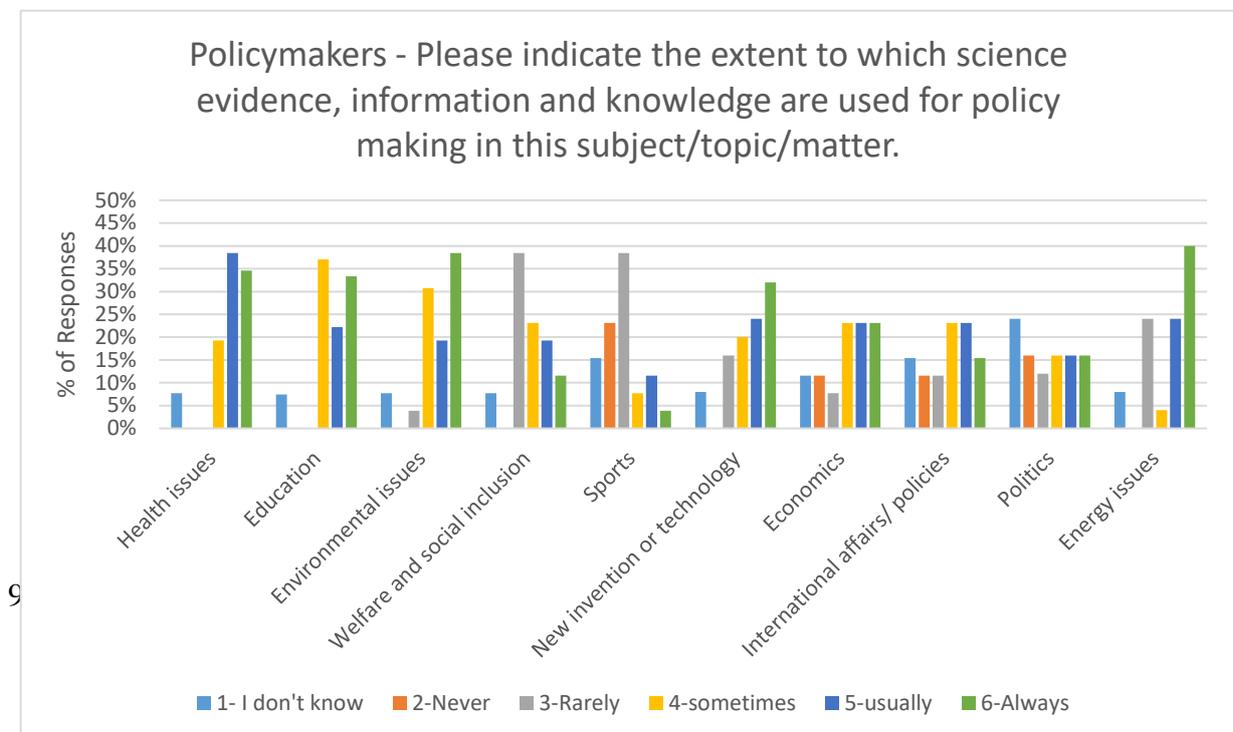
Scientist response:



For the scientist sample group, it was only the topics of Health Issues (50%), Education (45%), and Economics (44%) where it was considered that evidence is consulted ‘Usually’ or ‘Always’.

In contrast, it was considered by scientists that evidence is ‘Never’ or ‘Rarely’ sought when it comes to topics of Sports (42%), Welfare and Social Inclusion (41%), and Politics (39%).

Policymaker response:



With the Policymaker data, there is considerably more insistence that policymakers ‘Always’ source evidence in their processes.

Policymakers most strongly indicated that evidence was utilized for policy in the topic areas of Health (73%), Energy Issues (64%), Environmental Issues (58%), Education (54%) and New Inventions or Technology (54%)

At the opposite end of the scale, Policymakers largely concurred with Scientists that the topics of Sports (62%), Welfare and Social Inclusion (38%) and Politics (28%) were areas in which evidence was less likely to be sought to inform the policymaking process.

Comparison:

Between the Scientist and Policymaker datasets, there is agreement that evidence is often used in the formulation of policy in the ‘Health’ and ‘Education’ sectors.

Yet there is significant conflict between perceptions on a number of topic areas:

- Environmental Issues: 58% of Policymaker responses said that evidence was ‘Usually’ or ‘Always’ used, compared to only 34% of Scientists. In contrast, 24% of Scientists said that evidence was ‘Never’ or ‘Rarely’ used – whereas only 4% of Policymakers responded this way.
- New Inventions or Technology: 56% of Policymaker responses indicated that evidence was ‘Usually’ or ‘Always’ used, compared to 36% of Scientists. In contrast 34% of Scientists said that evidence was ‘Never’ or ‘Rarely’ used – while 16% of Policymakers indicated the same
- Energy Issues: The single biggest disparity between the groups was on the topic of Energy Issues. 64% of Policymakers concurred that evidence ‘Usually’ or ‘Always’ used. Compared to 34% of scientists.

Perception of scientific evidence use

Both groups were asked to rate their level of agreement across a range of statements related to how scientific evidence was used in their countries. A number of interesting similarities and differences emerged.

Statements:

There is a need for an intermediary to translate scientific evidence to politician and decision maker.

- The vast majority of scientists (82%) ‘Agreed’ or ‘Strongly Agreed’ with this statement. Policymakers were also in very strong agreement (63%) who ‘Agreed’ or ‘Strongly Agreed’.
- This is a strong finding that scientists are either not confident in translating evidence into a format suitable for policy, or that they see the intermediary organisations as being more effective than individual scientists. Likewise, it seems that policymakers prefer to deal with intermediaries or knowledge transfer organisations rather than with scientists directly.

Scientific evidence provides solutions to problems faced by the country.

- There was strong agreement between the parties – 74% of Scientists ‘Agreed’ or ‘Strongly Agreed’. For the Policymakers this was even higher at 84%.

Scientific evidence helps strengthen policy in my country.

- 40% of Scientists agreed, compared to only 23% of policymakers.
- In contrast, 46% of Policymakers said that they ‘Neither Agree nor Disagree’. If true, this ambivalence towards the value of evidence in strengthening policy is concerning and requires further investigation.
- On the surface, this seems to contradict the first statement above, perhaps indicating that there are subtleties between social benefit (solutions to problems) and strong policy that need to be teased apart.

The benefits of science are greater than the harmful effects

- Similar to the previous statement, there was strong agreement that the benefits of science are greater than the negative effects with Scientists (48%) and Policymakers (54%) agreeing with the statement.

You trust scientists when they present you with a fact.

- Both 68% of scientists and policymakers agreed or strongly agreed with this statement. This indicates a solid level of trust in the mechanisms of evidence creation and the trustworthiness of scientist to relay this information truthfully.

There is so much conflicting information about scientific evidence that, it is difficult to know which one is true.

- Interestingly, 39% of Scientists said that they ‘Neither Agree nor Disagree’ with this statement. In contrast, the Policymakers primarily disagreed with this statement (36%)

Your country supports new scientific evidence discoveries.

- In response to this statement, scientists’ responses were much more diffuse across the spectrum – (31% disagreeing or strongly disagreeing – 21% neither agreeing nor disagreeing – 46% agreeing or strongly agreeing)
- In contrast, Policymakers were far more positive (8% disagreeing – 33% neither agreeing nor disagreeing – 55% agreeing or strongly agreeing)

Scientist sometimes hide evidence that does not have value on their research.

- The result of this was interesting as both Scientists (33%) and Policymakers (40%) primarily ‘Neither Agreed nor Disagreed’. Yet the groups’ second strongest responses were on opposite sides. 25% of Scientists agreed that scientists sometimes hide evidence, while 28% of policymakers disagreed.

Science and Policy Collaboration

When asked “**Do you think that there is a real gap of collaboration between the scientific community and policymakers?**” and given the options ‘No, ‘A Slight Gap’ or ‘A Big Gap’ – not a single respondent picked that there was NO gap.

Among Scientists:

- 75% said that there was a ‘Big Gap’
- 25% said there was a ‘Slight Gap’

Among Policymakers

- 81% said there was a ‘Big Gap’
- 19% said there was a ‘Slight Gap’

That there was such agreement on this topic indicates the need for real progress in fostering collaborative mechanisms and science to policy pathways across the continent. Not having these strong linkages invariably influence the use of scientific knowledge in policy making across the African continent.

Given the trust both policymakers and scientists have indicated they have in intermediary organisations to provide this bridge – it seems that there remains a need to strengthen these institutions further.

When asked to explain why there was such a large gap between science and policy, the primary trend was that policymakers did not “know the importance of integrating science into policy” or that “Scientists are at times not taken seriously”. It was generally considered that if there was more collaboration then the situation would be better, but there were no suggestions about how this collaboration might happen.

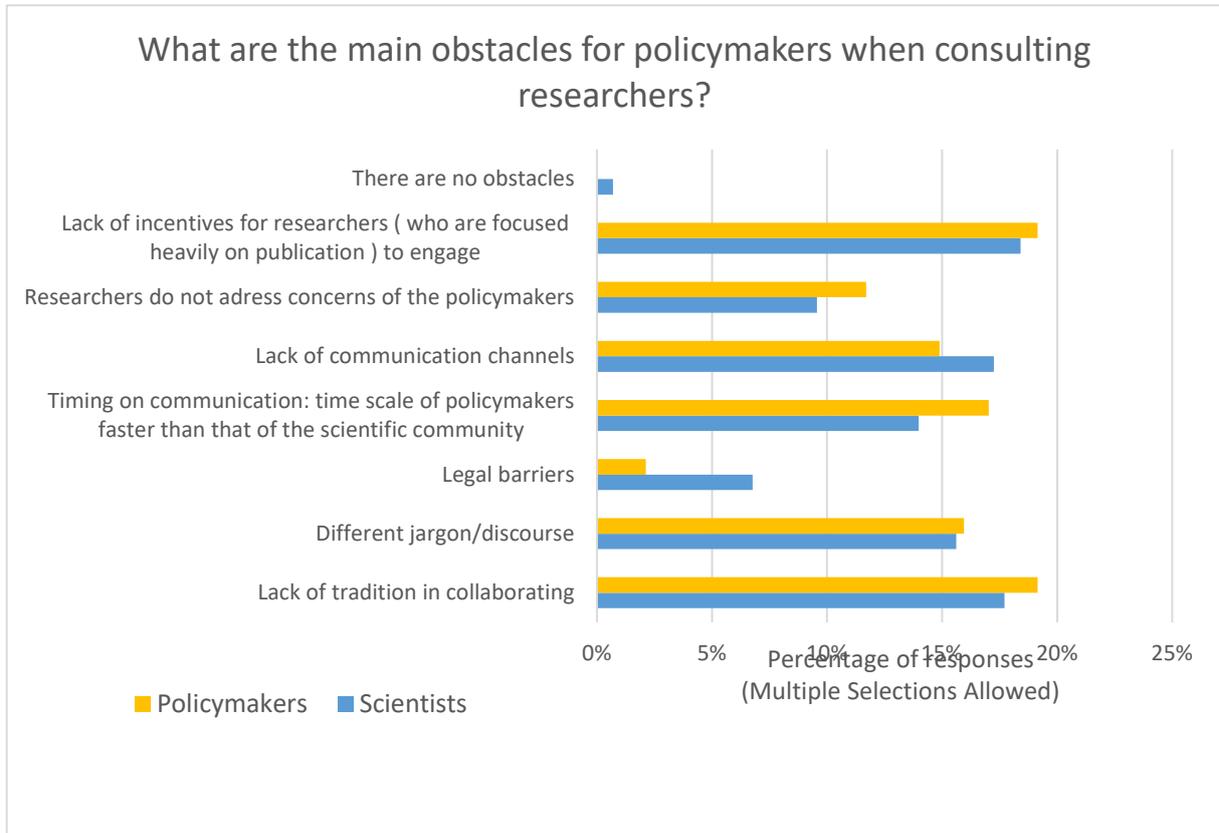
Due to the disproportion in the sample sizes of the groups, the responses primarily came from Scientists, and there is a tendency to blame the policymaker for their lack of understanding in the value of science, or their predisposition to elevate political concerns over the evidence, or their failure to update policy as new research becomes available.

That said, there was an appreciation that “The gap could be in the form of communication, scientists should use simple and comprehensive terms to explain their scientific findings to the policies makers.” There was also the understanding that an element of translation was needed to turn science evidence into usable information for policymakers, and that this is a responsibility that falls on the scientists.

- Other novel responses included: “Often good scientific knowledge fails to reach the industry and the community because of reasons like poor finance”
- “Policymakers are interested in solving problems in a short-term view whereas scientific solutions are for a long-term view; so, the policymaker who is looking for government and academia have different cultures and agendas. To this extent, scientific community and policy makers come from different worlds.”
- “Scientists and policymakers have different motives and speak different languages: scientists are trained to be transparent, while policymakers hide their true motives. The jargon/phrase of each discipline also make it difficult for the two groups to communicate”

- “Often the intentions of scientists are good, but the research is still one step away from the reality/practical and how to put it into application requires another step of thinking”

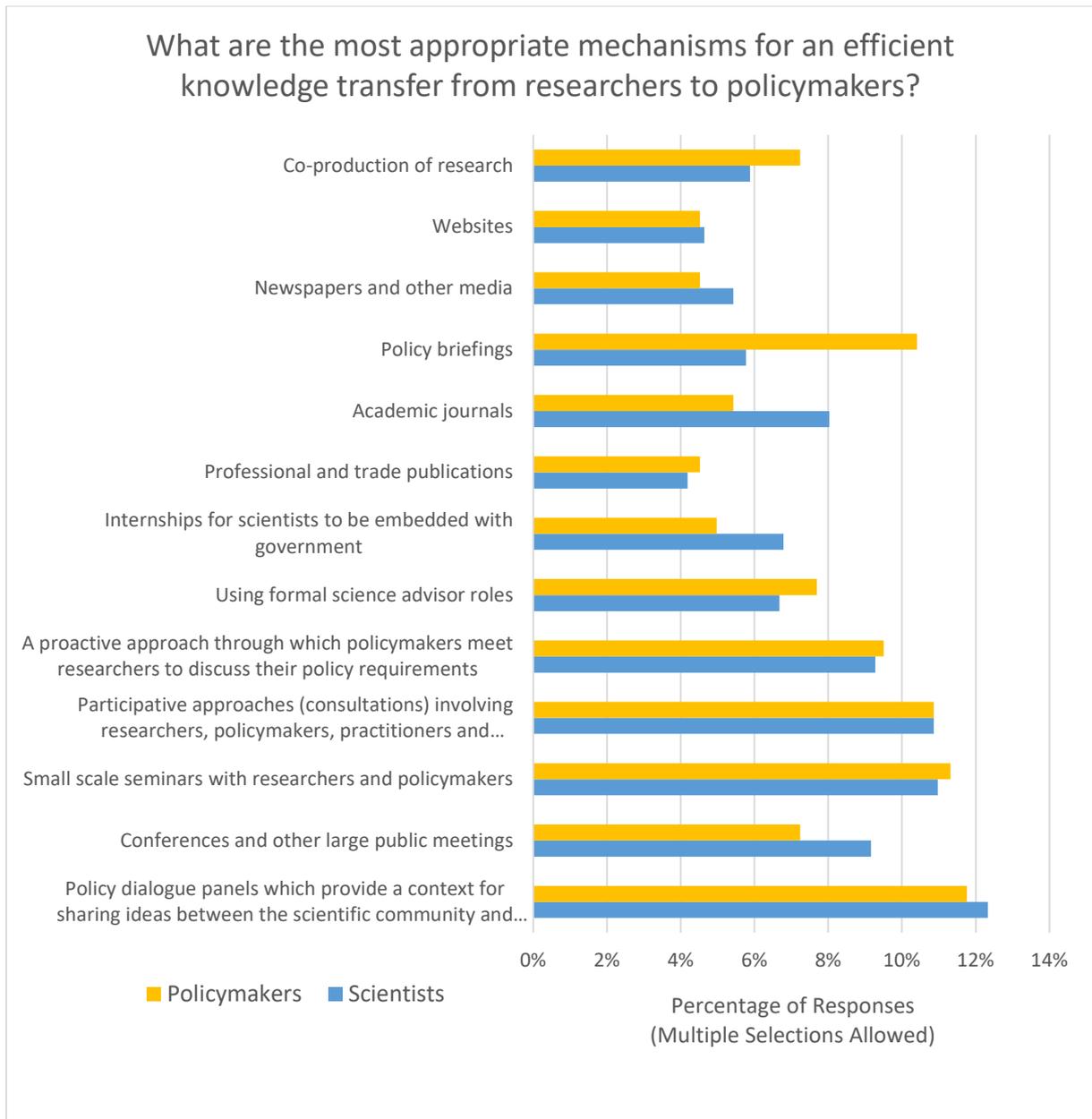
Obstacles and Mechanisms in Collaboration



There was once again a high level of agreement between the groups.

For Policymakers, their top three obstacles when consulting with Researchers were the Lack of Incentives for Researchers (19%), Lack of Tradition in Collaborating (19%), and Timing on Communication (17%)

For Scientists, their top three obstacles were considered to be: Lack of Incentives for Researchers (18%), Lack of Tradition in Collaborating (18%), Lack of Communication Channels (17%).



In order to bridge the perceived gap in the use of evidence, both groups were asked what the most appropriate mechanisms might be for knowledge transfers. Again, there was a commonality in response.

Notable (but not surprising) exceptions are that Policymakers have a greater preference for Policy Briefings (10% vs Scientists 6%), while Scientists believe there should be a greater reliance on academic journals (Scientists 8%; Policymakers 5%). Regarding academic journals, this reflects the earlier question that asked the importance and influence on the different methods by which policymakers are informed by evidence – Scientists ranked journals in the mid-range of the list of interventions, whereas Policymakers listed journals last in influence.

The preferred mechanisms for policymakers were: Policy Dialogue Panels (12%), Small Scale Seminars (11%), Participative approaches (11%), Policy Briefings (10%), and Policymakers meeting to discuss their policy approaches (10%)

The preferred mechanisms for policymakers were: Policy Dialogue Panels (12%), Small Scale Seminars (11%), Participative approaches (11%), Policymakers meeting to discuss their policy approaches (9%), Conferences and Large Public meetings (9%)

It is highly instructive to see that the most preferred methods of knowledge transfer are active person-to-person mechanisms, rather than passive learning opportunities such as websites or journals.

This underscores the need for active, participatory, and human interactions in order to build trust, understanding and the free flow of information.

Improving Communication and Dissemination of Evidence

Participants were asked: **“How can researchers be assisted in communicating and disseminating the results of their research?”**

The primary theme in the responses was related to communication: the potential to give researchers access to appear on “regular media programs to communicate their findings”, or to be assisted in “having more communication channels and assistance in presenting research in a simplified and easy to understand format.” Similarly, it was suggested that scientists could be involved in public seminars or roundtables on contemporary issues and that greater emphasis should be put on the building of “networks of communication”

Echoing the previous question that indicated that both Scientists and Policymakers preferred intermediaries for knowledge exchange, some of the responses indicated that it should not fall to the individual scientists to communicate their research: “The researcher presents the findings to the university which in turn should present at the national level and the government in return should present that at international level,” and “Publications of findings should be the responsibilities of the institutions and the government. The responsibility of the researcher should be getting novel and publishable findings.”

Other novel suggestions included:

- Funding for working with science communicators, film, and documentaries, facilitated processes for sharing.
- All researchers should be encouraged to take part in science communication. This can be done by making it a requirement for accessing research grants and related funding supplied towards seminars, meetings, conferences where all stakeholders will be present.

Conclusion:

It is hoped that the results of this survey will help better comprehend the issues of government science advice systems currently in place across Africa. It has shown that there are identifiable gaps in collaboration and in the uniform use of evidence to inform public policy across Ministries. Likewise, it offers up suggestions for the most influential mechanisms for linking scientists to policymakers – indicating where the first areas of intervention and focus might be.

There is a general agreement between the scientists and policymakers surveyed on the value of science and the means by which the relationship between these groups could be strengthened further. This agreement provides a solid foundation of understanding on the current limitations of the system, and is reassuring that the obstacles, handbrakes and differences between evidence and policy systems across Africa can be surmounted.

Respondent demographic information

