PERITIA

Policy, Expertise and Trust

Policy Brief: How Can Governments Build Trust in Science?

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1 SUMMARY

1. Support and nurture trustworthy science

2. Commit to making policies informed by trustworthy science

3. Build impartial, knowledge-based bureaucracies

4. Develop science advice mechanisms

5. Include relevant multi-disciplinarity in science advice…

6. …as well as civil society and stakeholders – in meaningful ways

7. Get citizens and elected involved – in ways that make sense

8. Make it transparent – but do it responsibly

9. Communicate – bearing in mind that citizens are not alike

10. Go beyond superficial trust-building – aim for long-term trustworthiness

2 BACKGROUND

2.1 Why trust in science is important

Trust in science is vital because science often provides us with ***the most reliable knowledge*** about what happens in the world, and why. If citizens distrust science and instead seek out less reliable sources of knowledge, their understanding of the world and how it affects their lives is likely to become more incomplete and less adequate.

Public policies that are based on inaccurate or misleading knowledge of what the world looks like and how it works are likely to be less efficient and less fair. While policies cannot be derived mechanically from science, policies designed with the public's best interest in mind are informed by relevant scientific findings. However, in a democracy, policies are unlikely to be properly science-informed if people distrust science. Trust in science is thus vital for ***better policies*****.**

2.2 Why are governments responsible for building trust in science?

Science is a ***public good***.

Governments have a responsibility for the provision of public goods – which include science. However, in a democracy, governments' allocation of resources to science institutions depends on citizens' trust in science. If people distrust science, they will regard governments' support of science as illegitimate and ill-founded. It is therefore governments' responsibility to build trust in science.

Ensuring that public policy is informed by relevant scientific findings is a hallmark of **good governance**. However, for science-informed policies to have support, people must have trust in science, and governments must take a responsibility for developing that trust.

3 TEN STEPS GOVERNMENTS CAN TAKE TO BUILD TRUST IN SCIENCE:

3.1 1. Support and nurture trustworthy science

If citizens are to have trust in science, independent scientific institutions such as universities and research institutes must exist. These entities must likewise produce reliable, high-quality science that is deserving of citizens' trust. The establishment and cultivation of such institutions require active engagement by governments, through both allocation of resources and of regulation.

Importantly, to be trustworthy, scientific institutions need to have secured their autonomy and adequate distance from both government and private economic interests. Additionally, governments and citizens should expect from such institutions that their knowledge-seeking practices take seriously crucial moral and social concerns. These institutions must also produce scientific knowledge that can be put into use by broader society. Regulation must be aimed at reconciling these different and partly conflicting concerns, yet always guarantee scientists the intellectual and methodological freedom that genuine inquiry requires.

3.2 2. Commit to making policies informed by trustworthy science

Only politicians who commit to making science-informed policies consistently and in practice will contribute substantively to building trust in science. It is one thing to talk about the value of science in speeches or when it serves one's immediate political interests; it is another to incorporate science advice into real-life policymaking and when there are political costs involved. Only the latter will contribute to a true building of trust in science over time among citizens, as voters tend to put much more weight on what politicians do in practice than their politicking or electioneering. Indeed, there is little reason to expect citizens to trust science if politicians and policymakers repeatedly disregard scientific findings and science advice out of convenience, as they thereby give the impression that, when political priorities are formed, science does not make the cut.

A genuine commitment by governments and politicians to science-informed policymaking can be tough in the short term. Scientific findings may challenge cherished worldviews, or flawed ideas of policy effects among political actors and their constituencies. Still, over time, the quality of policies is likely to deteriorate and trust in science will decline if policymakers disregard science advice or take it seriously only when it supports their existing preconceptions and political preferences. Ultimately, this latter behaviour is in no one's interest.

3.3 3. Build impartial, knowledge-based bureaucracies

For governments to be – and to be perceived as – sincere, building trust in scientific knowledge and scientific institutions must be part of broader efforts to ensure intellectually honest, reasonable, and knowledge-based governance. A fundamental concern in this regard is the establishment and maintenance of a non-corrupt and un-politicized public bureaucracy. Such bureaucratic structures prepare governmental policies based on the best available information, before implementing them impartially and based on the rule of law. A government's commitment to science-informed policy is unlikely to be perceived as credible under a regime whose ministries and public agencies disregard knowledge and evidence to please politicians or private interests, and if civil servants and government experts fail to abide basic professional and legal norms.

In other words, if citizens are to prioritise science, they need to see that science is also a real priority for those in power. This requires a broader institutional commitment by the government to reason-giving, knowledge-based arguments, and norms of impartial treatment – which is experienced by the citizenry as genuine and consistent.

3.4 4. Develop science advice mechanisms

It requires also visible initiatives and measures. One way to achieve this is through the establishment of science advice mechanisms, which come in different forms and under different names. For example, individual science advisors can be positioned in ministries or agencies, or science advice can be delivered by knowledge and review units within a government's permanent bureaucracy. Other forms of science advice mechanisms comprise temporary advisory committees or permanent scientific committees. Science advisors can inform national governments or international organizations and polities such as the EU. The composition of these mechanisms may be hybrid – and include for instance stakeholders and administrators along with scientists and researchers – or they may be composed of scientists exclusively.

Regardless of form, the science-advice mechanisms in question must be organised in ways that make them worthy of citizens' trust qua mechanisms appealing to the authority of science. This means that they must include scientists with relevant expertise and who are recognised by their peers, and who give their advice based on balanced reviews of the best available and adequate scientific knowledge. Independence and autonomy are moreover decisive: Science advice mechanisms must have sufficient institutional independence, even when they deliver advice as a response to requests by the government, and even when they are formally part of the government apparatus (e.g., a science advice unit in a ministry). Furthermore, the scientists and other experts who embody those mechanisms must have the requisite autonomy to operate in accordance with their best expert judgment.

Creating science advice mechanisms with such features requires active initiative and responsibility from governments. Without proper resources and regulation that protects scientists' autonomy, science advice mechanisms will easily come under influence or control by private or political interests. This will contribute to the erosion of public trust in both government and in science.

3.5 5. Include relevant multi-disciplinarity in science advice…

An additional vital requirement is multi-disciplinarity, enabling problem exposure, analyses, and proposed solutions from several angles. Different scientific disciplines and research fields may be relevant for properly explaining developments and understanding challenges and puzzles, but also for giving recommendations and formulating policy responses, as different disciplines typically rely on different toolboxes. For instance, within environmental policy, economists will typically focus on taxes and quotas; lawyers on regulation; engineers on new technologies; conservation biologists on biodiversity measures, etc. Or consider family policy, where relevant disciplines vary from demography and economics to sociology and gender studies – or drug policy, where relevant research comes from the medical sciences, but also from disciplines such as criminology, cultural studies, and law.

Opting for multi-disciplinarity over mono-disciplinarity would widen the understanding of problems, enrich explanatory analyses, increase the pool of arguments and the amount of critical scrutiny from different perspectives. Likewise, multi-disciplinarity would bring more potentially relevant and effective policy solutions to the table. In short, governments' use of science and science advice mechanisms is more trustworthy when it is based on a pluralist approach to scientific knowledge and science-informed public policy.

This is no doubt a demanding requirement to put on governments. They need not only to keep abreast of a universe of relevant experts in single disciplines, but rather, in a range of areas and field. This requires competence, and, once more, resources.

Moreover, whereas multi-disciplinarity may increase trustworthiness, some citizens may be immediately sceptical. They may trust scientists primarily when they can express their findings in numbers, or they may equate science with natural science, for example. They may also have experienced that governments use slogans of "pluralism", "balance", and "multi-disciplinarity" to politicise expert advice and to bring in experts with poor credentials but government-friendly attitudes. Governments need therefore to think carefully about how they communicate what proper science is and why a pluralist approach is preferable. The pluralism they opt for must furthermore be competent and relevant. This calibre of multi-disciplinarity implies drawing on scientific expertise that is better

on the merit that it is sensibly varied. It does not imply granting quasi-expertise the authority of science.

3.6 6. … as well as civil society and stakeholders – in meaningful ways

Still, good policies are based on rich sets of knowledge; science alone, however manifold, will not suffice. Accordingly, governments must also draw on other types of expertise than scientific expertise in policymaking. An obvious example is the regulatory competence and knowledge of implementation effects possessed by civil servants and bureaucrats. However, also civil society organizations and stakeholders – that is, actors that are obviously bearers of values and interest, and who are far from politically neutral – may still possess valid and important knowledges with significant relevance for policy. Consider for instance how the local knowledge of environmental groups and initiatives can improve on environmental policy, how NGOs from various regions and sectors can contribute to make developmental policies more targeted, or how social partners may give valuable input to improve on work-life regulations based on their long-term, in-depth experience and engagement.

The involvement of civil society and stakeholders can be organised in different ways: Modest involvement is when science advisors consult publications by such knowledge actors. More ambitious involvement is when civil society is actively consulted – in the preparatory phase, before inquiries have started, or in the hearing and review process after the publication of a science advice report. Most ambitiously, the consultation can take place when the work of a science advice unit or committee is ongoing. Lastly, civil society and stakeholders may be involved even more strongly – not only as addressees of consultation, but also as full-fledged members of science advice committees or other expert bodies.

A general argument for why civil society and stakeholders should be involved in science advice is that it may contribute to improving on the quality of advice. These actors may have decisive experience and practical knowledge that complement the input from scientists. Science advice is moreover seldom “pure” science. Typically, science advisors will also be asked to assess risks and costs, distributional consequences, and/or effects on individual rights and other overriding normative concerns. Frequently, they are also asked to formulate and rank policy options.

Input and insights from civil society actors that represent different societal interests and values are likely to advance such assessments and make them richer, fairer, and more precise.

Another general argument for involving non-academic actors in science advice is democratic. In a democracy, it is the representatives of citizens that should be in the driver's seat of public agenda-setting, decision-making and policy choice. As advice from science advice mechanisms affects public policy, this is a case for involving civil society and stakeholders as representatives of different social interests and segments of the citizenry.

The trustworthiness of public institutions increases if their organisation can be justified with sound arguments: If there is reason to believe that including civil society in science advice mechanisms will strengthen both democracy and the quality of advice, there is also reason to trust mechanisms with such inclusion. Opening public institutions to influence from broader civil and social spheres, is also likely to increase more immediate de facto support among voters. People may have high levels of trust in science and science-informed policy, but still resist the idea that policy-relevant knowledge and policy recommendation is simply a question of "doing what science says". Including stakeholders and organisations may be a sound way to address people's understandable and legitimate uneasiness with policymaking becoming too "scientized".

Moreover, such inclusion does not imply doubting the special status of science as an authoritative knowledge source. The idea is not to replace insights from climate science or medical science with "alternative" facts from civil society. However, what science can tell us is often limited; scientific knowledge may be uncertain, and scientific inquiry can seldom be separated discretely from value judgment. Under such conditions, competent, differently positioned non-academic actors may supplement science sensibly, with crucial additional policy-relevant knowledge and a broader range of perspectives.

Still, this is a delicate balancing act, as the inclusion of stakeholders must not take place in ways that compromise the independence and integrity of science advice. Giving interest and lobby groups too much power over governments' use of science and expertise, will decrease both democratic credentials and policy quality as well as endanger citizens' trust both in the government and in science.

3.7 7. Get citizens and elected involved – in ways that make sense

In addition to including civil society organizations and groups, science advice mechanisms can include lay persons and ordinary citizens, or their representatives, such as local politicians or members of parliament. Consider, for instance, how the experience, testimony, and local knowledge from users of health services can prove valuable in the development of health policy, or how lay people's perspectives and concerns can contribute to improving the regulation of new technologies.

Citizens' and citizen assemblies' involvement in science advice can be organised in different ways: Advisory bodies and boards can consult parliaments, organise lay conferences, or establish digital platform for broad public engagement and consultation, but citizens or parliamentarians with special insights and relevant experiences can also be included as members.

Once more, arguments can be made that such inclusion can contribute to improving both advisory quality, democratic credentials, and public support and trust.

However, once more, there can also be downsides to including lay persons and perspectives in science advice mechanisms. Scientific knowledge and theories may be highly technical, complex, and contra-intuitive. Bringing non-experts into discussions and assessments is seldom straightforward, and the result may be that the involved lay persons are in reality not truly involved, or that the quality of the scientific reviews, deliberations, and advice decrease as a result of having been adapted and simplified for non-experts to be able to follow. If so, this will endanger trust in and the trustworthiness of science advice.

Such dilemmas call for organisational solutions that can serve different, and initially, even conflicting concerns. Carefully designed deliberative fora that consciously prepare and design expert input to preserve quality and availability at the same time, and that combine such input with lay deliberations, is one such solution. Establishing and strengthening science advice units in parliaments is another interesting option. Such units can emphasize and uphold high standards of scientific quality, while at the same time contributing to empowering the people's elect, providing them with quality-ensured, science-informed advice.

3.8 8. Make it transparent – but do it responsibly

Transparency is likely to increase trust in and the trustworthiness of any public institution, and science advice mechanisms are no exception. Science advice reports can be made public. Background documents and report drafts can be published as well, after the report has been launched, or earlier in the process. The same goes for meeting minutes of science advice committees. Even more radically, the meetings of science advice committees and bodies can be open to the public, by means, for example, of digital broadcasting, or engaged citizens, stakeholders and journalists may be invited to be physically present to observe and report.

General arguments can be raised with much force in favour of transparency regarding democratic control and involvement, the quality of science advice, and the de facto support and trust. In a democracy, the basis of the priorities and choices of public institutions should be open to citizens' scrutiny and control. Such control and scrutiny, by citizens, but also by peers, is likely to contribute to ensuring the quality of science advisors' advice. Moreover, while making policies in secret will tend to make citizens suspicious, openness invites trust and support: "We have nothing to hide".

Still, opening up science advice mechanisms also come with some challenges. Transparency can result in public and media exposure with a chilling effect on science advisors' inquiries. Specifically, such exposure may endanger the quality of decisions and discussions, for instance, if it prevents scientists from raising controversial or unpopular views, or results in increased pressures from lobby groups.

Striking a balance between transparency and protection of the autonomy of scientists and science advice calls for thoughtful regulation and sequencing of transparency measures: Not all things need to be open to everybody and in every channel all the time. Transparency is the gold standard of good, trustworthy governance – and the default option – but the challenges triggered by transparency in science advice must be responsibly addressed as well.

3.9 9. Communicate – bearing in mind that citizens are not alike

Trust in science depends on sincere communication about what science is and what it can achieve – and what it cannot, and so, equally, about the limitations of

science and science-informed advice. For instance, science communication must not sweep under the carpet the uncertainty of many scientific findings. Citizens should not be urged to trust science based on the false premise that science gives us certainty in all questions, but because it is likely that science, when pursued properly and trustworthy, provides us with the most reliable knowledge under conditions of uncertainty. Similarly, science communication must inform that consensus among scientists on an issue is often a good reason to trust their advice. Still, disagreement and criticisms are at the core of scientific practice and inquiries, and scientific findings cannot simply be dismissed even if some scientists question them. Furthermore, science should not be biased and shaped by ideological doctrine. Nevertheless, value judgment is often involved in scientific inquiries, for instance, in scientists' assessments of risks and costs. Such judgment should be made explicit, but its' presence as such is not reason to distrust scientific findings. Finally, when communicating science and science advice, governments must always do so as a distinctively *democratic* government. Trustworthy science deserves our trust, and responsible governments and citizens should take into account policy advice informed by such science. However, in the end, citizens and elected representatives are the ultimate decision-makers in democracies and have the authority to set aside the advice given to them when they see this as appropriate and reasonable.

Governments are thus confronted with the complex communicative task of both insisting on the democratic right to, at times, disregard this or the other piece of science-informed advice *and* arguing persistently for the need to trust and take into account trustworthy science and science advice. To be sure, this is not straightforward, and blueprints of how to go about this are hard to make. Yet, the approach that would always be wrong is for governments to simply abdicate the task of defending democracy and the authority of science – at the same time.

Another pitfall would be to communicate in a one-size-fits-all approach. Science communication must take place in a way that fits the context and audience. The government should communicate the importance of science in ways that work both in crises and during periods of more stability; when parameters are settled, and when they are in flux; when knowledge is radically uncertain, or more established. This dialogue must be appropriate for different types of people; the

educated and the less educated; the older and the younger; majorities and minorities.

3.10 10. Go beyond superficial trust-building – aim for long-term trustworthiness

Governments should avoid trust-building that is primarily opportunistic and single-issue oriented. They should rather aim at making trustworthiness the fundamental standard, which requires a broader and more in-depth approach.

Strategic science communication is obviously a virtue – communication that disregards situation and audience will not do. Still, reliance on short-term tactical considerations only comes with limitations. For instance, a short-term approach could speak in favour of focusing on scientific findings that are popular and that speak to citizens' common sense and preconceptions. However, there are situations where it is urgent for governments to have citizens trust science with "unpopular" conclusions and implications. Tactical considerations could also speak in favour of primarily promoting scientists who are media-friendly and "fast thinkers". However, sometimes the public will need to trust science undertaken by uncharismatic figures with complex messages, and a responsible government must prepare for it. In short, short-term boosts in trust in science may be well and good, but they must not overshadow the long-term work of patiently building trust and trustworthiness.

Finally, increasing citizens' trust in science – and in public institutions more generally – requires a consistent, wide-ranging approach. Focusing exclusively on the organisation and democratisation of this or the other science advice mechanism is obviously much too narrow. Citizens' trust is built by means by a broad set of trust-enhancing public policies, including, for instance, social and educational policy, and by means of a broad set of democratisation measures across public institutions and political bodies.

4 PUBLICATIONS ON TRUST IN SCIENCE FROM PERITIA WORK PACKAGE 3

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- Holst, Cathrine & Molander, Anders (2020). Epistemic Worries about Economic Expertise. In Fossum, John Erik & Batora, Jozef (Ed.), *Towards a Segmented European Political Order. The European Union's Post-crises Conundrum.* Routledge. ISSN 9781138495333. p. 72–92. doi: 10.4324/9781351024341-4. Full text in Research Archive

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