



The Brussels declaration on ethics & principles for science & society policy-making

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The Brussels declaration on ethics & principles for science & society policy-making

Text adopted on 17th February, 2017 during an announcement symposium at the American Association for the Advancement of Science's Annual Meeting (AAAS) held in Boston, MA, USA.

PREAMBLE

With the encouragement and support of all participating organisations, public and industry scientists, representatives of science-led civil society groups and particularly those many individuals assuming leadership roles in steering this independent initiative, we the participants of the five Consultation Events held from 2012 - 2016 adopt the present ***Brussels Declaration on Ethics and Principles for Science and Society Policy-Making.***

This bottom-up initiative began as a genuine attempt by the scientific community to question the robustness of science-led policy-making worldwide. The features that set it apart are its purposeful five-year process, its multidisciplinary approach, its openness to all stakeholders, the numbers and range of groups involved, and the quality of the dialogue and inputs achieved. Taking harm reduction science as the most powerful case-study to encourage both engagement and examination of how decisions are made, the spotlight has been on the processes themselves, not the public health imperatives. Nevertheless, our discussions uncovered major concerns and these searching questions persist.

During the latter part of our process when presenting interim findings at global conferences, our collective was able to convince the organisers of the *World Science Forum* to equally call for greater concerted effort towards establishing universal ethics and principles. Thus, in line with the outcomes of the 1999 World Conference on Science (WCS) and taking into account the 2011 Budapest Declaration on the *New Era of Global Science* and the 2013 Rio de Janeiro Declaration on *Science for Global Sustainable Development*, our Co-Chairs helped draft Article IV of the 2015 World Science Forum's Budapest Declaration on the *Enabling Power of Science* entitled '*Scientific Advice for Policies*'. This calls for: "***...concerted action of scientists and policy-makers to define and promulgate universal principles for developing and communicating science to inform and evaluate policy based on responsibility, integrity, independence, and accountability.***"

Our document brings together the findings from a series of five consultation events and symposia at global conferences from 2012 - 2016, in which more than 300 individuals from 35 countries examined how power operates in science and society (see annex).

We believe that science is relevant to politics, policy and power because it is based on evidence and gets it right most of the time. In what some now call our 'post-factual' society, however, with its cauldron of competing interests, knowledge is ever more complex, contingent and contested.

Right now, the 'playbook' at the boundary of science, society and public policy is being re-written, by multiple groups with multiple mandates and agendas.

The story of this five-year experiment is rich with tales of scepticism and walk-outs, but also of unbridled support and positivity. Our case-study presentations and discussions examined the science behind science-policy making, making it clear that 'truth' has today become a moveable feast, a mask of legitimacy often worn by those seeking power, but a mask which often bears no relation to reality.

Most policy decisions are informed by evidence provided by experts. All too often, who those experts are, how they are chosen and how reliable their advice really is, is open to question. The hard truth for the champions of scientific evidence is that facts will not reverberate as much as fear or emotion. People know that smoking kills but they still do it. Similarly, policy-makers know, as Kofi Annan put it, that *'drugs have harmed many people but bad government policies have harmed many more'*, but they still make those policies. We tried to uncover why?

The added-value of our expertise-gathering was that we took a deliberately *bottom-up* approach, focusing on the view from the grass-roots level and working with carefully selected influencers from a range of relevant fields – politicians, science advisers, chief scientific officers from industry, civil society leaders, medical doctors, professors, science editors etc. By merging traditional scientific and political 'elites' with 'scientific citizenship' and robust third-party science, our group effort identified promising alternatives based not on more top-down authority or even certainty, but on greater methodological trust.

Citizens have every right to ask who the experts are, how they are chosen and what the veracity of their advice is. The career professional scientific class must be more open. It is important that all stakeholders – society at large and those individuals or companies that may be affected by new policy – are able to be involved in the process. For all these actors and stakeholders, the scientific community included, the key requirement is **transparency** and **honesty**. Without these, **trust** is impossible. And without trust, **public dialogue** and **effective policy-making** are the losers.

We call upon all stakeholders – governments, scientists, industry and the public at large – to cooperate in a joint effort to ensure reliable, evidence-based policy-making for the benefit of society as a whole. The alternative, in our view, is a continued dangerous slide into the realm of policy-biased evidence.

This Brussels Declaration proposes a twenty-point blueprint for a set of ethics and principles to inform work at the boundary between science, society and policy. Its sole purpose is to boost understanding of how power operates and to explain why evidence plus dialogue rarely equals (as one might expect) good decisions and laws. Above all, we make the case for a broad, multi-stakeholder and multi-disciplinary approach promoting greater integrity and accountability. Our main recommendation for promoting public dialogue and better understanding is not only greater transparency and scrutiny, but genuine inclusivity.

We offer our Declaration for public comment as an attempt to provide guidelines for incorporating scientific progress into the policy-making that affects all areas of our lives.

We renew our commitment towards the responsible and ethical use of scientific knowledge in addressing the grand challenges of humankind.

We call for concerted action and will continue mobilising the international community to play its role to advance the use of this Declaration to support global and national initiatives.

Above all, our five-year journey has convinced all concerned, more than ever, that it is in all our interests that we benefit from **'evidence-based policy-making'** rather than suffer **'policy-biased evidence'**.

**Details of all five consultation events and supporting symposia held at global conferences 2012 – 2016, their set-up logic, participant lists, working groups, presentations, plus the thematic thought-leader essays generated etc. can be found at: www.sci-com.eu*

The 20 Principles of the Brussels Declaration

Section 1: science and policy – a crucial relationship (p5)

1. Science is a fundamental pillar of knowledge-based societies
2. Science can help provide the evidence base for public policy
3. Sound public policy is crucial for the direction and priorities of science
4. The dialogue between science and policy is never straight-forward

Section 2: what we expect from the scientific community (p6)

5. The integrity of science needs to be clear and the integrity of scientists providing advice must be unimpeachable
6. The full range of scientific disciplines should be included; notably, the social sciences can play a key role in improving how the public may react or adapt
7. Scientists must learn to use established communication channels for providing policy advice more effectively and be less aloof and perhaps less arrogant
8. Scientists must listen and respond to criticism

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15. Industry is an investor in knowledge generation and science and has every right to have its voice heard
16. Interest groups similarly have every right to have their voice heard as guardians of the common good or legitimate sectoral interests
17. Advice from any source to policy-making must acknowledge possible bias

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18. Scientific advice must be more involved in all stages of the policy-making process
19. Policy-making must learn to cope with the speed of scientific development and include greater foresight and policy anticipation
20. Societal investment in science will always require priority-setting; nevertheless, advances in public health deserve special attention

Section 1: science and policy – a crucial relationship

1. Science is a fundamental pillar of knowledge-based societies

Science provides a vital source of innovation, technological development and new ideas that change the way citizens and policy-makers perceive the world. It can both benefit and pose risks to the human condition. Scientists provide an interpretation of factual evidence, acknowledging that the interpretation may change as new knowledge is gathered. The application of science is not without risks and uncertainties, and these factors should be openly acknowledged and identified. Above all, we must not lose sight of the fact that science is also a value to society in its own right, forming the basis of judgement and insight while expanding the frontiers of knowledge. As such it cannot, and must not, be judged only in utilitarian, economic terms. In return, excellence and integrity must be taken very seriously by the scientific community in order to retain trust.

2. Science can help provide the evidence base for public policy

In a complex, inter-connected society, there is a growing need for evidence and expertise to inform policy-making. Scientific evidence is one among many types of advice that inform the decision-making process. Others include ethical values, cultures, politics and the impact any decision has on other areas of policy. But science occupies a unique position in the support it can offer to policy formation. This is a responsibility – and a value – that must be taken seriously by scientists and non-scientists alike.

3. Sound public policy is crucial for the direction and priorities of science

Policy for science is distinct from science to inform public policy. But there are overlaps. More often than not, science advice and science communication stand apart from the classical academic reputational system. Both are under-prioritised in academic careers. How funding and other resources are allocated to different areas of research can have a major impact on the questions and priorities which are addressed by the scientific community. Laws and policies may even prohibit the funding of science for certain topics in ways that are unrelated to evidence, for example, *in vitro* fertilisation or surrogacy.

4. The dialogue between science and policy is never straight-forward:

Policy-makers have multiple sources of solicited and unsolicited advice. Scientific evidence is not always welcomed by policy-makers, which can lead to it being ignored or distorted. Even when it is invited to speak, science does not always speak with one voice. Where judgement is necessary on competing scientific assessments, transparency is essential. Above all, there needs to be greater awareness that scientific uncertainties are likely to be perceived differently by different stakeholders. Building trust and ensuring transparency demands that citizens are engaged and consulted in developing the scientific advice, and in ensuring the integrity of those providing the advice. Scientific citizenship is not an *a la carte* add-on option.

Section 2: what we expect from the scientific community

5. The integrity of science needs to be clear and the integrity of scientists providing advice must be unimpeachable:

Scientists and those who make use of their work have a duty to ensure that the results of scientific research are reproducible and transparent. Vested interests can be beneficial but must be disclosed and conflicts of interest avoided or managed appropriately. The integrity and quality of that which science produces should be rigorously monitored and nurtured, by underpinning it with continuous and effective peer review, plus open quality assurance. Conclusions should be based on evidence. If scientists accept funding from special interest groups (including industry, not-for-profit organisations or government) the relationship must be open, known to all stakeholders and especially the general public. For example, several governments fund charities – often in former colonies – which, in turn, use public funding to lobby government.

6. The full range of scientific disciplines should be included; notably, the social sciences can play a key role in improving how the public may react or adapt:

Science and society all too often remain poles apart. Breaking down silos and including the full range of scientific disciplines will help scientists understand their role in society. Their collective wisdom is essential in helping policy-makers get things right. Science must accept that such inputs are often required *ad-hoc*, as there is not always time for tailor-made studies or optimal solutions. The focus should be on humane, ethical and sound science. Neither can science advice ever be accurate or actionable unless social psychology and humanities studies are fully factored in. For example, key determinants such as information selection, confirmation bias, pluralistic ignorance, extremism, polarisation, decision-making etc. require greater attention.

7. Scientists must learn to use established communication channels for providing policy advice more effectively and be less aloof and perhaps less arrogant:

Scientists must accept the responsibility to translate their scientific knowledge into forms that are understandable for society at large – especially where they are funded by public money. They need to be less aloof, perhaps even less arrogant, and engage with all appropriate communication channels to inform genuine public debate and provide effective policy advice. In so doing, science must enhance its voice, be courageous in policy debates, and get better organised to ‘gang up’ and ensure more accurate representation of its findings. In particular, scientists need to understand that policy-makers have to constantly weigh up the pros and cons of every decision. By developing comparative analyses of choices based on scientific evidence, more pragmatic choices will be possible. Ultimately this will require a greater understanding of, and earlier engagement with, the general public, private sector and non-governmental organisations, who are equal stakeholders.

8. Scientists must listen and respond to criticism:

The dialogue between science and society requires mutual trust and respect. All too often it can be portrayed as a ‘science versus society’ arm-wrestle with zero room for understanding or compromise. Scientists need to convey the best current evidence while acknowledging the limits of science and listening and responding seriously to criticism. Scientists must justify their recommendations and better engage when faced with such argument and criticism. “Trust me, I’m a scientist” does not, and should not convince. Scrutiny matters too and discounting ‘citizen science’ is

erroneous. Where there are disagreements as to the interpretation of scientific data this should be acknowledged and addressed. Scientists need to recognise that they are advocates with vested interests too – in their case, in their own science.

Section 3: what we expect from the policy-making community

9. Policy-makers must listen, consult and be held accountable

Policy-makers should be receptive to independent and transparent scientific advice, even when this advice is uncomfortable. Scientists should have the opportunity to provide input at all relevant stages of the policy-making process and hold it to scrutiny, while accepting that there may be stages that are not science-relevant. Policy-makers should pose questions in a timely fashion, as the quality and value of advice given may be compromised by a demand for unrealistically fast responses. Although policy-makers may be restricted in the level of expertise or tools they have at their disposal, they should keep their door open and include the private and corporate sectors, civil society groups and NGOs in public dialogue on scientific evidence. A system for alerting policy-makers to hazards and potential mistakes should be integral. But the bottom line must be that, while the inherent uncertainty in research has to be recognised, when policy-makers fail to take on board what the evidence is telling us, they must be held accountable for their inactions as much as for their actions. For example, differing policy responses to cannabis or alcohol harm reduction. The highly publicised opposing views of the Canadian and U.S. Surgeon Generals on e-cigarettes are a case in point.

10. Ethical consideration of the impact of policy decisions is crucial

Ethical consideration of the human impact of policy decisions is crucial and should be an integral part of decision-making. For example, how do we differentiate between the responsibilities of individuals to look after themselves and the powers of states to look after their citizens? Inevitably, occasions arise where a purely scientific assessment may harm society, or particular groups in society. Concerns for human dignity, respect for plurality, solidarity and justice, and even practicality, can all be crucial for the ultimate acceptance of policy, yet seem unscientific, or even anti-scientific, to some. Policy-makers, of course, have a responsibility to address areas that are complex, which require compromise and pragmatism, and where the selected response may therefore run counter to scientific 'purity'. Where policy does not respond directly to scientific findings, policy-makers must accept a responsibility to give clear explanations and reasoning.

11. Policy-makers have to challenge science to deliver on public investment:

For the science and policy relationship to work, policy-makers have to challenge science to deliver on any investment it receives from the public purse. For their part, when target-setting, policy-makers must not look at aspirations only, but should define explicit goals including using scientific evidence as a guide to help define and achieve faster and better results. The Sustainable Development Goals are an example. There is always an essential need for academic freedom within the parameters of any research question. Especially where public investment is involved, scientists must be held to account and challenged to demonstrate the relevance and effectiveness of their work. An example of this is the development and use of novel antibiotics. The responsibility of scientists does not end with the discovery or report of findings. The implementation of these findings, enshrining science in policy, needs to be a shared endeavour. The failure to report negative finding is in itself a perversion of science.

12. Policy-makers should be willing to justify decisions, particularly where they deviate from independent scientific advice

Clarity and transparency are fundamentally important, particularly where policy deviates from independent scientific advice. Whether there is scientific consensus or not, it has to be clear, through disclosure of all sources of input, whenever non-scientific considerations or influencing factors are involved in decision-making. Policy-makers should also be brave and imaginative. A new spirit of innovation might have to out-weigh precaution. Opening up new opportunities should be a core responsibility of policy-makers, who must also give due attention to the need for global investment in education to provide the resources for our shared future.

13. Policy-makers should acknowledge the potential for bias and vested interests Contrary to the scientific consensus

Policy-makers should acknowledge all sources of input used in coming to decisions and be aware of the risks and dangers of pressure from commercial agencies or special interest groups including media bias, which can frequently lead public opinion. Where decisions are made that are contrary to the scientific consensus this should be made explicit and the considerations driving that decision should be transparent. Input from those with a vested interest in the decision should be publicly acknowledged and, where possible, the nature of the advice should be made available. In order to minimise bias and inappropriate influence, a clear, reliable and transparent methodology for the whole life-cycle of policy-making should be defined.

Section 4: what we expect from the public, media, industry and interest groups

14. The public plays a critical role in influencing policy and must be included in the decision-making process

The public plays a critical role in determining what positions policy-makers will take. Unless science understands their 'nothing for us, without us' rights, then all sides of the equation will never truly balance out. Policy-makers are, by and large, elected and few will take a stance to support what the scientific evidence is telling us if this means going against the views of their electorate. The emergence of social media plays an important role here. For while new media lends itself to the expression of strong emotion, it hardly facilitates the careful explanation of a research finding or a policy platform by elected policy-makers. Traditional media's capacity to explain the ins and outs of less tangible science-policy-making is equally limited, especially when scientific consensus may not exist.

In this context, scientists must learn to find transparent ways and means to make their voices heard. The scientific community must sharpen its message and engage the public. On their side, the public needs to better understand that societal problems are not necessarily solvable through science. Increasing science literacy is relevant in this regard. Democracy is best served when citizens are comfortable with science and, by extension, science policy. However it is achieved, if the general public and their civil society actors are not included as fully as possible in decision-making by the scientific-political establishment, the consequences will be extremely damaging.

15. Industry is an investor in knowledge generation and science and has every right to have its voice heard

Industry is not to be shunned when it comes to policy-making. As the largest investor in knowledge generation, technology and science, it has every right to have its voice heard. Indeed, society and the policy-making process greatly benefit from the participation of industry experts. This is especially true when it comes to newly emerging technologies, where experts from industry and academia alike tend to have the deepest understanding and the most thoughtful approach on how we should proceed. Nevertheless, industry is too often perceived as suffering from fatal conflicts of interest and its views are therefore dismissed. In fact, commercial conflicts of interest are fairly easy to deal with if they are properly declared and the relationship between the science and the marketing made explicit. Ideological, personal or academic conflicts of interest, on the other hand, are much harder to detect or deal with.

Industry, in turn, must be better at disclosing its research methods, findings and interests and speak out more when its competitors or sector behave inappropriately. Equally, industry should speak out more when denied access to important policy-making or when its scientific research is poorly scrutinised or dismissed altogether. Yet, companies are too often constrained by their own competitive, secretive and hierarchical natures. Spokespeople, not scientists, are deployed to engage with society. If greater trust is to be built, industry should empower its scientists to speak up. This will help industrial research to be seen to be underpinned by an inherent integrity and quality. Above all, industry should avoid a 'battle-ground' mentality and the promotion of public disinformation intended to muddle the scientific picture when competitors or policy-makers appear to be going in an unwelcome direction.

16. Interest groups similarly have every right to have their voice heard as guardians of the common good or legitimate sectoral interests

Interest groups similarly have every right to have their voice heard as guardians of the common good or legitimate sectoral interests: interest groups are a crucial cog in the policy-making process. NGOs and legitimate grass roots groups represent a concerned citizenship. At the same time, policy-makers need to be conscious of the fact that interest groups are not necessarily defenders of the common good or promoters of robust science. For this reason, they must be transparent, accountable and responsible for the information and misinformation they disseminate. When interest groups clearly get it right, both the scientific and policy-making community should give them credit. When they get it clearly wrong, they should learn to hold their hands up and contribute to dismantling the public myths about science that they have helped create.

17. Advice from any source to policy-making must acknowledge possible bias

Transparency is key to science policy advice. Advice from any source must therefore acknowledge any possible bias (including any funding that may have influenced the advice). Scientists supported by government, academia, industry or special interest groups, including global institutions, must declare that support. Funding sources must be openly declared, also the various roles or associations, past and present, of those giving advice. It cannot be that when provided welcome advice it is called an 'input' and when unwelcome, called 'lobbying'. The influencing of policy-makers is embedded in society, but this must not become the preserve of a privileged few. The majority of stakeholders, if not all, must be given an equal opportunity to exercise influence. It is essential that lobbying is transparent and accountable, and that it avoids any hint that it exerts an undue or even deceitful influence on decision-making.

Section 5: what needs to change: how scientific advice & greater inclusivity need to be integrated more effectively

18. Scientific advice must be more involved in all stages of the policy-making process

Knowledge institutions have multiplied. New players have joined. Think tanks and expert groups are manifest. Yet, few checks and balances are in place to contest when policies proposed by elite power circles are clearly not evidence-based. Therefore, from the anticipation and development of policy to its implementation, evaluation and reform, scientists need to be more readily involved in political circles, and integrated into the policy-making system. A variety of approaches to this can already be seen in the world today (science & society co-production in Asia or top-down advisory mechanisms in Europe etc.). A key impetus behind this is the fact that science-based issues are now so crucial to the conduct of foreign policy whether in the national, regional or global interest. Countries are expressing a clear interest in implementing science diplomacy through politics, a process which by its very nature demands a closer integration of science and politics. The same applies to global companies and institutions operating in a complex matrix of technical and relational challenges. But the reality is that scientists at the top of their profession are often kept away from policy-makers, particularly on emerging, controversial issues. The policy-making process must thus be self-critical and somewhat auto-correcting, rooting out its own inherent flaws and biases.

Recent moves towards the creation of science advisory posts at the top table of government and global institutions can only work if those appointed as important gatekeepers to power are permitted to actually listen and consult grass-root stakeholders more broadly. They must also have the courage to stand by what the consensus evidence is telling them. If as a society we recognise the benefits of increasing scientific input at all stages of the policy-making process, then we must all redouble our efforts to remove the political barriers that prevent science being heard.

19. Policy-making must learn to cope with the speed of scientific development and include greater foresight and policy anticipation

Aspects of future risk and uncertainty are particularly complex and difficult for policy-makers to grapple with. Taking the Ebola virus as an example, some may choose to invest heavily in being prepared for even remote outcomes, others will prefer simply to respond whenever a crisis arises, if at all. Where there is scientific uncertainty, policy-making should be aware of the basis of that uncertainty. Science should be forthright in providing advice on the costs and benefits of action or inaction. Similarly, the precautionary principle must not be misused in a way that impedes technological progress towards reducing risk or public harms. It is clear that greater interaction between science and policy-making has great potential to bridge the fundamental divide, where scientists tend to think long-term, while policy-makers tend to address short-term, election-cycle concerns. Clearly the understanding of problems can be very different when viewed from different perspectives.

20. Societal investment in science will always require priority-setting; nevertheless, advances in public health deserve special attention

The general public may be interested in investing their taxes in discovering life on Mars or the Higgs Boson, but they quite reasonably expect most tax-funded scientific research to be focused on issues of life and death. An increased focus on public health science and innovation or that which stresses food security and safety will help prevent disease and premature death and promote wellbeing worldwide. For this to be further established, there is a need to build trust between scientists, policy-makers and other societal actors through a long-term, sustained and participatory dialogue. Nobody should be excluded or left behind. There is a need for institutions that can serve as “brokers” and “interpreters” between the science and policy arenas. Global challenges need global solutions. In today’s politics of science, it is therefore of the utmost importance to break with the past and already bankrupt world views to join efforts to provide the best possible scientific solutions for our time.

Consultation events details & attendees

**'EVIDENCE-BASED POLICY VERSUS POLICY-BIASED EVIDENCE:
THE CHALLENGE OF FEEDING SCIENTIFIC ADVICE INTO POLICY-MAKING'
*When science speaks to policy, politics and power because it has evidence***

"Drugs have harmed many people but bad government policies have harmed many more"

Kofi Annan (GH) - *Global Commission on Drug Policy*

"Scientists should learn to stand up, shout up and when necessary, shut up. The voice of the rational middle ground should be louder"

Prof. Patrick Cunningham (IRL) - *former Irish Chief Science Adviser (2012 Participant)*

"We need to drag all stakeholders out of their silos and force them to work together"

Dr. Mary Baker MBE (UK) - *Immediate Past President, European Brain Council & European Federation of Neurological Associations (2014 Participant)*

"Only by systematically holding our leaders to account for the promises they make can we ever hope to tip the risks balance towards reduced harms and save lives"

Dr. Richard Horton (UK) - *Editor-in-Chief, The Lancet; Former First President of the World Association of Medical Editors (2012 Participant)*

Consultation event dates, locations & thematic titles

Consultation No 1: 29th June, 2012, South African Mission, Brussels

- Case-study theme: [harm reduction science](#)

Consultation No 2: 4th June, 2013, South African Mission, Brussels:

- Case-study theme: [substance addictions and their brain reward systems](#)

Consultation No 3: 10th June, 2014, South African Mission, Brussels:

- Case-study theme: [ethics, integrity and the policy-maker](#)

Consultation No 4: 18th June, 2015, South African Mission, Brussels:

- Case-study theme: [regulating risk](#)

Consultation No 5: 24th July, 2016, Manchester Town Hall:

- Case-study theme: [towards ethics & principles of science policy-making](#)

Brussels Declaration Final Dialogue: 9th December, Pretoria:

- [Science Forum South Africa \(SFSA\)](#)

Brussels Declaration Release: 17th February, Boston:

- [American Association for the Advancement of Science \(AAAS\) Annual Meeting](#)

The brussels declaration drafting process

CHAIRPERSONS 2012 – 2016

- **Dr. Mary BAKER MBE** (British), Past-President, *European Brain Council*; Consultant to the WHO; Universities of Oxford & London School of Economics.
- **Dr. Wilson COMPTON MD** (American), Deputy Director, *U.S. National Institutes of Health*, National Institute of Drug Abuse (NIDA).
- **Professor Patrick CUNNINGHAM** (Irish), Professor of Genetics, *Trinity College Dublin*; Former Chief Science Adviser to the Government of Ireland; Champion, *EuroScience Open Forum* (ESOF) 2012 Dublin.
- **Dame Professor Anne GLOVER** (British), Dean of International Relations, *University of Aberdeen*; Former Chief Science Adviser to *European Commission* President, José Manuel Barroso.
- **Professor Julian KINDERLERER** (British & South African), President, *European Group on Ethics in Science and New Technologies (EGE)*; Professor of Intellectual Property Law, *University of Cape Town*.
- **Professor Michel KAZATCHKINE MD** (French), *UN Secretary General's Special Envoy* on HIV/AIDS in Eastern Europe and Central Asia; Member, *Global Commission on Drugs Policy*; Former Executive Director of the *Global Fund* to Fight Aids, Tuberculosis & Malaria.

In early May, 2016 our Consultation Event Co-Chairs, Professor Michel Kazatchkine and Professor Julian Kinderlerer took the Fifteen Principles & Recommendations arrived at following our first 2012 meeting as version **1.0**. They revised them, adding five new principles reflecting a more robust ethical stance.

On 14th June, 2016 this version **2.0** was then sent to the four past Chairs for comment, namely Dame Anne Glover, Professor Patrick Cunningham, Dr. Wilson Compton and Dr. Mary Baker.

Based on their inputs, we arrived at our **3.0** version which was sent on 28th June, 2016 to the many past-participants unable to join the fifth and final Consultation Event in Manchester on 24th July, 2016, but who had asked explicitly to be kept in the loop and continue feeding-in to the process.

Taking into account their comments, we then sent a version **4.0** to all confirmed participants (see below), dividing them into five **Pre-Working Groups** with an assigned **Discussion Lead** who then steered the drafting process for their specific set of principles:

Working Group 1: Science and policy – a crucial relationship?

Discussion Lead: Dr. David BUDTZ PEDERSEN (Danish), Strategic Adviser, *Ministry of Science, Innovation & Higher Education*; Bid Coordinator ESOF 2014 Copenhagen.

Working Group 2: What do we expect from the scientific community?

Discussion Lead: Dr. Thomas HARTUNG (German), Professor and Chair for Evidence-based Toxicology, Director, Center for Alternatives to Animal Testing; *Johns Hopkins University, Bloomberg School of Public Health, Dept. of Environmental Health Sciences*.

Working Group 3: What do we expect from the policy community?

Discussion Lead: Professor Roy ROBERTSON M.D. (British), Center for Population Health Sciences, *University of Edinburgh*.

Working Group 4: What do we expect from the public, industry, media and interest groups?

Discussion Lead: Professor Kathryn O'HARA (Canada), Professor of science broadcast journalism at *Carleton University*; former President of the *Canadian Science Writers' Association*; former Board Member, *World Federation of Science Journalists*.

Working Group 5: What needs to happen next?

Dr. Lidia BRITO (Mozambique), Director of Science Policy for Latin America & the Caribbean, *UNESCO* & former Minister for Science, *Government of Mozambique*.

On 24th July, 2016 at the Concluding Consultation Event, each Discussion Lead presented the specific text recommendations of their Working Group in open session at Manchester Town Hall, including further comments and suggested changes from the floor i.e. from all participants present.

Following this fifth and final Consultation Event, each Discussion Lead was tasked with continuing the dialogue and refining their texts for final submission to the Co-Chairs, which they did by end September, 2016.

Co-Rapporteurs Aidan Gilligan and Jan-Marco Mueller then worked with all Discussion Leads and Chairs to produce this final *Brussels Declaration*.

On 19th January, 2017 the Declaration was sent to all 2012 – 2016 Consultation Event participants for one final assessment, equally asking them to check their affiliations.

The initiative was announced in *Nature Correspondence* on 19th January, 2017 as being for public release at the Annual Meeting of the *American Association for the Advancement of Sciences* (AAAS) Boston on 17th February, 2017.

This scientific symposium panel announcing the *Brussels Declaration* includes:

- Chair Professor Kinderlerer presenting principles 1 – 4;
- Chair Dr. Wilson Compton presenting principles 5 – 8;
- Chair Professor Michel Kazatchkine presenting principles 9 – 13;
- Discussion Lead Professor Kathryn O'Hara presenting principles 14 – 17;
- Participant Sir Peter Gluckman, Chief Science Adviser to the PM of New Zealand presenting principles 18 – 20; &
- Grace Naledi Mandisa Pandor, South African Minister for Science & Technology joining as a Discussant.

In parallel, the *Euroscientist* journal and *Elsevier* released the principles to all publications in a global online campaign.

Concluding consultation event participants, 24th July, 2016 Manchester town hall

Prof. Tateo ARIMOTO (Japanese), National Graduate Institute for Policy Studies (GRIPS) & *Japanese Science & Technology Agency (JST)*, Japan

Mr. Stephane BERGHMANS (Dutch), Vice President, EU Academic & Research Relations, *Elsevier*

Professor Jean-Pierre BOURGUIGNON (French), President of the *European Research Council (ERC)*

Dr. Lidia BRITO (Mozambique), Director of Science Policy for Latin America & the Caribbean, *UNESCO* & former Minister for Science, *Government of Mozambique*

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Supporting engagement panels 2012 - 2016

Case-studies and presentations given at annual Consultation Events often formed the basis for participants coming together with further experts and groups to conceive and deliver high-level panels at global conferences.

In addition, speakers and delegates often teamed up to generate novel thought-leader essays on specific topics of interest to them around scrutinising evidence-based policy-making.

This has generated a large body of work. These compendia and details of all below-mentioned high-level panels can be found under 'events' and 'publications' at www.sci-com.eu

July, 2012: EuroScience Open Forum Dublin (ESOF):

'Exploding myths about nuclear energy, GMO's and harm reduction science'

'Are science journalists doing their job?'

February, 2013 American Association for the Advancement of Science (AAAS) Boston:

'Clinical trial and error, beauty and the beast'

'Food, nicotine, and drug addictions: the latest research on brain reward systems'

26 November, 2013 World Science Forum Rio, Brazil:

'Leveraging the nexus between health science, policy & business: insights from the BRICS, USA & Europe'

February, 2014: American Association for the Advancement of Science (AAAS) Chicago:

'Addiction: our compulsions and brain reward systems'

'Building global partnerships: sharing discovery while protecting competition'

'Resolving our greatest public health challenges via science diplomacy'

July, 2014 EuroScience Open Forum (ESOF) Copenhagen

- 'Unravelling addictions and brain reward systems'
- 'Building global partnerships, sharing discovery while protecting competition'
- 'Health science 2020: a jig-saw puzzle of global business clusters'
- 'Resolving our greatest public health challenges via science diplomacy'

February, 2015: American Association for the Advancement of Science (AAAS) San José:

- 'E-cigarettes: killing me softly or our greatest public health challenge?'
- 'Science diplomats tackling our lifestyle killers'

November 2015, World Science Forum Budapest:

- 'Mapping the brain, unlocking the mind'
- 'Fit for purpose global health policies'

February 2016, American Association for the Advancement of Science (AAAS) Washington D.C.

- 'Neuroscience clues to the chemistry of addiction & their mood disorders'
- 'Statecraft & scalpel: regional & global health diplomacy'

July, 2016: Euroscience Open Forum (ESOF) Manchester:

- 'Evidence newcomers: revolutionising regional & global initiatives – should the 'old world' make more space?'
- 'Waging war on drugs doesn't work – applying harm reduction science does: key findings of the UN General Assembly 2016'
- 'The right to be forgotten versus the right to know'
- 'Toxicant detectives: the chemical innovation race, lifestyle risks & the role of animal experiments'
- 'Clinical trial and error: why narrowing the resources gap matters'

September, 2016: Latin American & Caribbean Open Science Forum (CILAC) Montevideo, Uruguay:

- 'Refining the open science paradigm shift - barriers, opportunities, infrastructure & open society'

November, 2016: Seoul, Korea (KOFAC):

- 'How good & bad innovation, ethics & policy-making shape our modern lives'