EU-AU-IIASA Evidence and Policy: Water-Energy-Food Nexus

30 August - 2 September 2016
European Commission, Joint Research Centre, Ispra, Italy

Masterclasses

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THE AFRICA-EU PARTNERSHIP
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International Institute for Applied Systems Analysis
IIASA

1. Operating at the science-policy interface

1.1. INFORMED DECISION-MAKING IN CRISIS AND DISASTER RISK MANAGEMENT SITUATIONS

Facilitators

Philippe Quevauviller, European Commission, Free University of Brussels

Oladoyin Odubanjo, The Nigerian Academy of Science

1) Objectives

- To help participants appreciate various considerations during crises and disasters, and the need for evidence in decision making in such circumstances, using a case study on flash floods as a basis for the discussions
- To tease out effective ways of presenting and receiving evidence for policymaking during crisis and disaster situations, in a time frame of several hours with early warning data (from meteorological services) and evidence given by scientists (based on knowledge from research projects) regarding a flash flood disaster to protect citizens and assets, and respond to the event as best as possible to limit socio-economic impacts

2) Outline

The art and science of evidence-informed policymaking is dynamic and still evolving. Within their peculiar environments, policymakers struggle with finding the right evidence to use for policy (and decision)making while scientists are challenged with finding effective ways to bridge the evidence to policy gap. Given that crises and disasters (which are not uncommon in the water-energy-food security nexus) portend chaos and mandate quick decision-making, evidence-informed policymaking becomes complicated and even more challenging in such situations. Hence, the need for policymakers and scientists alike to examine what it takes to make effective policies which are evidence-informed during any kind crises (e.g. related to natural disasters, accidents or intentional threats). In the present masterclass, the disaster chosen will be a flash flood occurring in an urban area.

00.00-00.15	**Welcome and Introductions** • 5 min on crisis management from a policy-making/governmental viewpoint – Doyin Odubanjo • 5 min on crisis management from a scientific viewpoint and exploring it via a scenario on flash floods - Philippe Quevauviller

00.15-01.00	**Simultaneous Group Exercises (45 minutes)**
	Group Exercise 1 – Policy-making in a scenario of flash flood in an urban area
	• Policy-makers (group to be a mix of scientists and policymakers): based on their policy knowledge,
	  ○ Discuss what the various political considerations may be for reaching a decision
	  ○ Discuss the political processes to follow to reach a decision
	  ○ Discuss the various stakeholders that may need to be considered/consulted
	  ○ discuss what they need to get as scientific background to take a sound decision which would be in line with the existing policy

	implementation and disaster management principles
	
	You are a civil servant in the a Ministry in charge of civil protection or security, and you are faced with decisions to be taken in face of a flash flood in an urban area (following early warning by meterological services). Your Minister asks you for a summary of science-based actions to be undertaken in the light of existing policies. He/She requires this summary in a few hours time. Where would you go to find this evidence?
	
	Group Exercise 2: Science-based evidence in a crisis situation
	
	• Scientists (group made of scientists and policymakers): based on their scientific background,
	  ○ figuring out what type of recommendations could be given to policy-makers so that their decisions is reflecting the best of the scientific state-of-the-art
	  ○ discuss effective ways of engaging policymakers with the scientific information
	
	You are a scientist from a research organisation or university. You are contacted by civil servant(s) asking for science-based recommendations to respond to an identified flash flood risk in an urban area. You are asked to provide concrete advises based on scientific expertise / experience, in a format that can be used by first responders and meeting civil protection / policy requirements. This is required in a few hours time. How will you proceed to provide clear recommendations to the policymakers and first responders?

01.00-01.25	**Feedback and Joint discussion** Debate asking policy students to express their needs and to scientist students about their recommendations. Discussion about the policy framework, feasibility of recommendations, format in which they are presented etc. – TO RESULT IN A CLEAR DECISION TO RESPOND TO THE CRISIS
01.25-01.30	**Feedback on the Masterclass and Wrap Up.**

3) Format

- Short presentations by facilitators
- Group discussion of case studies

4) What skills will scientists learn? What skills will policymakers learn?

Scientists:

- What other considerations, apart from scientific evidence, influence policymaking in crises
- What the political processes are followed in policymaking and, especially, during crises
- Effective ways of engaging policymakers

Policy Makers:

- What would constitute relevant scientific evidence during crises and how to access it in a timely manner
- Identify stakeholders to consult for decision-making in a crisis

5) Recommended readings

National Research Council. (2012). *Using Science as Evidence in Public Policy.* Committee on the Use of Social Science Knowledge in Public Policy, K. Prewitt, T.A. Schwandt, and M.L. Straf, Editors. Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

EU Flood Directive (2007)
Scientific paper related to EU policies and related research

Videos related to flash floods:
https://www.youtube.com/watch?v=jPZQU_T8jz0
https://www.youtube.com/watch?v=m74rPJRYDBA

1.2. WHAT COUNTS AS EVIDENCE: TAKING TRADITIONAL, LOCAL AND NON-SCIENTIFIC KNOWLEDGE INTO ACCOUNT

Facilitators

Ken Hughey, Chief Science Advisor, Department of Conservation, New Zealand; Professor of Environmental Management, Lincoln University, Christchurch, New Zealand

Simon Tamungang, Head of Basic Sciences Department, College of Technology, University of Bamenda, Cameroon; Senior Lecturer in Ecology and Conservation, University of Dschang, Cameroon; Wildlife Management Consultant, Ministry of Forestry and Wildlife, Cameroon; Member of the of the International Network for Governmental Science Advice (INGSA).

1) Objectives

- To understand why indigenous cultures and knowledge can be in conflict with modern concepts of globalisation and development
- To demonstrate how, if traditional practices and indigenous knowledge are not considered appropriately in development planning people can be alienated from community social amenities and sustainable livelihoods, with potentially severe ramifications
- To help identify principles and practices (including the role of Science Policy Advice) to assist in accommodating sustainable traditional practices and knowledge, but also to help engage in change management of unsustainable indigenous practices thereby enabling people to join the mainstream of sustainable water resource development

2) Outline

Our intent is via practice, to identify the pros and cons of not including and then including alternative forms of knowledge, including traditional ecological knowledge, in development planning. We aim to do this by setting up a development scenario involving a water resource that has multiple use interests, and value sets, and knowledge(s) and practices. Participants will be exposed to policy/planning processes, one exclusive and the other inclusive of different forms of knowledge. Lessons will be derived to show how development can benefit by more inclusive approaches.

3) Format

Use role playing to demonstrate how development processes: first, without including indigenous knowledge/sustainable traditional practice holders are likely to lead to win-loss situations with considerable potential for social disruption and other losses; second, by including these knowledge holders and their knowledge in decision making, have the potential to lead to win-win development practices. Each group will be split into smaller sub groups for two rapid rounds of role playing associated with mediated reflection leading to a set of ideas and principles for how to consider this sort of knowledge in development proposal planning. (Note that we have developed a package of information that will be used in this role play).

4) What skills will scientists learn? What skills will policymakers learn?

Scientists:

- Multiple sources of knowledge can strengthen overall understanding and assessment of development options

- Being open to alternative sources and types of knowledge can lead to new knowledge and insights

Policy makers:

- Involving multiple knowledge including indigenous practices can lead to more inclusive decision making
- More inclusive decision making can lead to win-win development plans which reduce conflict potential.

1.3. WICKED PROBLEMS: DEALING WITH SCIENTIFIC AND POLITICAL CONTROVERSIES

Facilitator

Rob Maas, RIVM - Netherlands

1) Objective

The objective is to gain practical experience in dealing with 'wicked problems'. Wicked policy problems are cases with large scientific uncertainties and strong normative controversies.

2) Outline

The masterclass will focus on a hypothetical trade agreement on food between the EU and Africa. Free trade of food products can lower food prices and increase food security. On the other hand it could contribute to local water shortage or increased greenhouse gas emissions, e.g. due to the use of fertilizers. In addition, food safety is an issue. Can the market be organised in such a way that these negative side effects will be negligible? Is national or international regulation required?

3) Format

Role-playing

4) What skills will scientists learn? What skills will policymakers learn?

Scientists:

- Distinguish when science is not conclusive, normative perspectives will dominate the debate. In such cases, scientific evidence is used to strengthen the bargaining position. Participants could learn how to handle in such situations.

Policy makers:

- How to make a policy strategy more robust when taking into account multiple scientific theories.

1.4. WHY DO EXPERTS SPEAK WITH MANY VOICES? THE ROLE OF EXPERTISE IN POLICY DEBATES

Facilitators

JoAnne Linnerooth-Bayer, International Institute for Applied Systems Analysis (IIASA)

Isayvani Naicker, Department of Science and Technology, Government of South Africa

1) Objectives

The purpose of this master class is to build an appreciation of how expertise enters policy debates where there are multiple stakeholders with different frames of the policy issue and policy solution. Through a role-playing exercise, participants in the master class will argue their policy stances based on plural and differentiated expert evidence made available to them. This will build an appreciation of how expertise can be shaped to fit diverse policy frames.

2) Outline

- ***Background*** (10 minutes): The case will focus on the risk of floods to crops, livestock and food production in a selected, but stylized, African river basin.

- **Policy frames** (10 minutes) The point of departure of this master class is its focus on constructions or frames of the flood problem (its causes, consequences, etc.) and the preferred solution (structural, ecological, and/or regulatory measures) by stakeholders holding competing interests and worldviews. Three distinctly different problem frames, based on the theory of plural rationality[1] will be presented. For each frame, three policy interventions will be provided, along with their costs.

- ***Role preparation*** (15 minutes) The participants will be asked to choose one of the three policy frames describing the flood issue in the selected case. The class will then be divided into three groups, where the participants are asked to play the role corresponding to their selected policy frame.. Each group will discuss and refine their narrative. This exercise will make use of a "game board" with a map of the river valley, and spatially represented interventions and their costs.

- ***Policy debate*** (20 minutes) Each group will be asked to prepare arguments to justify their policy solutions. For this, they will need to identify the types of information and expertise they need to support their case (illustrative facts, figures and analytical methods will be provided by the facilitators). The groups will choose a leader, and the leaders will debate their chosen policy paths. Their arguments will be supported by the provided expertise.

- ***Policy negotiation*** **(**20 minutes) Finally, the groups will enter negotiations with the aim of reaching a compromise solution given a joint budget constraint. Both policy debate and negotiations will take place with the aid of the "game board" adding realism to these interactions.

- ***Debriefing and discussion*** **(**15 minutes**)** The plural policy frames and legitimizing expertise will be discussed for the "lessons learned" and for the representativeness of real policy debates. If time permits, the facilitator will show how this role-playing exercise played out in reality – in the case of landslide risk management in Nocera Inferiore, Italy. This three-year participatory process

[1] Thompson M, Ellis R, Wildavsky A (1990) Cultural theory. Westview Press, Boulder

respected the diverse views on the problem and its solution, and three different scientific solutions to the landslide policy issue were co-produced by scientists working with the citizens who took part in the participatory process.

3) Format

Interactive role-playing simulation inspired by a case study. Role-playing simulations recreate complex management dilemmas through acting the roles critical to the success or failure of policy. As a result more information is retained, learning is faster, and an intuition is gained about how to make real decisions.

4) What skills will scientists learn? What skills will policymakers learn?

The scientists and policymakers will learn to appreciate that knowledge is constructed to fit the views and interests of those advocating for specific policy pathways. Rather than proceed with the notion that one policy path is "optimal" based on one set of "facts", the master class will show how participatory processes can be designed to respect the different frames of the problem and different "facts" called upon to support the views. A successful policy may not be viewed as optimal from any one perspective, but as research has shown, policies have an improved chance to be robust (long-lasting) if they accommodate competing worldviews.

5) Recommended readings

- Linnerooth-Bayer, J., Scolobig, A., Ferlisi, S., Cascini, L. and Thompson, M. (2016) *Expert engagement in participatory processes: translating stakeholder discourses into policy options.* Natural Hazards, 81 (S1). pp. 69-88.

- Scolobig, A., Thompson, M. and Linnerooth-Bayer, J. (2016) *Compromise not consensus: designing a participatory process for landslide risk mitigation.* Natural Hazards, 81 (S1). pp. 45-61.

2. How to provide and use evidence

2.1. MAKING SENSE OF SATELLITE IMAGES

Facilitator

Alan Belward, Sustainable Resources Directorate, DG JRC, European Commission

1) Objectives

To introduce the science and art of satellite remote sensing, highlight the range of information that can be extracted from different image types and show how different geographic and time scales can be used for resource management issues.

2) Outline

The land meets most food, fuel and fibre requirements for over seven billion people, and has to support over 100 more people every minute of every day. Our growing and shifting population is testing the resilience of land and water resources as never before. Policies to improve resilience, minimise risks and balance use with recovery are most effective when based on evidence. Satellites provide a unique vantage point from which to analyse land and water resource changes.

3) Format

Short participatory introductory talk to the whole group, followed by individual and team practical experience of image interpretation and a final interactive group session identifying, selecting, preparing and printing example images selected by the group to illustrate a resource change scenario selected by the group.

4) What skills will scientists learn? What skills will policymakers learn?

Scientists:

- Decision-making is a continuous process, but choices and decision points in this process will condition the sorts of measurements remote sensing science should provide; the importance of indicators, and how the language used to describe them by policy may need interpretation.

Policymakers:

- How different sorts of satellite imagery can help resource management decision making; how to read satellite images and use the information they contain to provide evidence concerning resource status, condition and changes; know where to go to find images and how to prepare them for use in reports, briefings etc.

5) Recommended reading

Belward, A.S. and Skøien, J. O., 2015, Who launched what, when and why; trends in Global Land-Cover Observation capacity from civilian Earth Observation satellites, ISPRS Journal of Photogrammetry and Remote Sensing, 103, 115-128 http://dx.doi.org/10.1016/j.isprsjprs.2014.03.009

2.2. USING RESEARCH SYNTHESIS TO MAKE BETTER DECISIONS

Facilitators

Philip Davies, PhD, Oxford Evidentia Ltd, and Department of Social Policy and Interventions, University of Oxford, England

Alex Ademokun, PhD, Department for International Development, London, England

1) Objectives

- To get participants to identify what constitutes high quality evidence
- To familiarise participants with some of the main methods and skills of research synthesis.
- To give participants the opportunity to use some of the skills of research synthesis to inform a policy or practice issue.

2) Outline

The Water-Energy-Food Security nexus, like any other area of public policy, requires informed decision making about the nature, magnitude and dynamics of a problem, and of effective ways of responding to the problems of these sectors. It is important that evidence to inform policy and practice should not be taken from a single study or source alone. Evidence to inform decision making for the nexus comes from many studies, multiple sources, multiple countries, in multiple formats and languages, and with different degrees of validity, reliability and quality. The sheer amount and flow of such evidence is beyond the capacity of the human mind without some means of assistance. Research synthesis provides this assistance with a number of methods for identifying, critically appraising, and summarising the *balance of evidence* on a topic from a wide range of sources over a long period of time.

3) Format

- Problem-solving group exercises and scenarios from real policy settings
- Database searching (via internet)
- Participants' critical appraisal skills exercise
- Short presentations by facilitators

4) What skills will scientists learn? What skills will policymakers learn?

Scientists:

- How to respond to policy makers' needs for high quality evidence in a timely manner
- How to deal with different notions and standards of evidence
- How to provide an overview of the balance of evidence of a topic

Policy Makers:

- How to appreciate the different types and sources of evidence
- How to critically appraise research evidence and separate higher from lower quality evidence
- How to use research synthesis as a tool to enhance decision making.

5) Recommended readings

Davies, P.T. 2003
Systematic Reviews: How Are They Different From What We Already Do?, in Anderson, L. and Bennett, N. (eds) *Developing Educational Leadership for Policy and Practice'*, London, Sage Publications.

Davies, P.T. 2006
What is needed from research synthesis from a policy-making perspective?, in Popay, J., (ed) *Moving Beyond Effectiveness in Evidence Synthesis*, London, National Institute for Health and Clinical Excellence.

Participants are encouraged to bring a laptop or tablet to the masterclass so that they can take part in exploring sources of sound evidence.

3. Techniques for co-creating policy

3.1. HOW TO USE FORESIGHT TO ANTICIPATE POLICY CHALLENGES?

Facilitators

Fabiana Scapolo, DG JRC.I2 Foresight and Behavioural Insights Unit
Laurent Bontoux, DG JRC.I2 Foresight and Behavioural Insights Unit
Peter De Smedt, Vlaamse Overheid Transitie Lab – Connecting in change

1) Objectives

The objective of the masterclass is to give insights on Foresight and its ability to look into the future by adopting a system thinking approach and to analyse what are the leverage points within the system that need policy intervention today. Through the approach another objective is to make a clear distinction between foresight and forecast and how they relate to the future and what it can provide to the policymaking process.

2) Outline

During the 90 minutes, 10-15 minutes will be spent to give some main notions on foresight, the rest of the masterclass will be hand-on working on a case study. The case study will focus on a future scenario on food security in hypothetical, but real, African urban environment. Participants will analyse the scenario and analyse what are the main global trends relevant to the scenario and how they interrelate. The global trends will be provided to participants and are part of the JRC Foresight knowledge management project. In particular, as the scenario will focus mainly on food security, the water and energy implications of the scenario will be highlighted. Participants would be asked to identify the leverage points of the system and would have to outline policy measures that can be developed to address the leverage point and which are the actors that would be responsible for them.
Participants will be asked to visualise their system based on templates that will be provided in advance. At the end of all the masterclasses the outcomes of all groups could be displayed.

3) Format

Small groups of 4-5 participants working on case study

4) What skills will scientists learn? What skills will policymakers learn?

Both will discover their ability to deal with the future and with uncertainty in an open ended way. Scientists will have to deal with issues beyond their field of expertise and beyond modelling in a systemic way. Policy makers will discover that it is possible to prepare for the future without being able to predict what will happen.

5) Recommended readings

Short description of the global trends that will be provided one week ahead the masterclass

3.2. THE POWER OF ATTENTION AND THE WISDOM OF YOUR HANDS: PRACTICING KEY PRINCIPLES OF DESIGN FOR POLICY

Facilitators

Emanuele Cuccillato, DG JRC, EU Policy Lab
Nelson Torto, Botswana Institute for Technology Research and Innovation

1) Objectives

While design thinking has been applied in industry and the private sector for several decades, it is only in recent years that its potential for public policy making has started to be explored. A new "movement" of design and policy labs is taking shape with several experiences across the world, emphasizing the importance of co-creation in addressing contemporary challenges. But what does "design for policy" really mean? Is it bringing something new or it is just another hype? What is its true potential for enabling a more effective collaboration between policy makes and scientists? During this masterclass you will get a brief introduction on the key ideas of design for policy and experiment with two fundamental principles: using attention to enable co-creation and collaborating across disciplines by working with your hands (and 3D objects). Although often ignored, attention where one listens with palpable respect without interruption positively affects the quality of other people's thinking. Therefore the best gift that one can receive is to be allowed to think for one's self. Even in a hierarchy, people can be equals as thinkers. Knowing that one will have their turn does improve the quality of their attention. In this session participants would learn that when it comes to helping others think for themselves, sometimes doing means just being present, not doing anything at all.

2) Outline

The power of attention: deep listening is a fundamental enabler of co-creation. By giving your undivided attention to your teammate while he/she is speaking you can create the conditions for them to think for themselves and catalyse the emergence of new ideas. Normally when one speaks and they are not interrupted, one feels rather lucky. However to be allowed to think and know that one will not be interrupted, puts one at ease and sets them free from the destructive internal rush. The wisdom of our hands: research and practice have shown that working with our hands with 3D objects can trigger thinking paths that we do not usually explore while engaged in verbal conversations. In fact using our hands activates parts of our brain that are not stimulated during conventional working interactions. If collaborating with others through a different language can feel awkward at first, it can liberate creativity and create truly different interaction dynamics.

Programme:

A. *Getting the basics (20 min): what is design for policy and how it can help policymakers and scientist to build a shared understanding of WEF challenges and co-design solutions.*

Participants will also engage in a thinking session as pairs so they can both experience attention.

B. *Experiencing (50 min)*

2/3 parallel groups will be working with 3D materials to describe and explore solutions for a case emblematic of a policy challenge at the water, energy and food nexus. The key rule for verbal interaction will be to listen deeply to your teammates without interrupting them while they are speaking.

C. *Sharing (10 min)*

Each group will briefly share their story using the artefact that they have built.

D. Processing and internalizing (10 min)
Participants are invited to reflect individually for a few minutes on the following questions:

- What was the effect of deep listening (as a listener and a speaker)?
- How "working with your hands" did change the interactions? Did it make it easier to work across disciplines/roles?

3) Format

Hands on workshop with 3D materials and props based on a case study

4) What skills will scientists learn? What skills will policymakers learn?

Scientists and policymakers will learn how deep listening skills that can create the conditions for more effective collaboration and co-creation of solutions to policy challenges. They will also experience how generative tools such as 3D toolkits can speed joint exploration of a problem and identification of innovative solutions.

5) Recommended readings

blogs.ec.europa.eu/eupolicylab ; maketools.com ; www.timetothink.com

The radical's dilemma: an overview of the practice and prospects of Social and Public Labs; Geoff Mulgan, February 2014

3.3. BEHAVIORAL INSIGHTS FOR POLICY DESIGN

Facilitators

Girum Abebe Tefera, Ethiopian Development Research Institute
Anna Fruttero, The World Bank

1) Objectives

This session will summarize how behavioural insights are relevant for policy-making. It will be a hands on session, which will first show how policy-makers' own biases can account for flawed policies and then it will go over a behavioural approach to problem definition and diagnosis, that will lead to developing a behavioural map specific policy problems.

2) Outline

- We are all biased - 15 minutes illustrating, with interactive exercise, how our own biases can prevent us from making the right choices and few tips on what to do about those;
- Problem definition (using an example from the Water-Energy-Food nexus- eg water conservation) - 30 minutes exercise on the importance and the challenges in having a good definition of the problem at hand and tips on how to get to one;
- Diagnose do not suppose - 30 minutes developing a behavioral process map for the problem being addressed;
- Recap - 15 minutes discussing main take away points that can be used right away in our work.

3) Format

Short presentation of a couple of slides detailing main concepts and then discussion and debate

4) What skills will scientists learn? What skills will policymakers learn?

Scientists and policymakers will:

- become more self-aware of how their biases are affecting their everyday actions and work;
- learn some tools to contrast these biases;
- learn how to go about defining a problem effectively and hence be on the right track to identify solutions;
- learn how to make good use of existing evidence and identify areas where more evidence is needed to identify the constraints that are causing a problem, and consequently effective solutions.

5) Recommended readings

Chapter 10 and 11 of the 2015 World Development Report - Mind, Society and Behavior (http://www.worldbank.org/content/dam/Worldbank/Publications/WDR/WDR%202015/WDR-2015-Full-Report.pdf).

4. Stimulating Effective Dialogue

4.1. STIMULATING EFFECTIVE ENGAGEMENT

Facilitators

Clara Richards, Evidence Informed Policy-Making, INASP and VakaYiko Consortium
Nyasha Musandu, CommsConsult

1) Objectives

- To enhance trust between researchers and policymakers by understanding each other's viewpoints and priorities
- To strengthen engagement and communication skills between researchers and policymakers

2) Outline

Time	Activity	Objective	Materials
15 min	Icebreaker and introduction - Name - Organisation and role - Personal challenges for research and policy engagement Overview of masterclass and objectives	- To introduce each other - To express what people's challenges are and begin to understand policymakers and researchers' perceptions of challenges - To address complexity of policymaking processes - To frame the session	- Wool ball - PowerPoint
30 min	Speed Dating: Audience, messages and oral communication - Introduce session (Objectives, guidelines) - Role play - Conclusions in plenary	- To understand and practice tailoring messages for different audiences. - To practice being clear and concise when delivering oral messages	- Scenarios on food security nexus - PowerPoint
40 min	Pairing: Synthesis for written comms - Introduce session (Objectives, Policy Briefs (PB) structure, guidelines) - Read and highlight main points in articles individually - Share with partner - Agree on what are the main messages for each section of the PB - Share in plenary	- To understand PBs function and structure - To practice synthesising information - To understand what researchers and policymakers prioritise in terms of information needs	- Short articles on food security nexus - PowerPoint - PB examples
5 min	Conclusion and recommendations	- To come up with tips and solutions to	- PowerPoint

		improve research and policy engagement	

3) Format

The session will include a combination of:

- Icebreaker
- Role playing
- Pairing
- Short presentations to sum up activities and share principles
- Plenary discussion on challenges and recommendations for effective engagement

4) What skills will scientists learn? What skills will policymakers learn?

- Participants understand policymakers and researchers' perceptions and evidence needs
- Participants reflect about the complexity of the policymaking process
- Participants understand and practice tailoring messages for different audiences.
- Participants practice being clear and concise when delivering oral messages
- Participants understand PBs function and structure
- Participants practice synthesising information
- Participants understand what researchers and policymakers prioritise in terms of information needs
- Participants learn new tips and solutions to improve research and policy engagement

5) Recommended readings

- **Evidence Informed Policymaking Toolki**t, INASP, VakaYiko Consortium http://www.inasp.info/en/work/vakayiko/eipm-toolkit/
- Extensive online resource on **preparing evidence based policy briefs**: http://global.evipnet.org/SURE-Guides/

- **The knowledge translation toolkit Bridging the Know–Do Gap**: A Resource for Researchers https://www.idrc.ca/en/book/knowledge-translation-toolkit-bridging-know-do-gap-resource-researchers?PublicationID=851 The Knowledge Translation Toolkit provides a thorough overview of what knowledge translation (KT) is and how to use it most effectively to bridge the "know–do" gap between research, policy, practice, and people.
- **Writing for change An Interactive Guide to Effective Writing**, Writing for Science, and Writing for Advocacy https://www.idrc.ca/en/book/writing-change-interactive-guide-effective-writing-writing-science-and-writing-advocacy?PublicationID=335 In Writing for Change, you will learn the core skills of effective writing, how to write for scientific publication, and how to write for advocacy. Writing for Change will enhance your capacity to write in ways that promote action from your target audience.
- **How to Give a Science Flashtalk** http://www.scidev.net/global/communication/practical-guide/flash-talk-science-video-guide.html

4.2. VISUALISATION OF DATA AND MESSAGES

Facilitators

Darren McGarry, Joint Research Centre, European Commission
Francois Kayitakire, Joint Research Centre, European Commission

1) Objectives

To improve the knowledge base and strengthen competences in communication visualisation

2) Outline

The session will include a combination of:

- Interactive plenary discussions
- Group work on given case studies
- Interactive discussion and demonstrations of best practices

3) Format

- Through interactive plenary discussions, case studies, and demonstrations at the JRC's visitors centre Policy makers and scientists will realise the importance of visualisation in today's society.
- Scientists and policy makers will jointly brainstorm approaches to visualise key issues.
- Examples of interactive visualisation and communication will be given via hands on demonstrations in the JRCs visitors centre.

4) What skills will scientists learn? What skills will policymakers learn?

Policy makers and scientists:

- Will become acquainted with a "palette" of tools to enhance visualisation of key messages.

Policy makers:

- Will learn some tips and tricks to read correctly the statistical data in different formats of data representations/visualisations (graphs, maps, etc.).

5) Recommended readings

- Data Flow, Visualising Information in Graphic Design
- Information Graphics– May 27, 2012, by Sandra Rendgen, (Author), Julius Wiedemann (Editor).
- The Age of the Image: Redefining Literacy in a World of Screens Paperback – April 8, 2014, by Stephen Apkon (Author), Martin Scorsese (Foreword)
- Information is beautiful, David McCandless, Our World Data : https://ourworldindata.org/

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