

Yulye Jessica Romo Ramos, SciDev.Net

OUR LEARNING SERIES

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First published by SciDev.Net in the UK in 2012

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ISBN 978-1-909528-01-7

Printed and bound by Trident Printers, UK Cover design by www.stevendickie.com/design Photo Credit (Cover): iStockphoto.com / Gawrav Sinha



Putting science at the heart of global development

OUR LEARNING SERIES

SciDev.Net Global Review 2012

Yulye Jessica Romo Ramos, SciDev.Net

November 2012

Acknowledgements

Thanks to all SciDev.Net staff who participated in the development of the terms of reference, goals and core questions. A special thanks to the regional coordinators for the valuable input and support provided to the author when designing and implementing this research project.

I could have not done it without the help of the temporary contractors we hired around the world, who were instrumental in collecting data at country level. Another key resource was my temporary Monitoring and Evaluation assistant, Gifty Boachie, whom I thank for helping with cleaning data, summarising open-ended responses and for supporting the monitoring and evaluation desk during one of its busiest periods.

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List of acronyms

LAC Latin America and the Caribbean

MENA Middle East and North Africa

SA South Asia

SEAP South East Asia and the Pacific

SSA Sub-Saharan Africa

A&R Academic and research

AusAID Australian Agency for International Development

DFID Department for International Development

DGIS Netherlands Directorate-General for

International Cooperation

ICT Information and Communication Technologies

IDRC International Development Research Institute

INASP International Network for the Availability of

international Network for the Availability

Scientific Publications

M&E Monitoring and Evaluation

NGO Non-governmental organisation
ODI Overseas Development Institute

POST Parliamentary Office of Science and Technology

SIDA Swedish International Development Cooperation

Agency

SIRC Social Issues Research Institute

S&T Science and technology

Executive summary

SciDev.Net wanted to study the different contextual settings within which policymakers, the private sector, non-governmental organisations (NGOs), the media and the academic/research community operate, to better understand how to mainstream science evidence and technology innovation for development and poverty reduction. To that end, SciDev.Net conducted a series of research projects that created a robust picture of policymaking and science journalism in a number of contexts. The findings helped the organisation develop an updated theory of change and informed the development of SciDev.Net's strategic objectives (2013–17).

About 3,000 responses were submitted as part of a global survey, and an additional 44 specialist stakeholders participated in a series of focus groups in the South East Asia and the Pacific region. SciDev.Net also partnered with the London School of Economics and Political Science (LSE) as well as Museum of Life/House of Oswaldo Cruz/Fiocruz (Brazil) for a global science journalist research project, which generated an additional 600 responses. The majority of the respondents in this body of research (over 94%) come from global south. We focused on five regions: Latin America and the Caribbean (LAC), South Asia (SA), South East Asia and the Pacific (SEAP), the Middle East and North Africa (MENA) and Sub-Saharan Africa (SSA).

The findings and recommendations presented in this paper are primarily applicable to the knowledge broker sector as our analysis has been focused on the work of organisations like ourselves and how they respond to the complexity of our environments.

General insights on evidence uptake

All sectors identified that **social, economic, envronmental and political analysis of research results helps** improve the uptake of S&T information, and is more valuable when provided by a trustworthy, authoritative and accurate source. Knowledge brokers and relevant actors should actively aim to provide such analysis and support in understanding the implications of certain insights to facilitate uptake.

Nearly 70% of respondents use evidence for 'personal knowledge building, keeping up to date with certain topics'¹, rather than only for delivering specific activities. This correlates to research carried out by IDS² as well as Weiss's seven models of research utilisation³, where information is used when it has been internalised and in most cases repackaged to serve a specific action or purpose. The importance for science communicators or knowledge brokers is the ability to facilitate this internalisation and conversion of information.

Challenges for uptake of evidence

In terms of more generic challenges preventing the application of S&T information in projects for development, we found that 'lack of human or financial resources' tops the charts for all sectors and most regions — reported by nearly 60% of respondents. More resources should be allocated and capacity building efforts put in place to help the uptake of evidence, especially at organisational and national levels.

The second most common challenge is the 'lack of analysis of the economic implications of research', followed by a 'lack of social analysis (i.e. the impact of research on certain groups)'.

Challenges for engaging the wider public on issues related to S&T are also identified. 'Lack of sources of information that present S&T information readily usable for public engagement' was found to be one of the top two challenges, experienced by over 60% of respondents. Another issue is a perception that the public lacks interest in S&T subjects. However, Chapter 6 presents information that supports the idea that the public is generally interested in S&T issues and that more relevant and inspiring stories can generate interest and action.

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¹ Statements in quotes are taken directly from options provided for respondents in the survey instrument

² Perkins, N. and Batchelor, S. (2011) *Learning about how to communicate 'learning' from and within a multi-sited organisation*. Institute of Development Studies

³ Weiss, C. H. *The many meanings of research utilization*. Public Administration Review 39 (5), 426–431 (1979)

Evidence and policymaking

We found that over 60% of policymakers resort to 'personal knowledge and experience' when sourcing evidence for policy development. Around half of all the public sector respondents use 'media organisations and the public perception' as common sources of information for policy development — making neutrality and objectivity in journalism practice crucial. In addition, policy stakeholders seem to also rely heavily on government sources of information, which reminds us of the need to ensure that S&T is not politicised.

Worryingly, in the majority of the regions evidence is integrated or used rather late in the policymaking process — i.e. 'once a decision is made, as supportive documentation and justification' and 'post-implementation, to assess impacts and outcomes of policy'. In addition, about 40% of policy respondents also feel that 'significance of views held by policy participants and other stakeholders are generally more influential than findings presented in paper for policymaking', which represents a challenge. Further, more than 60% of respondents involved in policymaking and lobbying feel that 'economic stakeholders dominate or influence more successfully', that there is a 'lack of formal avenues for involvement in policymaking and development', and that the 'nature of policymaking does not favour uptake'.

The role of media in research, policy and development

The majority of respondents felt there was a role for media in research, policy and development. Interestingly, there was marginally less agreement on this in the public sector where 72% of respondents agreed with this idea, compared to 85% on average in other sectors. The differences in the regions were more marked: in MENA the proportion of respondents (all sectors) who do not believe media and specialist communications organisations should have a role is the highest at 31%. Compare that with SSA where only 2.3% believe the media should not have a role in research, policy and development.

We studied the type of roles media and specialist organisations should play, finding that overall the top three (in order of importance) are: 'help raise awareness and interest', 'draw attention to areas of public concern at times of decision-making or flag areas where research is needed' and 'help generate public debate on subjects and proposals'.

When analysing some of the open-ended responses provided by respondents we also found that media and communication organisations are expected to help build a culture of science, which involves the provision of

information in a language that is easy to understand (accessibility); raising awareness of and advocating S&T topics; reporting issues in an objective and balanced manner; and making use of the best communications channels⁴. Socialisation of science is also a desirable role, and should involve a balanced representation of views, especially from those directly affected. There is also a desire for more investigative journalism and positive reporting of facts (as opposed to focusing on the controversial areas). Finally, there is a strong desire for the media to act as a 'watchdog', helping to monitor, evaluate and contribute to the accountability of key stakeholders such as policymakers and researchers.

Surprisingly, over 60% of media respondents said their organisations cover S&T topics. Of these, the biggest proportion (34%) mentioned they have been covering S&T topics for five years or more. The top covered topics are health/medicine, technology, environment, science and social science. 'science communication', 'grassroots science innovation' and 'science policy' are consistently the least covered topics and most do not cover 'science innovation' neither.

In the science journalism research we also found that **most respondents (62%)** welcome the idea of a science desk that is sponsored by third parties ('philanthro-journalism'), with 79% and 67% favouring national and foreign charitable foundations respectively. This is great news for funding bodies with an interest in developing high-quality science journalism in the global south. Such donor-led coverage might bring more long-term goals, such as concerns raised in SEAP⁵ that most media organisations work on short timeframes, preventing coverage of issues in the long-term and giving a false sense that there is a lack of public relevance, resulting in dropped plans for addressing issues through S&T.

Around 60% of respondents or less feel 'completely satisfied', 'very satisfied' or 'satisfied' about their work environment and the coverage of S&T topics, so there is room for improvement. 'Access to information from government agencies' is an issue, with only 40% of respondents feeling positive about it (except for SA and SSA, with 60% and 50% respectively); this is worse in MENA where only 20% feel positive about this. In addition, some participants feel that the political context is missing (i.e. a lack of government policy on S&T that would create awareness and motivation for the media to increase coverage). Some also say that lack of funding and capacity is another obstacle in their work environment along with a perceived lack of interest at government and wider public levels.

Over 80% of all media sector respondents use conferences, press releases/press officers and government media agencies as sources for story ideas. In SA social media channels and blogs are more widely used.

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⁴ Some participants feel radio should be used more. Radio is still the primary channel for many, especially the most vulnerable and marginalised.

⁵ South East Asia and the Pacific Focus Group Report (Romo, 2012)

Our findings indicate **there** is **great demand for training around the world**, especially in SSA, SA and SEAP where the percentages of respondents indicating need for training is higher. In addition, capacity building needs for women are slightly higher (about two to three percentage points) for most items, except for the top one ('nature and role of science journalists') where it increases more significantly to 71.8% – see Figure 30.

The role of NGOs and the private sector in research, policy and development

There is a high percentage of NGOs currently not consuming S&T information for development and programmes (an average of 71% of respondents). This is of concern when we think about the expectations people have of these stakeholders. For example, during our research in SEAP (Romo, 2012) the desirable role that NGOs should play is similar to that for media organisations, in that both are expected to identify needs on the ground for consideration by the research and policy community, while also helping with monitoring and evaluation (as 'watchdogs'). They are also ideally placed to encourage more social and environmental analysis of research results, to help disseminate results and facilitate their uptake at local levels or where they are most needed (including policy level). Therefore there is a lot of room for improvement in raising awareness in the NGO sector about the importance of S&T for development and policymaking.

A small majority (59%) of private sector respondents said that their organisation consumes information related to S&T for development and nearly 80% of respondents believe their company would be interested or benefit from more business/industry sector S&T news and analysis. This represents a big opportunity for news and analysis provision to this sector. Developing a service delivery strategy should be based on insights about the private sector presented in this report, and conducting more research on this subject is advisable.

The great majority of private sector respondents (88%) believe they have a role in S&T communication and/or knowledge transfer for development. Over 90% believe the private sector should be a partner for research development — there were no regional differences here.

The role of ICT

The use of information and communication technologies (ICT) for consumption of information is clear: 45–50% of all sector respondents named the Internet when asked to think about their preferred sources of S&T information⁶. In addition over 60% of all sector **respondents currently prefer to consume information via 'online daily news'** digest (top response) and 'as online weekly digest' (second place). The same proportion also prefers information via 'specialist formats (i.e. opinion and editorial pieces, key documents, features, etc.)', ranking these in third place. Moreover, we discovered that these formats will continue to be popular in the next five years for over 60% of respondents. We can see the demise of TV and print, and an increase in the use of mobiles and tablets (i.e. iPads) over the same period.

The use of ICT expands beyond the consumption of information, as over 60% of respondents say they would engage in online fora if given the chance to talk with specialists (this does not apply to the academic/research sector), and with other peers or the public.

When we asked the academic/research, media and public sectors about preferences for training delivery, the top response was 'online course materials', favoured by over 80% of respondents. But at regional level, except for LAC, the top preference is for training delivery in person.

Participants were also asked to choose from two types of online delivery channels: nearly 80% favoured webinars (with no regional differences).

Revenue

Although many of the results and leads resulting from the findings in this report could be potential areas for revenue, only two avenues were included in the survey.

<u>Training</u>: Over 60% in the media, academic/research and public sectors indicated that they or their organisation would be willing to either pay in full (18%) or contribute towards their training if subsidised by a third party (46%). So moving from a free training model to a suitable pay arrangement could be an option, keeping in mind the relatively high percentage that are unwilling to pay for training (36%).

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⁶ This correlates with information gathered in our South East Asia and the Pacific Focus Group (Romo, 2012) where online resources were identified as the most popular channels used by the policy, media and academic/research sectors.

<u>Announcements</u>: There are potential revenue opportunities from the private sector for fees for posting announcements. For example, 30% of respondents say they or their companies would be willing to pay for events promotion and 21% for job adverts. In some regions the willingness to pay for events is high, for example in SA (64%).

Gender perspective

Gender challenges exist at all levels throughout the global south or developing world, and the proportion of women indicating the need for capacity building is higher than for male respondents in both the media and academic/research sectors.

From our pool of respondents we found that **the media sector has one of the highest gender disparities** for executive roles (4 : 1) (men to women); followed by NGOs (3 : 1). The media is also the sector with the highest gender disparity for managerial roles (2.3 : 1), followed by the academic/research sector (2.1 : 1). If we analyse gender differences by job grade across sectors and regions, we see that all regions have major gender issues across particular sectors and roles. Some points are:

- The most concerning job grade/region ratio is in the academic/research sector for executive roles: in MENA it is 9:1 (men to women) and in SA 15:1
- SSA, with an average of 4.8 : 1, is the region with the highest gender disparity for executive roles in general
- LAC, with an average ratio of 5.6 : 1, is the region with the highest gender disparity for managerial roles in general.

In our SEAP Focus Groups Report (Romo, 2012) we discuss how the context favours the role of women as family carers, perhaps discouraging professional interest in S&T especially, as it is male dominated. Men and indeed the private sector are seen as being reluctant to make changes that would allow women to participate, such as allowing flexible working or sharing family responsibilities. SEAP participants feel their governments could also do more, by developing gender-sensitive programmes across all sectors and avoiding policies that continue to stereotype women. The role of education is cited as key, especially when combating the larger societal issues that create glass ceilings for women. We believe that these views are not unique to SEAP and that similar challenges can be seen globally.

Key factors of change

We can identify four key factors that together create paths towards mainstreaming S&T evidence and insights related to innovation in policy and development:

- 1) Access to information that is useful and easy to understand. This relies on increasing awareness and visibility of information and providing an infrastructure that supports dissemination and access.
- 2) Analysis of research findings, including the socio-economic implications. This should be extended to the environmental and political impacts of research according to the priorities of sectors and regions. The aim is to increase relevance for geographic locations and for a wide range of stakeholders, engaging with appropriate discourses (e.g. political or development specialist language) to further facilitate uptake.
- 3) Capacity to support and sustain uptake of research, where the key target audiences are policy stakeholders, academics/researchers, science communicators and knowledge brokers.
- 4) Creation of spaces and incentives that facilitate the type of relationship building that would help mainstream more evidence into policymaking and development programmes, increasing the influence of research. Such relationships should be based on trust, and be aimed at making policy development process democratic and consultative. The participants should include S&T champions, knowledge intermediaries (both formal and informal), 'social network connectors' (SNC), epistemic communities and private sector stakeholders. The latter are some of the most influential stakeholders in the policy sphere.

Action points and recommendations for SciDev.Net

The recommendations below are discussed in more detail in the Conclusion. They are aimed at mainstreaming more evidence into policymaking and development activities as well as helping to build a culture of science. Therefore we believe many of the points made here are also applicable to the wider community of interested stakeholders.

- 1) Design profile-raising activities for science communication
- 2) Encourage content sharing— improving access, increasing outreach and facilitating uptake
- 3) Practise responsible journalism for policy, research and development
- 4) Provide socio-economic analysis of research results
- 5) Improve capacity to facilitate uptake
- 6) Adapt to the digital world but be mindful of the marginalised
- 7) Create key relationships for uptake
- 8) Design a model that can adapt to the various contexts and needs arising from gender, sector and regional differences
- 9) Build a monitoring and evaluation (M&E) model for intervention design and implementation, and continuous learning and improvement
- 10) Adopt an open approach share knowledge and lessons learned

Introduction

SciDev.Net was founded more than ten years ago and has now reached a wide audience in both the developed and developing worlds. We wanted to study the different contextual settings within which policymakers, the private sector, non-governmental organisations (NGOs), the media and the research community operate, to better understand how to mainstream science and technology (S&T) evidence in development and poverty reduction. To that end our Monitoring and Evaluation (M&E) Coordinator developed and lead a series of research projects which would create a robust picture of the current situation, and which would help develop the next set of SciDev.Net's strategic objectives (2013–17).

Our main interests are in the following areas:

- Measuring the level of desire for media and specialist communication organisations (knowledge brokers) to play a role in policy, research and development, and the top roles these actors should play
- Studying the most valuable attributes that help people make use of evidence (uptake) in specific S&T information; how SciDev.Net rates against those attributes; and the preferred sources of information
- Identifying challenges preventing uptake especially those related to engaging the wider public and interacting with the academic/research community and also identifying opportunities to overcome these challenges to increase the use of S&T information for development and poverty reduction.
- Analysing the role of information and communication technologies (ICTs) in disseminating information and helping uptake, and in delivering training.
- Studying needs for capacity building and demand for SciDev.Net products and services.

More specifically, for the public sector we wanted to better understand the role of evidence in policymaking — when in the policymaking cycle is evidence most likely to be used, and what are the most effective formats for presenting evidence to policymakers? When surveying the media sector we aimed to analyse the extent to which S&T topics are covered and what audience these specialist communication organisations are addressing. For the academic/research and NGO sectors we wanted to know how many are involved in lobbying activities or influencing policy, and the extent to which NGOs use S&T evidence for development purposes. Finally, for the private sector we aimed to measure the interest in playing a bigger role in S&T communication and/or knowledge transfer for development, and involvement in policymaking.

This report mainly focuses on the global strategic survey but it also incorporates insights from other SciDev.Net research projects such as our South East Asia and the Pacific and Science Journalism reports. It also correlates findings with other internal information such as SciDev.Net registrant and website metrics. External references and links to work done by others are also made where appropriate.

The findings and recommendations presented in this paper are primarily applicable to the knowledge broker sector but we also believe that this document is of interest to the below audiences due to the overlapping areas of work in the development arena:

- All those interested in S&T and innovation and their role in development and poverty reduction
- Knowledge brokers and those involved in policymaking or lobbying
- Organisations interested in development issues, such as NGOs and international organisations
- Funding partners and donors

Chapter 1: Methodology

1.1 Terms of reference

The mission of SciDev.Net is to help individuals and organisations apply science and technology-related evidence and insights for decision-making to make a positive impact on equitable and sustainable development and poverty reduction in the developing world.

Previous studies have identified the benefits and services that are valuable to our users and the information generated from these projects was used as a starting point. The focus of this evaluation is to further study the different contextual settings within which policymakers, the private sector, NGOs, media organisations and the academic/research community operate to better understand how to embed science and technology (S&T) evidence in development and poverty reduction activities.

The aim was to compile all the relevant information on SciDev.Net users and our current performance, as well as to identify new areas of improvement or opportunity to inform the preparation of our strategic plan for 2013–17.

We wanted to:

- Understand how to better mainstream S&T evidence for development, identifying the challenges involved and possible solutions
- Develop regional and sector profiles to better understand and serve these audiences
- Analyse the role of ICTs, which are increasingly used for development goals
- Identify areas of opportunity such as potential partners, revenue avenues, demand for specific services and products, etc.
- Create insights that not only SciDev.Net would find useful but also the wider community of knowledge brokers, development practitioners, policymakers and all those interested in S&T.

1.2 Literature review

This global evaluation builds on a series of projects and research, mainly:

- SciDev.Net original research, taking forward unanswered questions or generating more in-depth analysis on areas. These are:
 - The ODI–SciDev.Net paper, 'Political science? Strengthening science–policy dialogue in developing countries' (Jones et al., 2008), based on 617 respondents — 63.9% from the developing world or global south
 - A 'Mid-term review of SciDev.Net' by the Social Issues Research Institute (2010). Respondents were policymakers and scientists (about 1,500 in total)
 - SciDev.Net surveys hosted on Survey Monkey studying impact on users, such as 'Tell us your story',
 which has run twice (2010 and 2012), generating more than 100 case studies
 - Analysis of a wide range of statistical data derived from our registrant database as well as our website metrics, to identify baselines and areas of focus.
- External this list is not exhaustive (for more details see the bibliography):
 - Review of commitments made to SciDev.Net's donors/funding bodies such as DFID, SIDA, AusAID,
 IDRC and DGIS, which helped prioritise research
 - Results of research projects by POST (Parliamentary Office of Science and Technology), such as the
 evidence generated by Chandrika Nath on formats used for mainstreaming evidence (policy briefs in
 this case) along with an assessment of capacity building needs in the developing world
 - Research by Ajoy Datta from RAPID (Research and Policy in Development) analysing the role of think tanks and policy research organisations in the developing world
 - A recent paper by Andries du Toit (2012), 'Making sense of evidence', which provides valuable thoughts on the role of evidence in policymaking
 - A paper from IDS by Nick Perkins and Simon Batchelor (2011), which also makes reference to Carol Weiss's research, 'The Many Meanings of Research Utilization' (*Public Administration Review*, 1979).

1.3 General approach

A participatory approach underpins this research. The M&E Coordinator consulted on the areas below; these were reviewed by SciDev.Net's director, regional coordinators, senior managers and head of departments:

- Research proposal: evaluation of suggested approach, terms of reference, goals and specific areas of research
- Countries of focus: selection method and feasibility study
- · Questionnaires: surveys were shared with stakeholders before they were rolled out
- Participatory approach to resourcing: mainly on selection of appropriate in-country contractors.

SciDev.Net focuses on low- to middle-income countries, further dividing these into six regions: Latin America and the Caribbean (LAC), Sub-Saharan Africa (SSA), North Africa and the Middle East (MENA), South Asia (SA), China and South East Asia and the Pacific (SEAP). It was deemed appropriate to concentrate research efforts in these geographic regions (with the exception of China), approaching both readers/registrants as well as non-users in order to generate more accurate insights. These five regions are ones referred to when talking about the 'regions' throughout this report.

The following sections explain in more detail the process from the design to the implementation stage of this research project.

1.4 Surveying non-SciDev.Net readers/registrants: country research

Within each region, we have noticed that there are some countries where SciDev.Net has been very successful and others where impact has been limited (based on readership and registration figures). We wanted to evaluate both good and less successful cases (at country level) to understand what has worked, and how regional dissemination can be improved, by surveying non-SciDev.Net readers/registrants. The goal is to transform insights into scalable models that can be applied throughout the regions, helping to further our impact and reach.

A scoring system was used to select two countries for each of the five SciDev.Net regions, using the following criteria:

- Science and technology investment, using gross domestic expenditure on research and development (GERD)⁷ and Knowledge Economy Index (KEI)⁸ indicators from UNESCO where information was available
- Size of population⁹
- Countries that are the focus of our main donors
- Online engagement with SciDev.Net measured by visitor statistics to our website as well as registration figures for weekly email alerts
- Feasibility assessment: countries where it is physically and practically possible to conduct field research, taking into account civil conflict for example as well as the ease of conducting longitudinal studies in the future.

The highest and lowest score countries were selected using this system, two per region except for SEAP (where we did four countries) and China (not surveyed). We chose a total of 12 countries for this stage:

- LAC: Guatemala and Colombia
- SSA: Kenya and Uganda
- MENA: Egypt and Algeria
- SA: India and Nepal
- SEAP: Indonesia, Philippines, Cambodia and Palau.

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⁷ UNESCO Institute for Statistics (UIS)

⁸ By the World Bank

⁹ CIA World Factbook

Once the countries were selected an audience approach was chosen, whereby we grouped people by sectors to study needs and preferences. This resulted in six predefined audiences, matching the most prominent registrant groups at SciDev.Net:

- Public sector: governmental organisations, aiming to interview decision-makers and all those who support them such as civil servants, policy analysts, etc. Instructions were given to our contractors to prioritise those governmental departments involved in science and technology (S&T) as well as development and environmental areas. They were also asked to target a mix of local and national government.
- <u>Private sector</u>: sampling of companies was based on their interest in S&T and potential uses of their research for development, as well as those that already invest in S&T or whose products and services assist with development. For example, we included companies with 'corporate social and environmental responsibility' programmes that might include projects in developing countries related to development and sustainability.
- <u>Media outlets</u>: national, regional and local media outlets were targeted. A good mix of radio, TV, online and print outlets was reached.
- <u>Academic institutions</u>: we approached national and influential institutions that are well recognised within
 the country, especially those where the majority of future policymakers and other influential individuals
 graduate from.
- Research institutions: sampling was based on those organisations that are well recognised within the country, especially those with ties to the government.
- <u>NGOs</u>: non-governmental organisations based in the country that are well recognised in the development field, preferably those that are good at influencing policy or working with local and regional governments to help alleviate poverty or implement sustainable development. Other international organisations were also approached such as those dealing with issues related to economic and social development or gender.

It is important to note that this research also aimed to focus on people in senior roles where possible. This required the creation of tailored surveys. Five different surveys were developed, matching each of the above audiences (the academic and research sectors were covered by one survey as their work was deemed similar).

Note that the five sectors are those referred to when talking about the 'sectors' throughout this report.

There was a series of 25 core questions included in all surveys. These questions were for profiling respondents (age group, gender) as well as analysing sources of information, opinion on the role of media, ICT usage and other areas considered relevant to all sectors. More sector-specific questions were added accordingly, making an average of 40 questions per sector survey. Overall we had 62 questions and 310 variables.

In-country contractors were given two months to conduct face-to-face interviews where possible, completing surveys in real time, allowing for phone and online surveying as an alternative. Each country had targets per sector; these were mainly based on the institutions we thought would fit the sector profiles.

Contractors were briefed verbally, in person where possible, and given guides with detailed information about the project and its specifications. They reported primarily to the Monitoring and Evaluation Coordinator as well as the Regional Coordinator where necessary.

Surveys were made available in four languages: English, French, Spanish and Arabic. This effort generated 2,001 responses between February 2012 and the end of April 2012. Surveys results were sent to the M&E Coordinator for analysis. Cleaning of data followed, which resulted in the following distribution of usable surveys:

Table 1: Total number of clean responses by sector — country field research

Total	1,863
Research	720
Academic	720
NGOs 294	
Private	195
Public	331
Media 323	

1.5 Surveying readers/registrants: online research

The same surveys used for the country research were made available online in April 2012 to all our readers and registrants. Minor changes were made to address a different pool of respondents. For example, a question about reasons for not being already registered was modified.

Promotional emails were sent to all our registrants, and website announcements were also made, allowing readers to participate as well. Surveys were available in three languages: English, French and Spanish.

About 950 entries were received from 95 countries, equivalent to an average response rate of 5.1% for the sectors. These were also managed by the M&E Coordinator. Of those the following were used:

Table 2: Total number of clean responses by sector – SciDev.Net registrants/readers

Media	38	
Public	96	
Private	72	
NGOs	90	
Academic	333	
Research	333	
Total	629	

1.6 Other research

1.6.1 South East Asia and the Pacific Focus Group Report

The South East Asia and the Pacific (SEAP) focus groups project is regional research funded by AusAID (Australian Government Overseas Aid Program) and designed and facilitated by SciDev.Net's Monitoring and Evaluation (M&E) Coordinator. The groups took place in the following locations:

- Ascott Makati Hotel, Manila, Philippines on 1 June 2012
- Novotel Lami Bay, Suva, Fiji on 5 June 2012
- Renaissance Hotel, Kuala Lumpur, Malaysia on 8 June 2012
- Siam City Hotel, Bangkok, Thailand on 11 June 2012.

Participants included science communicators, policymakers, scientists, academics, NGO officials and professionals from the private sector. The goal was to hear their views on science and technology (S&T) for development — seeking opinions on regional priorities, our current service, user needs and other issues specific to the region. We also studied regional capacity building needs.

Discussions ranged from creating the right environment for science and innovation to how to disseminate information and facilitate the use of evidence and research results for development and poverty reduction. As well as discussing general insights on S&T for development, participants divided into specialist groups to generate indepth thoughts on emerging trends within their own areas.

PDF report available for download [2MB] at:

http://c96268.r68.cf3.rackcdn.com/SciDevNet_SEAP_Focus_Group_Report_2012.pdf

Also available on issue.com at:

http://issuu.com/scidev.net/docs/seapfocusgroupreport2012?mode=window&backgroundColor=%23222222

An **editorial article** by Nick Perkins is based on this report: "Global priorities, local context: a governance challenge" (19 September 2012) available at:

http://www.scidev.net/en/science-and-innovation-policy/governance/editorials/global-priorities-local-context-a-governance-challenge-1.html

1.6.2 Global science journalism report

SciDev.Net partnered with the London School of Economics and Political Science (LSE) and Museo da Vida/House of Oswaldo Cruz/Fiocruz (Brazil) to examine in more detail science communication around the world. The goal was to find out more about science communicators: their background, workload, opinions on science communication, work environment and capacity building needs. The survey was made available in four languages (English, French, Spanish and Arabic) and hosted online by the LSE. A total of 600 science journalists completed the survey. A subset of questions from this survey was included in the media survey created for SciDev.Net's global strategic evaluation, this added a further 395 responses, making a total of 900.

We also investigated the climate of opinion among science journalists around the world and found no evidence for a global sense of crisis — contrary to the evidence presented by an article in *Nature* (Brumfiel et al., 2009). Our data shows that unlike North America and Europe, in the Middle East, North and Sub-Saharan Africa, Latin America and South Asia, enthusiasm and optimism about the future of science journalism is widespread, even in traditional print formats. The crisis that Brumfiel highlighted appears to be a regional one.

The results were used to complement this report where appropriate.

Authors:

Yulye Jessica Romo Ramos (SciDev.Net)

Martin W. Bauer (LSE) and Susan Howard (LSE)

Luisa Massarani (SciDev.Net and Museum of Life/House of Oswaldo Cruz/Fiocruz, Brazil) and Luis Amorin (Museum of Life)

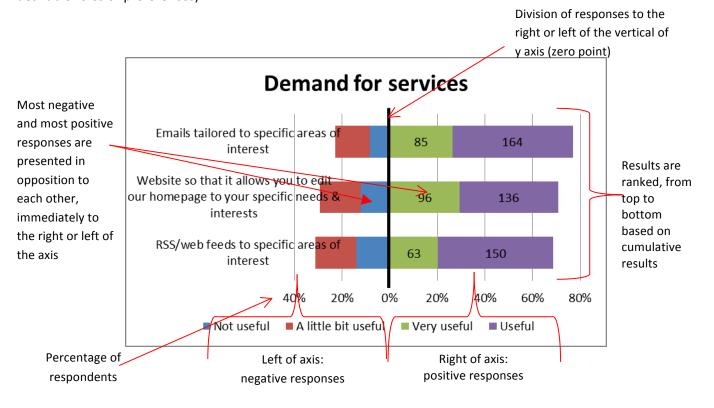
The report will be published on our website as part of SciDecv.Net Learning Series at:

http://www.scidev.net/en/content/our-learning-series/

1.7 What you need to know about the charts and data management

All data gathered were sent to SciDev.Net's Monitoring and Evaluation Coordinator, who enlisted the help of a temporary assistant to help with tasks such as cleaning data and summarising 'other' responses (open questions).

The charts in this report are presented in the form of stacked bars; ranking is based on cumulative results and arranged from top to bottom. Results are divided along the y axis (zero point) and placed either on the left (when they represent negative responses such as challenges to uptake) or right (representing positive responses such as desirable roles or preferences):



Ambiguous responses are placed on the opposite side of the y axis according to the chart. For example, when studying desirable roles for media organisations, responses such as 'neither desirable nor not desirable' are placed on the left of the axis, allowing the right-hand side to showcase strong preferences, making it easier to identify key points. Due to the large amount of data generated, not all the variables are disaggregated by gender. Further, only marked differences among regions are noted. If a region is not mentioned then it means that it did not differ significantly from overall results.

	SciDev.Net Global Review 2012
Chapter 2: Profile of respondents, secto	rs and regions

2.1 Sector distribution

Combining the clean data collected from the country research and surveys submitted online by our registrants and readers, we have almost 2,500 responses as follows:

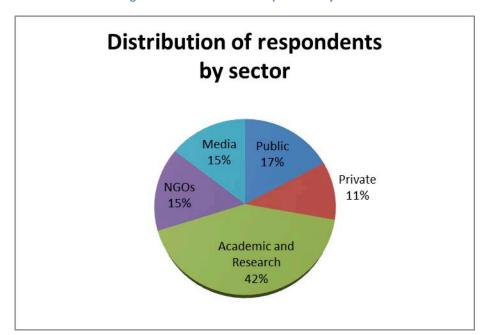


Figure 1: Distribution of all respondents by sector

Table 3: Distribution of all respondents by sector

Total	2,492
Research	2,000
Academic	1,053
NGOs	384
Private	267
Public	427
Media	361

2.2 Geographical distribution

Note that the geographical distribution is the same per sector; the majority of the respondents (over 94%) come from the global south, low- and middle-income countries.

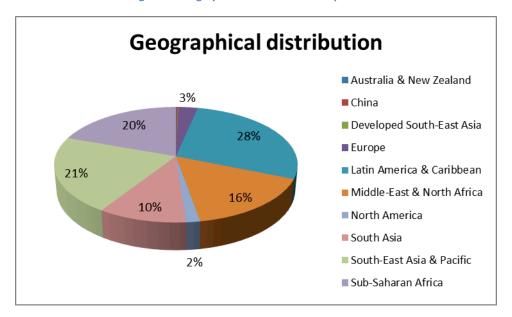


Figure 2: Geographical distribution of respondents

2.3 Gender

From our pool of respondents, 42% were women and 58% male. The gender balance changes by region. In MENA, SEAP and LAC the proportion of men and women is about 54% and 46%, whereas in SSA and SA there is a greater disparity. In SSA 67% were men and 33% women; in SA we had 73% men and only 27% women respondents. The gender distribution also changes by sector; the highest male dominance was in the media sector, followed by NGOs — see table 4 (next page).

If we look at gender differences by region and sector, we see that the higest female representation was in MENA/private sector, with 65% women respondents. But the private sector also contributed to higher male representation in other regions, increasing the already high male regional proportion from 67% to 71% in SSA and from 73% to 79% in SA.

Table 4: Gender distribution by sector and region

Sector	Average (%)		Remarks on regional differences (per sector)	
Sector	Male	Female	Remarks on regional unreferices (per sector)	
Public	59	41	Opposite gender distribution seen for MENA (56% female, 44% male), whereas for SSA the proportion of male respondents is higher (65%) and in SA is even higher (71% male, 18% female)	
Private	55	45	The highest gender disparity is seen in SSA and SA (71% and 79% male respondents, respectively). In SEAP and MENA women respondents dominated (53% and 65%, respectively)	
NGOs	61	39	Distribution is a bit more balanced in LAC and SEAP with around 55% male and 45% female respondents; whereas in SSA and MENA the male dominance is higher (67% and 70% respectively)	
Media	62	38	The male dominance is higher in SSA and SA with 66% and 78% male respondents respectively	
Academic/ research	57	43	Opposite gender distribution seen for LAC (54% female, 46% male), whereas in SA male dominance is higher (82% male, 18% female)	

2.4 Job grade distribution

While it is interesting to see the gender distribution of our respondents, of more importance are gender differences by job grade. The following charts and table provide more detail.

Job grade — female respondents

(blank)
7%
Executive
13%
Junior
8%
Officer
34%

Figure 3: Job grade distribution by gender — female respondents

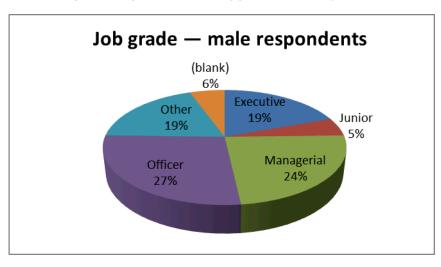


Figure 4: Job grade distribution by gender — male respondents

The next chart is gender distribution by job grade across all sectors. In our pool of respondents, on average men hold more senior positions by a ratio of 2.2 : 1 (executive) and 1.9 : 1 (managerial) than women.

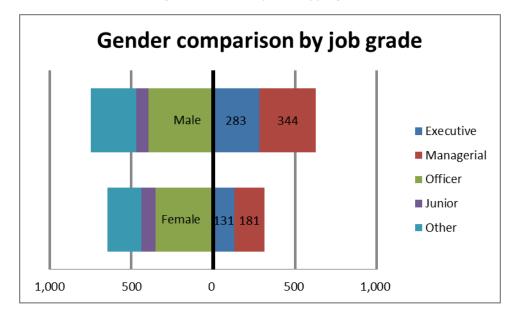


Figure 5: Gender comparison by job grade

Men-to-women ratios change significantly by sector. For example the media sector has one of the highest average gender disparities for executive roles, with a ratio of 4:1; followed by NGOs with 3:1 (see Table 5, next page). The media is also the sector with the highest average gender disparity in managerial roles, with a ratio of 2.3:1; followed by the academic/research sector (2.1:1).

Table 5: Gender comparison by job grade and region

Sector	Average executive role ratio (men to women)	Average managerial role ratio (men to women)	Remarks on regional differences (by sector)	
Public	2.8 : 1	1.9 : 1	For executive roles the ratio is highest in SSA (7:1), followed by MENA (4:1) but level in SA (1:1). For managerial roles all regions have a ratio of 2.4:1, except for LAC where it increases to 6:1	
Private	1.7:1	1.5 : 1	For executive roles the ratio is slightly lower in LAC and SEAP (1.3:1) and is balanced in MENA (1:1), but the male dominance is much higher in SA (4:1) and SSA (3.5:1). For managerial roles the ratio is also balanced in MENA (1:1) but it is higher in LAC (4.7:1) and SSA (2:1)	
NGOs	3.1:1	1.5 : 1	For executive roles in LAC and SSA the ratio is higher (3.5 : 1 and 4 : 1, respectively), whereas for MENA and SEAP it is lower, around 1.4 : 1. For management roles the ratio is higher in SSA and SA (2 : 1) and MENA (2.5 : 1)	
Media	4:1	2.3 : 1	For executive roles the ratio is highest in SEAP (7:1) and LAC (3.8:1); whereas in SA, SSA and MENA it is below 2.3:1. For management roles the highest gender disparities are in LAC and SA (5:1)	
Academic/ research	1.6:1	2.1 : 1	For executive roles the ratio is balanced in LAC (1.1:1) but very high in MENA (9:1) and even higher in SA (15:1). The latter two regions also have a higher male dominance for managerial roles: MENA (2.7:1), SA (8:1), and also SEAP (3.3:1)	

If we analyse gender differences by job grade across all sectors and regions, we see that all regions have marked gender issues across particular sectors and roles. Note that:

- The 'worst' job grade/region ratio is in the academic and research sector for executive roles: in MENA it is 9:1 and in SA 15:1
- SSA consistentely topped the charts with the highest male to female ratio for executive roles in the public, private and NGO sectors, with an average of 4.8:1, making it the region with the highest gender disparity for executive roles
- LAC has the highest average male to women ratio for managerial roles in the public, private and media sectors, with an average of 5.6 : 1, making it the region with the highest gender disparity for managerial roles.

2.5 Age distribution

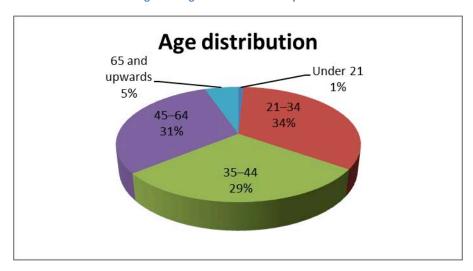


Figure 6: Age distribution of respondents

The chart shows that the largest group across all regions is 21–34 years old, although this changes by region. In LAC and SA the biggest group is 45–64 years old, whereas in SSA and SEAP it is those aged 35–44.

In all sectors the relatively young group (21–34 years old) is also prominent, except for the public and academic/research sectors, where the biggest group is 45–64 — see Table 6 below. The private sector seems the most adept at integrating the relatively young (those aged between 21 and 34 years old) and in some cases the proportion increased significantly to 71% (SA) and 76% (MENA).

Sector	Predominant age group (years old)	Remarks on regional differences (by sector)
Public	45–64	In MENA the biggest group is 21–34 years old (49%)
Private	21–34	In all regions the 21–34 group was the largest and as high as 71% (SA) and 76% (MENA)
NGOs	21–34	In SSA the prominent group is 35–44
Media	21–34	In SEAP the prominent group is 45–64; in SSA 35–44
Academic/ research	45–64	In SSA the biggest group is 35–44 and in MENA and SEAP 21–34

Table 6: Age distribution by sector and region

2.6 Geographical reach of respondent's organisation

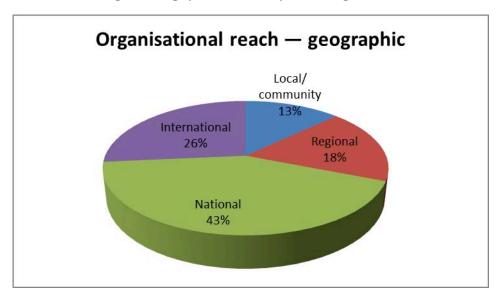


Figure 7: Geographical reach of respondent's organisation

The predominant organisational reach is national across all sectors. Most regions also have a national reach across all sectors, except for SSA (academic/research sector) and MENA and SA (private sector), where there is a predominant international reach, while in MENA (NGOs) local reach is predominant.

2.7 Organisational interaction with other sectors

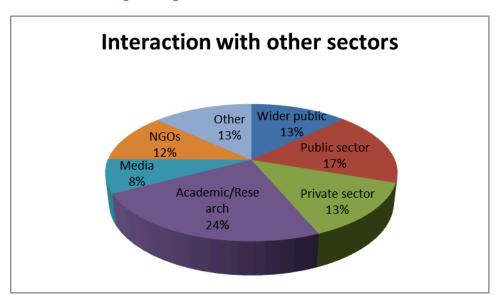


Figure 8: Organisational interaction with other sectors

2.8 Distribution of respondents by SciDev.Net registrants/readers vs non registrants/readers

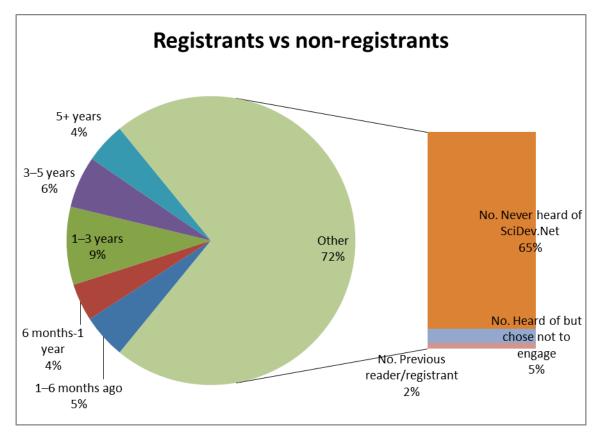


Figure 9: Distribution of respondents by SciDev.Net registrants/readers vs non-registrants/readers

This chart is useful for depicting loyalty. If we look only at the pool of SciDev.Net registrant/readers (n = 827), we see that 33% have been consuming our content for 1–3 years; followed by 3–5 years (19%) and 5+ years (17%). This shows that we are successful in retaining the interest of readers for the long term. But one of the goals of this global research project is to reach non-registrants/readers, and the chart also demonstrates we did so successfully, with a total of 72% indicating they are not SciDev.Net registrants/readers. Of the pool of respondents who are not SciDev.Net registrants/readers (n = 1,647), the vast majority (90%) have not registered with us simply because they 'have never heard of SciDev.Net', which represents a huge untapped opportunity. We can also use this variable as a proxy indicator for penetration rates per sector, finding that it matches our registrant's distribution and correlates with data by IDS¹⁰ for the public sector. Academics/researchers are the biggest SciDev.Net registrant group to date, so it is not surprising to see that we have the highest penetration rate in this sector (40% were found to be

¹⁰ Research project by Simon Batchelor (2012)

SciDev.Net registrants/readers), followed by NGOs (37%). The rate decreases to 29% in the public sector, 23% in the media sector and is lowest in the private sector (21%).

We can also analyse penetration rates per region: the highest are in LAC, SSA and SA¹¹ where we found that over 38% were SciDev.Net registrants/readers; whereas in MENA this proportion decreases to 14% and in SEAP it is only 9%. Overall, the population of non-registrants could be easily reached and engaged by regional marketing campaigns and other ad-hoc projects. In fact, this research project was instrumental in raising the profile of SciDev.Net, resulting in 515 new registration requests, which represents 34.2% of those respondents who were not already registered with SciDev.Net by the time this global survey took place. This figure is low as it only counts those requests that were accompanied by contact details that allowed us to create new registrations on behalf of respondents — what are termed 'unique' registrations. An extra 15% were interested in registering but did not leave contact details, and we hope they chose to register directly on our website. Note that the table below and any other data relating to registration requests only refers to unique registration requests.

Table 7: Registration requests by sector and region

Academic/Research	278	Media	68
Europe	2		
Latin America and Caribbean	117	Latin America and Caribbean	2
Middle-East and North Africa	41	Middle-East & North Africa	22
South Asia	20	South Asia	4
South-East Asia and Pacific	46	South-East Asia and Pacific	22
Sub-Saharan Africa	52	Sub-Saharan Africa	18
NGOs	54	Private	49
Latin America and Caribbean	4	Latin America and Caribbean	8
Middle-East and North Africa	4	Middle-East and North Africa	10
South Asia	22	South Asia	4
South-East Asia and Pacific	18	South-East Asia and Pacific	10
Sub-Saharan Africa	6	Sub-Saharan Africa	17
Public	66		
Europe	1		
Latin America and Caribbean	2		
Middle-East and North Africa	23	Total: 515	
South Asia	8		
South-East Asia & Pacific	23		
Sub-Saharan Africa	9		

 $^{^{\}rm 11}$ Coincidentally these are the oldest regional offices set up by SciDev.Net.

The most receptive sector was academic/research, representing 54% of all new registration requests, and the most receptive region was LAC (26%):

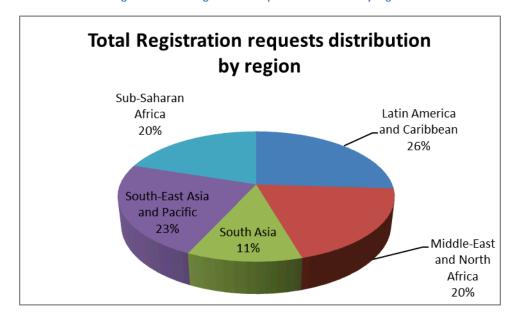


Figure 10: Total registration requests distribution by region

2.9 Profile of media organisations

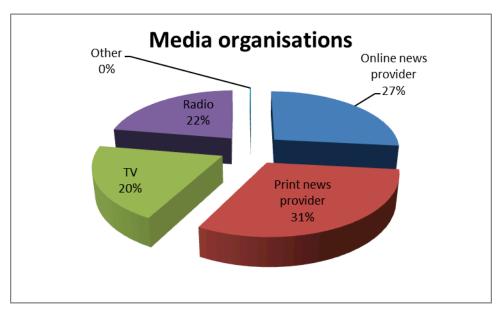


Figure 11: Profile of media organisations

Chapter 3: General insights and challenges to uptake of evidence

Key findings

- What facilitates uptake? All sectors identified that inclusion of social and economic as well as envronmental and political analysis of research help the uptake of S&T information. Analysis is favoured when it is provided by a trustworthy, authoritative and relevant source. This helps to identify the most valuable attributes for using S&T information for a wide range of purposes.
- Apart from using evidence for policy and development activities, nearly 70% of respondents also use
 evidence for 'personal knowledge building, keeping up to date with certain topics'. The requirement for
 science communicators/knowledge brokers is the ability to help this internalisation and conversion of
 information.
- Among the challenges preventing the application of S&T information into practical activities/projects for development, we found that 'lack of human or financial resources' tops the charts for all sectors and most regions (experienced by nearly 60% of all respondents), except for SA where 'cack of economic implications of research' comes first. More resources should be allocated and capacity building efforts put in place to help the uptake of evidence, especially at the organisational and national levels. The second most common challenge is a 'lack of analysis on economic implications of research', followed by a 'lack of social analysis (i.e. impact of research on certain groups)'.
- For use of evidence for policymaking, more than 60% of respondents selected the following challenges:
 (Economic stakeholders dominate or influence more successfully', 'lack of formal avenues for
 involvement in policymaking and development' and 'nature of policymaking does not favour uptake of
 evidence'.
- There are also challenges in engaging the wider public on issues related to S&T. 'lack of sources of information that present S&T information readily usable for public engagement' is one of the top two challenges, reported by over 60% of respondents.
- Gender perspective: In our South East Asia and the Pacific Focus Group Report (Romo, 2012) we studied gender in relation to S&T for development, finding that challenges exist at all levels throughout the region. Men and indeed the private sector are seen as being reluctant to make changes that would allow women to participate when there was the desire, such as allowing flexible working hours or sharing family responsibilities. Participants felt the government could also do more by developing gendersensitive programmes across all sectors and avoiding policies that continue to stereotype women. The role of education is key, especially when combating the larger societal issues that create glass ceilings for women. These findings are not unique to the SEAP region; similar challenges can be seen globally.

3.1 Preferred sources of S&T information

Our respondents were asked to name their preferred sources of information. Most named generic sources such as 'the Internet'. What follows is not an exhaustive list of preferred sources but a summary (details on the role of ICT in the uptake of information are analysed in Chapter 7).

Of the 185 who responded to this question in the public sector survey, 19.5% use governmental organisations as their preferred sources of information, followed by books (15.1%), research reports (13%), peer-review journals (11.4%), newspapers (10.8%) and libraries (9.2%). Other sources include experts (researchers and policymakers), knowledge networks, the World Bank and UN-related organisations, to name a few.

In the academic/research sector, of the 924 who responded, 37.5% consult peer-review journals (such as *Nature*), and 16.9% read magazines, 12.7% books and 12.5% consult SciDev.Net. The most popular sources for those in the private sector (n = 97) are peer review journals (27%), printed news (23%), magazines (20%) and TV (16%). Many other sources were mentioned such as AAAS (The American Association for the Advancement of Science), AlphaGalileo, CGIAR (Consultative Group on International Agricultural Research), IRRI (International Rice Research Institute), *New Scientist*, *Popularscience.com*, TED and SciDev.Net among others.

In the NGO sector (n = 184), 16.9% consult peer-review journals, and 15.2% use printed sources in general (such as newspapers and government publications). There were many other sources mentioned such as universities, conferences, national research centres, SciDev.Net, TV and radio.

Of the 263 respondents who answered this question in the media sector, more than 80% source story ideas from conferences, press releases/press officers and government media agencies. For more details see Chapter 5: The role of media in policy, research and development.

3.2 Valuable attributes that help uptake S&T information

There are a set of five 'core valuable attributes' that were included in all sector surveys (see Figure 12 below). We further analysed three of these by asking respondents to descibe how they define trustworthiness, authoritativeness and relevance.

The majority described a trustworthy source as one that is credible, backed by data/facts, reliable, reputable, gives references, is peer-reviewed and is valued by others. They described an authoritative source similarly, with a focus on accuracy and being produced by experts from an established body (such as a governmental organisation or one with an academic/university affiliation). Respondents said relevance is something that is usable, important and specific to the topic and goals of a project.

They were asked to think about their preferred sources of information and to consider what were their most valuable or useful attributes that faciliated the uptake of S&T-related evidence:

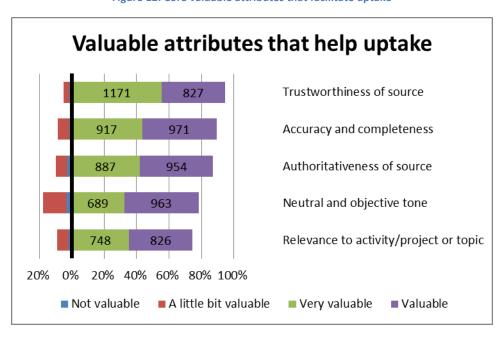


Figure 12: Core valuable attributes that facilitate uptake

There were no gender differences in the ranking of these attributes.

In addition to the above valuable attributes, other sector-appropriate values were introduced which in some cases resulted in changes to the ranking of attributes in the chart. But despite the additional items, all sectors positioned at least three of the five core valuable attributes in their top five list, namely trustworthiness of source, authoritativeness of source and accuracy and completeness. This correlates with the identification, in other sections of this global survey, of the provision of social, economical, environmental and political analysis of research results as the main challenges preventing uptake.

If we analyse the preferences of values (top five only) per sector/region we find that the differences are very much in line with the nature of the sector. For example, in the media sector 'reliability and independence of source' and 'how recent the story is' are more valued than 'relevance to activity and/or project' or 'neutral and objective tone'. In SA, media respondents also value the attributes 'local commentary in the story' and 'links and/or contact details that help develop a story'.

For respondents in the public, private and academic/research sectors 'balanced analysis of economic, social and environmental factors' is more valued than 'neutral and objective tone'. In the public sector, those in SA favour 'Broad representation of different views' and 'easy to understand' over 'authoritativeness...' and 'relevance...'.

'Easy to understand (no specialist language/jargon)' is also highly valued by those in the private sector, and is on its top five list.

Respondents were given the space to add comments to highlight other valuable attributes that help uptake. The most mentioned are:

- Ease of access in terms of financial expenditure (inexpensive is desirable) but also the ease of navigation provided by the source and language availability (English plus other languages)
- Coverage of innovative development, making sure it is recent or timely in relation to the policy context
- Relevance to the local or regional context and topic of interest
- Versatile information: it can be repackaged; it has references so that readers can get more detail or develop a story; it makes reference to the methodology used; etc.
- Video clips, case studies or any other tools to present information.

38

¹² The list of valuable attributes per sector varied, with a total minimum of 7 items in the research sector survey and a maximum of 17 for the media survey

3.3 Overview of uptake activities

The survey was tailored to study usage/uptake of S&T information for policy, academic research, lobbying and media coverage, but we also wanted to know whether there were other ways in which people are using information and evidence:

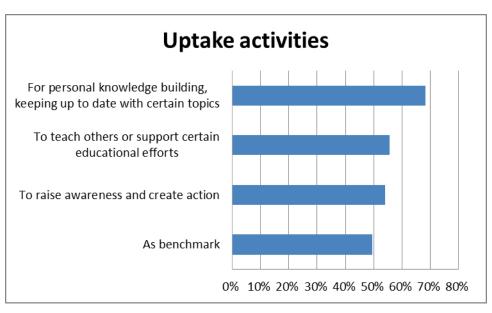


Figure 13: Other popular uptake activities

The percentages are based on total population (response rate per item), so it is possible that they might be higher if those who did not participate did so due to not completing the survey. But the results are similar to research carried by IDS¹³ as well as to Weiss's seven models of research utilisation¹⁴ (also cited in the IDS paper); these authors believe that information is utilised when it has been internalised and in most cases repackaged to serve a specific action or purpose. The message for science communicators or knowledge brokers is the ability to facilitate this internalisation and conversion of information.

¹³ Perkins, N. and Batchelor, S.(2011) *Learning about how to communicate 'learning' from and within a multi-sited organisation*. Institute of Development Studies

Note that there were no ranking differences by gender for items in Figure 13. But there are regional and sector differences:

- In LAC, 'as benchmark' is the second most popular uptake activity and in the private sector benchmarking is also ranked higher in third place, leaving 'to teach others...' in last place.
- In SA as well as in the in the private, public and media sectors, 'to raise awareness and create action' is in second place.
- In MENA/public sector the ranking is very different: 'to raise awareness...' comes first followed by 'to teach others...', then 'for personal knowledge building...' and finally 'as benchmark'.
- 'To teach others...' also has a slightly higher prominence in MENA but only in the private, media and NGO sectors.

3.5 Generic challenges to uptake

3.5.1 Challenges when trying to encourage policymakers to take up evidence

We asked those in the public sector and any respondent involved in lobbying or policymaking what are (in their experience or that of their organisation) the challenges in trying to encourage policymakers to take up evidence for policymaking and/or development purposes. Over 60% of respondents experience the following issues:

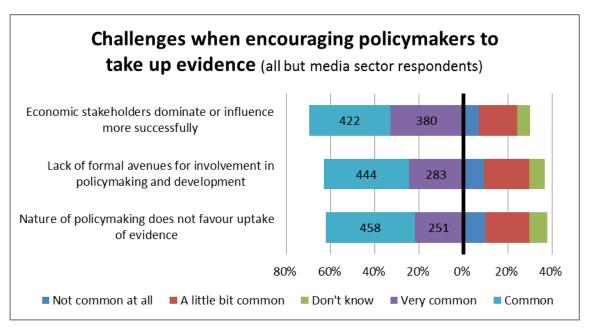


Figure 14: Challenges when trying to encourage policymakers to uptake evidence

In LAC, about 80% of policy respondents believe 'economic stakeholders dominate...'. 'nature of policymaking...' figures in second place in both SEAP and SSA, and reported by nearly 80% of all respondents in SSA. This is also the top challenge faced by NGOs in SA. The same is true for private sector respondents in both SA and MENA. This variable can be linked to responses to open questions volunteered by participants, such as the current dominant political culture and practice, which does not generally make use of evidence for decision-making, and the emphasis is on short-term policy goals that tend to shift when new representatives are elected.

'Lack of formal avenues for involvement...' is the top challenge faced by NGO and private sector respondents in LAC and also by academic/research respondents in SSA.

In Chapter 4, we find that even when evidence is used, in the majority of the developing world it is integrated or used late in the policymaking process, i.e. 'once a decision is made, as supportive documentation and justification' and 'post-implementation, to assess impacts and outcomes of policy'. In addition, about 40% of policymaker respondents also feel that the significance of views held by policy participants and other stakeholders are generally more influential than findings presented in papers for policymaking, which represents an additional challenge.

This is well explained by Andries du Toit (2012), whose paper criticises discussion about evidence-based policymaking as a "naïve empiristic view of the role of evidence in social science; and it misunderstands the importance of politically and ideologically loaded 'policy narratives' in policy change". The author argues that it is necessary to understand the "underlying paradigms and forms of discursive practice that shape what counts as evidence and that imbue that evidence with meaning and significance". The author also believes that the effective use of evidence requires "good knowledge brokers: intermediaries, translators, activists and 'organic intellectuals' who can work strategically across the divide between policymaking and research, helping shape both research questions and how these inform political and policy decisions".

Even when the right relationships are created, other practical issues should be resolved. For example, respondents also highlight information overload, which diminishes capability to make use of information. Others mentioned the influence of international organisations and other external sources, which was also raised by the Asian and Pacific participants in the South East Asia and the Pacific focus groups (Romo, 2012). In addition, the respondents felt policymakers lack capacity to find, assess and apply S&T information (see also Chapter 4: Evidence for policymaking), which can be linked to what respondents perceive as a lack of understanding of the scientific process and lack of awareness and/or interest in research information.

3.5.2 Challenges in applying S&T-related information to practical activities/projects for development

For challenges preventing the application of S&T information in practice, we found that at least two of the top three ranked items presented in the chart below also figure as the top challenges throughout all the sectors and regions — one of these being 'lack of human or financial resources...', which tops the charts for all sectors and most regions, except for SA where 'lack of analysis on economic implications of research' is the top challenge.

Challenges in applying S&T-related information into practical activities/projects for development purposes (all sectors except for academic/research) Lack of human or financial resources that could help 439 330 uptake Lack of analysis on economic implications of research 485 200 Lack of social analysis (i.e. impacts of research on certain 468 187 groups) Lack of political analysis on implications of research 417 230 Lack of analysis on environmental implications of research 441 200 Lack of conclusive evidence on what has worked best in 424 176 certain situations Specialist jargon which makes it difficult to understand 172 411 implications of research Institutional setting is not favourable for the uptake of 406 172 evidence 60% 20% 20% 40% 60% ■ A little bit common ■ Not applicable Not common at all Don't know Very common Common

Figure 15: Challenges in applying S&T information into practical activities/projects for development

'Lack of social analysis' (ranked in third place in Figure 15) is also one of the two items that appears in the top three list of challenges in all regions and sectors, except for:

- In SSA and LAC as well as in the media and NGO sectors, 'lack of political analysis...' is more prominent —
 except for SSA where 'lack of analysis on economic implications of research' displaces 'lack of social
 analysis'
- In MENA, respondents report that 'lack of analysis on environmental implications of research' is a more important issue
- In the private sector 'lack of conclusive evidence on what has worked best in which situations' is more prominent.

Note that in all of the above cases 'lack of social analysis' is in fourth place, which highlights its relevance and matches our findings presented in our SEAP Focus Group Report (Romo, 2012) where the lack of social and economic analysis of research results are also highlighted as main challenges to uptake.

3.5.3 Challenges when engaging with the academic/research community

This correlates with the challenges to uptake for practical activities and projects (previous section). We asked all other sectors to rank the challenges they encounter when engaging with the academic/research sector, finding that the lack of social and economic analysis of research results were the first and second highest, mirroring findings presented in the previous section as well (see Figure 15), which reiterates the importance of these two items in terms of uptake.

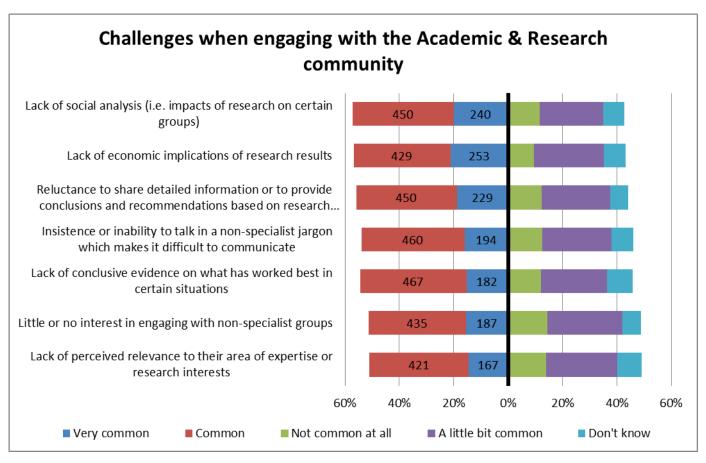


Figure 16: Challenges when engaging with the academic/research community

The top three items vary by sector, but all place two of the above top three in their lists. For example, media sector respondents say their biggest challenge is 'insistence or inability to talk in a non-specialist jargon...', and then place 'reluctance to share detailed information or provide conclusions and recommendations...' second and 'lack of social analysis' third.

For the private sector 'lack of conclusive evidence on what has worked best in which situations' is more of a challenge than 'reluctance to share detailed information...' — this is also the main challenge identified in the previous section for this sector. Those in the public sector feel that 'insistence or inability to talk in a non-specialist jargon...' is a more of an issue than 'lack of social analysis' when engaging with the academic/research community.

Analysing open responses to this question it is also evident that in some cases there is not enough research produced in certain areas of S&T for development, so the media and other stakeholders lack information. In the case of research carried out by the private sector, objectivity and use of data (intellectual property rights) were highlighted. Other issues include a lack of formal communication between research outlets and the public, while private sector respondents do not always find it easy to work with academic/research and public institutions, finding them slow or bureaucratic, which is a barrier for public–private partnerships.

Overall, the fact that nearly 60% of respondents feel there is a 'lack of human or financial resources that could help uptake' is concerning. More resources should be allocated and capacity building efforts put in place to help the uptake of evidence, especially at organisational and national levels.

It is also important to reiterate the importance of the social and economic analysis of research results as a major challenge for uptake. In another SciDev.Net research project¹⁵ we also learned that socioeconomic analysis of research results is imperative in facilitating the use of information. Capacity building and finance were also raised as major challenges during that project.

1

¹⁵ South East Asia and the Pacific Focus Group Report (Romo, 2012)

3.5.4 Challenges when engaging the wider public on issues related to S&T

We asked all respondents to identify challenges related to engaging the wider public on issues related to S&T. 'Lack of sources of information that present S&T information readily usable for public engagement' is one of the top two challenges.

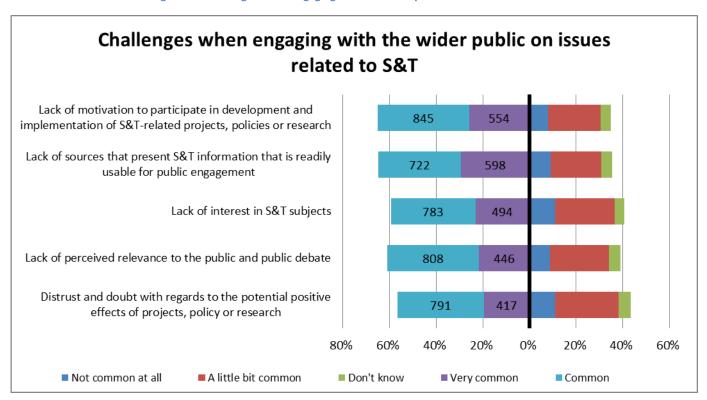


Figure 17: Challenges when engaging with the wider public on issues related to S&T

In most sectors and regions 'lack of motivation to participate...' as well as the 'lack of sources of information...' also figure in first or second place. Comments on the rankings are:

- The perceived wider public's 'lack of interest in S&T subjects' figures in second place both in the media and public sector as well as in SEAP and MENA
- 'Distrust and doubt...' is seen as a more prominent issue in the public and NGO sectors, taking third place; this is also the case in SEAP
- In LAC the second top issue is 'lack of perceived relevance to the public and public debate'.

As part of our SEAP focus group research (Romo, 2012), SciDev.Net found that the role of media organisations is key to raising awareness and interest in S&T topics, which will go towards solving some of the challenges presented in the above chart. The participants taking part in that project disagreed with the perceived wider public lack of interest on S&T topics, suggesting it was more a communications issue and that inspiring stories are lacking to engage the public effectively. This correlates to some open-ended responses volunteered by respondents participating in our global survey, where the language used to communicate was seen as problematic¹⁶ as well as indicating that the public is more interested in the practical implications of research on their lives than abstract and technical discussions.

It is important to highlight that many respondents mentioned social and cultural barriers, as well as the language barrier, as preventing appreciation of S&T. Finally, other challenges are the existence of conflicting information and a lack of government leadership for S&T policies that would create the incentives and funding to build a culture of science at a national level.

¹⁶ This lack of capacity to communicate clearly with the wider public is an issue mainly suffered by the academic/research community as presented in the previous section but is not unique to this sector – see Chapter 4: Evidence for policymaking.

3.5.5 Gender perspective

In our report on South Asia and the Pacific (Romo, 2012), we studied gender in relation to S&T for development, finding that challenges exist at all levels throughout the region, such as low numbers of women who go into science-related studies and careers. In Malaysia this was linked to the cultural, religious and reproductive social setting, which favours the role of women as family carers, perhaps discouraging professional interests, especially in S&T, which is male dominated. While women participants acknowledged that they are not forced to be full-time mothers and wives, they also mentioned that there is not always the space to openly discuss professional and academic inclinations with their husbands.

Men and indeed the private sector seem to be reluctant to make changes that would allow women to participate when there is a desire, such as allowing flexible working hours or sharing family responsibilities (although participants did say that there are also women that continue to discourage other women). The government could also do more by developing gender-sensitive programmes across all sectors and avoiding policies that continue to stereotype women. The role of education is cited as key, especially when combating the larger societal issues that create glass ceilings for women. For example, in Malaysia one suggestion is to make physical science teaching more female friendly; in the Philippines, disaster management and awareness programmes could be made more gender sensitive.

We believe that the above findings are not unique to SEAP and that similar challenges can be seen globally.

Participants also mentioned transgender. The role of S&T in facilitating sex changes and the wider cultural and social transformation has perhaps not been studied in depth, and touches on ethical and taboo subjects.

Also related to taboo subjects are S&T advances that are underused, such as safe abortion techniques. In terms of S&T for health, participants felt there is still much to do to reduce maternal mortality.

Chapter 4: Evidence for policymaking

Key findings

This chapter mostly presents analysis on questions put to those working in the public sector. However, a small subset of questions was also put to those in the NGO, private and academic/research sectors, allowing those involved in policymaking and lobbying activities to contribute as well. In the academic/research sector, 49.3% of respondents said they or their organisations are involved in lobbying or influencing policy (n = 519); the proportion for the private sector is 43.8% (n = 117) and for the NGO sector it is as high as 60.7% (n = 233).

- We found that over 60% of policy makers resort to "Personal knowledge and experience" when sourcing evidence for policy development. This finding can be correlated with the fact that over 60% of respondents in this sector also indicated in a previous question (Chapter 3) that they use evidence and research results "For personal knowledge building, keeping up to date with certain topics".
- About half of all the public sector respondents cite 'Media organisations and the public perception' as sources for policy development. In addition, policy stakeholders seem to also rely heavily on government-related sources of information, which reminds us of the need to ensure that S&T is not politicised.
- In the majority of the regions, evidence is integrated or used rather late in the policymaking process i.e. 'once decision is made, as supportive documentation and justification' and 'post-implementation, to assess impacts and outcomes of policy'. In addition, about 40% of policy respondents also feel that the 'significance of views held by policy participants and other stakeholders are generally more influential than findings presented in papers for policymaking'.
- We found that policy stakeholders need to learn how to find, appraise and use evidence for policy development.

4.1 General insights on policymaking

The survey distributed to public sector respondents inquired about the use of information for policymaking:

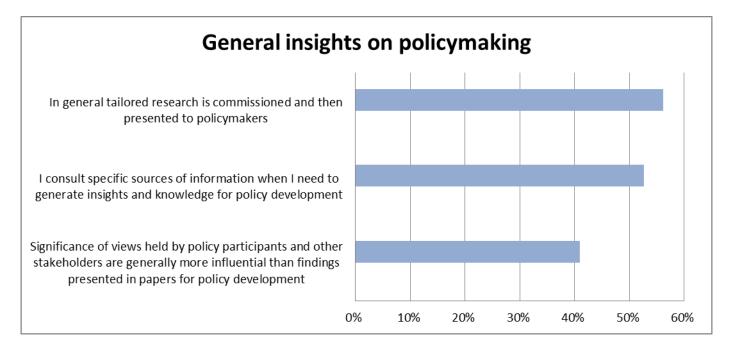


Figure 18: General insights on policymaking

There were no gender differences for this question. In SSA and SA over 60% of respondents chose 'I consult specific sources of information...', making it the top ranked response in these two regions. The same is true for SEAP but the proportion is higher (71%). In SEAP 'significance of views held by policy participants...' is also more common (ranked in second place with 57%).

That personal consultation of sources is a common practice presents an ideal opportunity for organisations such as SciDev.Net, as we are able to engage policymakers by contributing insights and knowledge for policy development. The caveat here is that only half of the public sector respondents use 'media organisations and the public perception' as common sources of information for policy development (see Figure 19).

4.2 Sources of information for policymaking

Chapter 4, section 4.1 already discussed preferred sources of information for the public sector:

'Of the 185 that responded this question in the public sector survey, 19.5% use governmental organisations as their preferred sources of information, followed by books (15.1%), research reports (13%), peer-review journals (11.3%), newspapers (10.8%) and libraries (9.2%). Other sources include experts (researchers and policymakers), knowledge networks, the World Bank and UN related organisations — to name a few.'

Chapter 4, Section 4.1 also covers the attributes that policy stakeholders value from their preferred sources of information, with over 80% indicating trustworthiness and authoritativeness, accuracy/completeness, relevance to the policy proposal and balanced analysis of economic, social and environmental factors. But we also wanted to study usage by type of source — see Figure 19, next page.

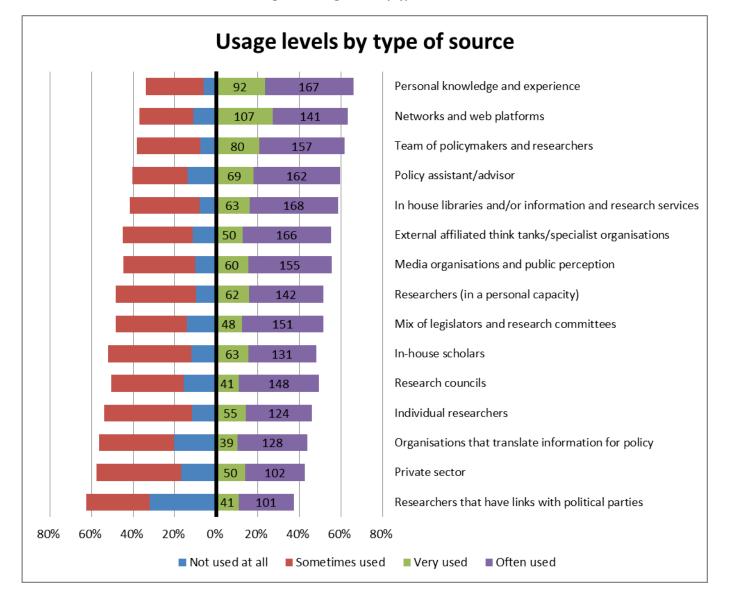


Figure 19: Usage levels by type of source

Note that we found no gender differences for the top five ranked responses in the above chart.

Figure 19 shows that over 60% of these public sector stakeholders resort to 'personal knowledge and experience' when sourcing evidence for policy development. This finding can be correlated with the fact that over 60% of respondents in this sector also indicated in a previous question (Chapter 4) that they use evidence and research results 'for personal knowledge building, keeping up to date with certain topics'.

If we take as a baseline the ranking presented in Figure 19 we find that some regions within the public sector rank differently. The significant changes for the top five are as follows:

- In SSA the ranking is completely different: 'External affiliated think tanks/specialist organisations' is the most used source followed by 'media organisations and public perception', 'mix of legislators and research committees', 'in-house libraries' and 'personal knowledge and experience'
- In SA 'media organisations and public perception' is the highest ranked source, displacing 'in-house libraries' out of the top five and towards the bottom
- In LAC 'team of policymakers and researchers' displaces 'external affiliated think tanks/specialist organisations'
- In MENA 'networks and web platforms' and 'team of policymakers...' take the place of 'researchers (on a personal capacity)' and 'policy assistant/advisor'.

In our SEAP focus group research (Romo, 2012) we also learned that most policymakers consume information via both traditional and electronic media outlets, which increases the importance of the media's role for providing quality S&T news and analysis. Finally, since policy stakeholders seem to also rely heavily on government-related sources of information, the need to ensure that S&T is not politicised is important.

4.3 Most effective ways of presenting evidence for policymaking

Respondents were asked to rank the level of popular formats used to present evidence to policymakers:

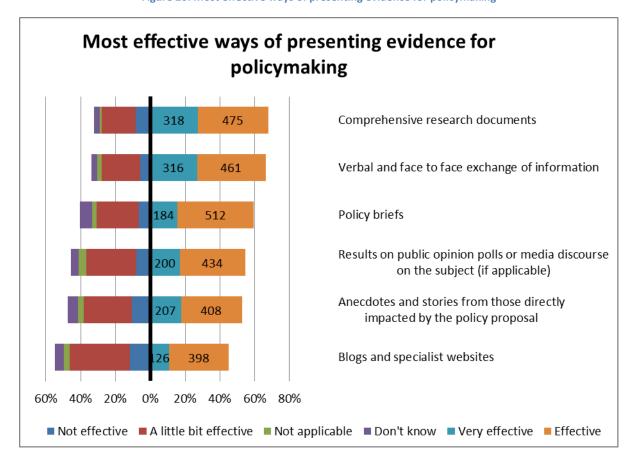


Figure 20: Most effective ways of presenting evidence for policymaking

Note that we found no gender differences within the public sector in the above chart.

'Comprehensive research documents' as well as 'verbal and face to face exchange of information' seem to be the norm, appearing in the top three list throughout the regions and sectors. Minor differences are in 'policy briefs', which is displaced in favour of other items that are thought to be more effective. For example those involved in policymaking in the private sector find 'anecdotes and stories from those directly impacted by the policy proposal' more effective. The same is true for MENA respondents regardless of the sector. NGO stakeholders involved in lobbying also see policy briefs as less effective than 'results on public opinion polls or media discourse on the subject'. The same is true for LAC respondents regardless of the sector.

The results presented in this subsection give an idea of the different political contexts and capacity levels when drafting policy briefs and using other tools to present evidence to policymakers. This correlates with research conducted by Chandrika Nath (2011) from the UK Parliamentary Office of Science and Technology (POST). She found that although policy briefs are some of the most common written formats for presenting evidence, there are differing levels of capability that affected their quality and efficiency. For example, Nath found that some policy briefs were mainly based on anecdotes, not evidence, which links to our finding that policy stakeholders in MENA and private sector stakeholders involved in policymaking said they found 'anecdotes and stories from those directly impacted by policy proposal' more effective. This means that these respondents might use anecdotes and stories when writing policy briefs.

In terms of verbal and face-to-face exchanges of information, respondents mentioned the use of networks and scientific seminars, conferences and demonstrations as effective ways of presenting and influencing policy. Other interactive tools are also used, such as videos, podcasts and online forums. Finally, any type of information that contains action points and success or failure stories from other countries with a similar context are also regarded as effective communication tools.

4.4 Probability of use of evidence — by policy cycle

We wanted to know the likelihood of usage of evidence at the difference stages of the policymaking cycle:

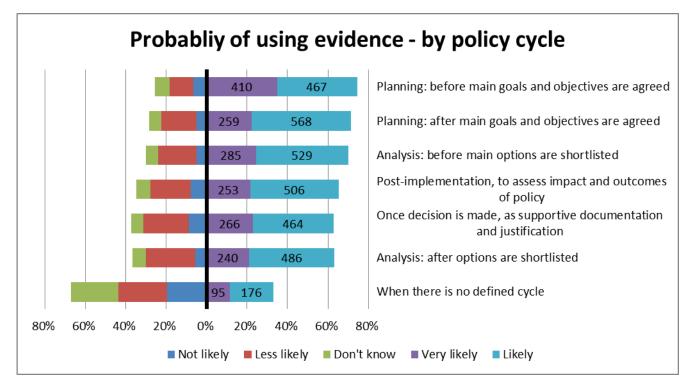


Figure 21: Probability of using evidence — by policy cycle

The first two items in the chart are in the top three list of women/public sector respondents, as is 'once decision is made, as supportive documentation and justification' (ranked in third place). No major differences were found in the top three items cited by policymakers and other sector respondents involved in lobbying activities. But regional analysis revealed marked differences in terms of policymaking:

- In MENA respondents believe that evidence is more likely to be used only 'once decision is made, as supportive documentation and justification' (top response), followed by 'planning: after main goals and objectives are agreed' and then 'post-implementation, to assess impacts and outcomes of policy'
- In both SA and SEAP use of evidence during 'analysis: before main options are shortlisted' is displaced off the top three by 'once decision is made...' and 'post-implementation...' respectively

• If we look at responses only by policymakers and region, we find that in SA evidence is more likely to be used 'post-implementation...', displacing 'analysis: before main options are shortlisted' off the top three; whereas the latter item is the top-ranked response in SSA, followed by 'post-implementation...' and 'once decision is made...'.

The above results show that in the majority of the regions evidence is integrated or used rather late in the policymaking process — i.e. 'once decision is made, as supportive documentation and justification' and 'post-implementation, to assess impacts and outcomes of policy'. This matches research by other authors such as Dalal-Clayton and Sadler (2005), whose findings suggest that evidence — especially that relating to social and environmental issues — is rarely used during planning stages and more often once main options have been shortlisted. In fact the previous chapter (section 3.5) further substantiate this claim, where we found that 'economic stakeholders dominate or influence more successfully' (top ranked response, with over 60% facing that challenge on a common or very common basis).

The same section also explores challenges preventing the use of evidence for policymaking, which are mainly about the lack of human or financial resources, the lack of analysis on economic implications of research and the lack of social analysis (impact of research on certain groups). In addition, slightly over half of policymakers also find it hard to engage with the academic/research community because they find it reluctant to share detailed information or conclusions and recommendations based on research results (also in Chapter 3, section 3.5: Generic challenges to uptake).

4.5 Mainstreaming more evidence into policy — capacity building needs

We asked policy stakeholders to tick any of the below areas where they felt they, or their organisation, needed capacity development. Note that we found no gender differences in ranking or proportion of policymakers with capacity building needs:

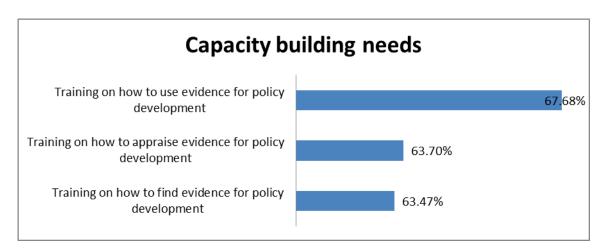


Figure 22: Capacity building needs — public sector respondents

As the percentages are based on response rate to this question we need to consider the possibility that the rates could be higher as some respondents did not complete the survey. The results are nevertheless important, reiterating the need of policy stakeholders to learn how to find, appraise and use evidence for policy development. Of relevance to these findings are that of Nath (2011) who believes that policymakers need to learn know how to summarise information, adding that information literacy¹⁷ also requires capacity building to enable policy stakeholders to find good information. In our SEAP report (Romo, 2012) we also identified the following capacity building needs: ability to develop national S&T policies with a budgetary, regulatory and monitoring framework;¹⁸ ability to disburse funds; capacity development in knowledge management and information sharing¹⁹ — focusing on 'socialising' science; and developing an appropriate S&T educational programme that is culturally sensitive.

¹⁷ Resonates with open-ended responses gathered via this survey.

 $^{^{\}rm 18}$ Relates to the ability to track and evaluate impacts of policies.

¹⁹ Ability to communicate information to the wider public in a way that supports implementation of policies and public engagement.

In addition, about 47% of respondents from the academic/research community also indicated the need to receive training in 'how to present evidence for policy development'. Since most policymakers have issues about engaging with this community due to its perceived 'reluctance to share detailed information/conclusions and recommendations based on results' and an 'insistence/inability to talk in non-specialist jargon', it might be relevant that 61% of academic/research respondents said they also need training on 'how to communicate research to media organisations and the wider public'.

Andries du Toit (2012) argues that it is necessary to understand the "underlying paradigms and forms of discursive practice that shape what counts as evidence and that imbue that evidence with meaning and significance". The author believes that the effective usage of evidence requires "good knowledge brokers: intermediaries, translators, activists and 'organic intellectuals' who can work strategically across the divide between policymaking and research, helping shape both research questions and how these inform political and policy decisions".

Typically these stakeholders write original opinion pieces for SciDev.Net and a recent study evaluating the impact of these types of articles has been very useful in understanding the benefits such effort brings to parties. For example from September 2011 to the end of August 2012, we found that SciDev.Net opinion author writers grow their professional networks as a result of their article being published on our website. In many cases these articles are republished in other online and print outlets. Many authors also report being invited to form new research partnerships, to conferences and to policy discussions. Allowing policymakers and academics/researchers to write for us is a process that allows them to improve their communication skills and also helps increase the importance of evidence and S&T for development and poverty reduction among their communities of peers and wider professional circles.

Chapter 5: The role of media in policy, research and development

Key findings

- We asked all respondents: 'In your opinion, is there a role for media and specialist communications organisations in research, policy and development issues?'. A great majority said yes (about 85%) but there are marked regional differences. The top three desirable roles are: 'help raise awareness and interest', 'draw attention to areas of public concern at times of decision-making or flag areas where research is needed' and 'help generate public debate on subjects and proposals'.
- Surprisingly, over 60% of media respondents say their organisations cover S&T topics. Of these, the biggest proportion (34%) said their organisations have been covering S&T topics for 5 years or more. The top covered topics are: health/medicine, technology, environment, science and social science. 'science communication', 'grassroots science innovation' and 'science policy' are consistently the least covered topics with 'science innovation' also not well covered by most.
- Only 60% of respondents or less feel either completely satisfied, very satisfied or satisfied about their work environment and the coverage of S&T topics, so there is room for improvement. Clearly, 'access to information from government agencies' is an issue, with only 40% of respondents feeling positive about it (except for those in SA and SSA, with 60% and 50% respectively); this worsens in MENA (20%).
- In our Global Science Journalism Report (Bauer et al., 2012) we found that most respondents (62%) welcome the idea of a science desk that is sponsored by third parties ('philanthro-journalism'), with 79% and 67% of people favouring national and foreign charitable foundations respectively. This is great news for those with an interest in developing high-quality science journalism in the global south.
- The results indicate there is great demand for training around the world, especially in regions such as SSA, SA and SEAP. Additionally, there is room to develop resources that enable science journalists to tackle challenges in communicating with the public sector, and dealing with academia — indicating the value of training in journalistic source management.

5.1 Should media and specialist communication organisations have a role in policy, research and development?

We asked all respondents, regardless of the sector and region: 'In your opinion, is there a role for media and specialist communications organisations in research, policy and development issues?' A great majority said yes (85%). The proportion is similar throughout all sectors, except for the public and NGO sectors. Only a small minority (9%) of NGO sector respondents believe media and specialist organisations should **not** have a role in research, policy and development; whereas in the public sector the proportion is larger (18%). Perhaps not surprisingly, over 90% of media respondents in SA, SSA and SEAP believe the media should have a role.

There are marked regional differences: in MENA (all sector respondents) the proportion choosing 'no' is the highest at 31% — this figure increases to 46% for the media sector respondents based in that region. In LAC the proportion of respondents who believe the media should have a role is 88% and in SSA it is the highest at 98%.

We wanted to study what type of desirable roles media and specialist organisations should play, finding that over 80% favour the following:

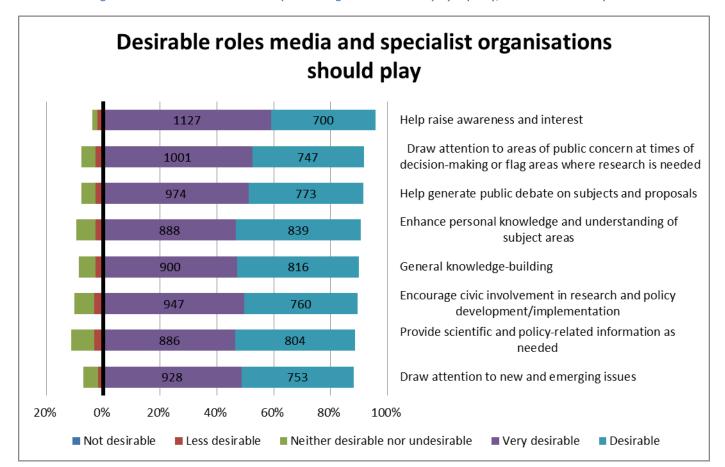


Figure 23: Desirable roles media and specialist organisations should play in policy, research and development

The order given by women respondents (all sectors) almost matches that seen in the above chart (top three only), with the exception that instead of having 'draw attention to areas of public concern...' in second place, they believe media and specialist communication organisations should 'encourage civic involvement in research and policy development/implementation'.

The preferences are different in the private, media and NGO sectors. Although those in the private sector also place 'help raise awareness and interest' at the top, their second most preferred item is 'general knowledge building', followed by 'draw attention to new and emerging issues'. In the case of the NGO sector the top ranked item is 'enhance personal knowledge and understanding of subject areas', followed by 'encourage civic involvement...' and 'provide scientific and policy related information as needed'.

For the media sector, we find that in all regions 'help raise awareness and interest' and 'enhance personal knowledge...' rank at the top, followed by others such as 'provide scientific and policy-related information...' (LAC) and 'draw attention to new and emerging issues' (SA and SSA). For our South East Asia and the Pacific Focus Groups Report (Romo, 2012) participants strongly supported the idea that both traditional and alternative media should act as advocates for S&T topics. SEAP participants also see media organisations as actors that help set the public policy agenda — this is also the case in SSA and SA²⁰. It is important is to make sure media coverage remains neutral and objective. Participants also see media organisations as key channels for communication and dissemination of academic and research findings; they can encourage the inclusion of social, economic and environmental analysis of research results and help raise interest in the uptake and discussion of evidence.

When analysing some of the open-ended responses of respondents we also found that media and communication organisations are expected to help build a culture of science, which involves providing information in a language that is easy to understand (accessibility), raising awareness of and advocating S&T topics, reporting issues in an objective and balanced manner and making use of relevant channels²¹. Socialisation of science is also a desirable role, involving the balanced representation of views, especially of those who are directly affected. There is also a desire for more investigative journalism and positive reporting of facts (as opposed to focusing on the controversial areas). Finally, there is a strong desire for the media to act as a 'watchdog', helping to monitor and evaluate as well as contribute to the accountability of key stakeholders such as policymakers and researchers.

²⁰ See Chapter 4, section 4.2 where we highlight the reliance on media organisations in these regions for policy development.

²¹ Some participants feel radio should be used more. Radio is still the primary information channel for many, especially the most vulnerable and marginalised.

In our Global Science Journalist research project (Bauer et al., 2012) we asked 592 science journalists to reflect on their work. Of these, 43% see their role as 'to inform', 23% 'to translate complex material', 13% 'to educate', while less than 10% see their role as mobilising or entertaining the public, or to be a public watchdog. The dominant theme here is of informing and educating, rather than engaging or entertaining. Entertaining has a somewhat more prevalent role in Asia regions, and education is an aim of many science journalists in MENA (31%). The role of the public watchdog (23%) and the notion of mobilising the public (19%) are seen as more relevant in MENA than in other regions. Mobilising the public is also more in evidence in Asia than elsewhere. Women writers see themselves more in the role of 'providing information' than men, while men see themselves more in the role of 'watchdogs'. There is no difference across the age groups in these role definitions.

5.2 Coverage of S&T topics by media organisations

We asked our media sector respondents: 'Does your organisation regularly provide science and technology news and analysis?'

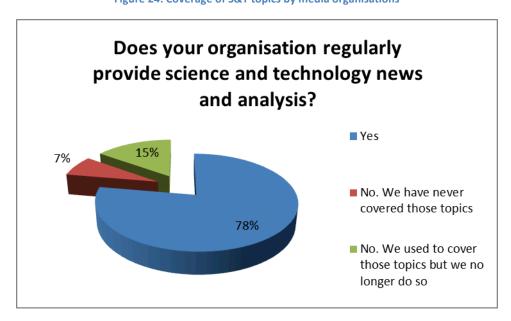


Figure 24: Coverage of S&T topics by media organisations

In MENA and SA there is a lower proportion of organisations that regularly cover S&T topics (63%) whereas in SSA it is the opposite, with 94% saying they cover S&T on a regular basis. About 14% in MENA and 22% in SA say their organisations 'have never covered those topics' and a further 23% and 14% (respectively) say 'we used to cover those topics but we no longer do so'.

It is important to help increase coverage in those regions where it is low (MENA and SA). For those that have never covered such topics it might be a straightforward matter of capacity building and funding; whereas for those that have stopped covering S&T the solution might be more complex.

5.2.1 Time of media coverage — S&T topics

Media sector respondents were also asked to state the time their organisation has been covering of S&T topics:

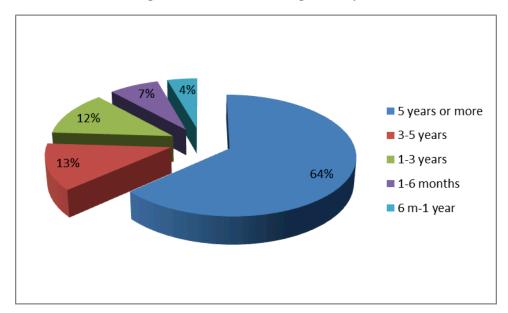


Figure 25: Time of media coverage - S&T topics

There are no regional differences, and most have covered S&T for 5 years or more - rising to 75% and 77% for SEAP and SA respectively. The second highest proportion is 1-3 years (19% and 24% for LAC and MENA respectively) and 3-5 years (13% and 19% for SSA and SA respectively).

In another global research project²² looking into science journalism we found that, on average, science journalists write nine items every two weeks (median = 7; n = 576). There are regional differences: in North Africa, Asia and Southern Africa all journalists produce more than those in the American continent and Europe. Also, we found that 64% of respondents report an increase in production over the last five years. In Europe, Latin America and Sub-Saharan Africa, there is no gender gap in weekly production. But in Asia, women tend to work more, while in the

²² Global Science Journalism Report (Bauer et al., 2012)

Middle East, men tend to do more. In SEAP²³ high output expectations and a media organisation's agenda are seen as obstacles preventing journalists from covering more S&T-related topics.

The next chart analyses the frequency in which certain topics related to S&T are covered by media organisations.

5.2.2 Media coverage by topic

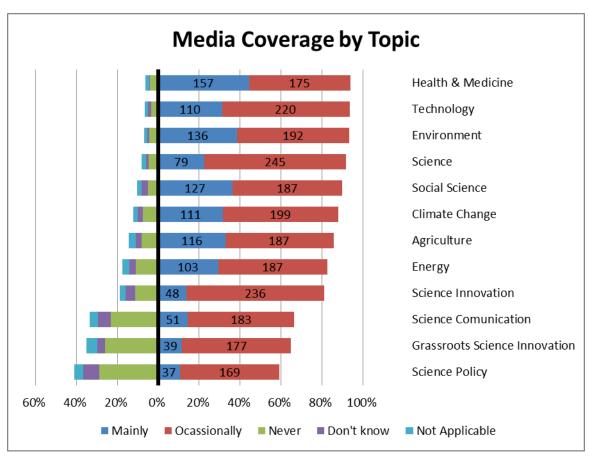


Figure 26: Media coverage by topic

Compared with the overall results shown in the above chart, social science seems to be more prominent in LAC and MENA, figuring at the top and displacing items such as health and medicine (LAC) and science (MENA). Energy is also more prominent in SA and SEAP, whereas climate change is more popular in SSA and SA. Agriculture is in the top three for SSA only.

²³ South East Asia and the Pacific Focus Group Report (Romo, 2012)

No regional differences are apparent for the bottom three, meaning that 'science communication', 'grassroots science innovation' and 'science policy' are consistently the least covered topics and 'science innovation' is also not well covered by most.

In another global research project²⁴ we learned that print, web stories and Facebook are the dominant outlets used: 90%, 87% and 75% respectively (cumulative responses: 'mainly' or 'occasionally'). At the lower end of the scale, only 18% use video podcasts. We also found that web stories are on the increase for the majority of respondents (55%) as well as print material (48%). Additionally, over a third of those who answered told us that podcasts and video podcasts are never used (35% and 38% respectively). These high tech — and often hyped — delivery formats are still less frequent across the globe. Among those working in print, radio or TV, about half work on national outlets, and the other half on regional or local outlets. Radio is the most locally oriented medium.

5.2.3 Source of information for story idea development

Over 80% of all media sector respondents use conferences, press releases/press officers and government media agencies as sources for story ideas – see figure 27, next page.

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²⁴ Global Science Journalism Report (Bauer et al., 2012)

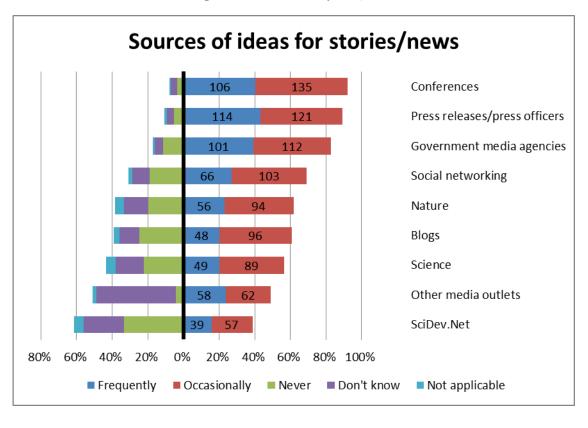


Figure 27: Sources for story ideas/news

Taking the above chart as baseline (top three items), the only regional difference is in SA, where social networking and blogs displace conferences and government media agencies. When we introduced more variables in a similar research project²⁵ we found that personal contacts are also highly used (94%). In that project we also looked at changes made over the last five years, finding that of the 579 respondents who answered, 24% said that direct quotes from press releases have increased; the majority (32%) report the same rate of using quotes from press releases, 12% say they are using them less, and 15% have never used press releases in this way. The direct quoting of press releases has increased more in MENA (38%), Latin America (26%) and North America (28%) than elsewhere. In Asia (23%) and southern Africa (28%) this practice has become less frequent.

In Chapter 4 we analysed the valuable attributes that help cover S&T topics: in order of importance, over 80% of media respondents value sources that are 'trustworthy', 'accurate and complete', 'reliable', 'authoritative' and 'how recent the story is'. The last item is more important in LAC, MENA and SA where it is ranked higher. In SA 'how recent the story is' comes first followed by 'local commentary', 'links and/or contact details that help develop a story', 'relevance' and 'neutral and objective tone'.

²⁵ Global Science Journalism Report (Bauer et al., 2012)

5.2.4 Audiences that media organisations serve/target

There were no regional differences for the top item, which means that 'the general, wider public' is the main audience for all media sector respondents. NGOs are the second most popular audience in LAC, SA and SSA, and politicians in MENA.

'A scientific audience' is at the bottom of the list throughout the regions, meaning that very few organisations target or serve this type of audience

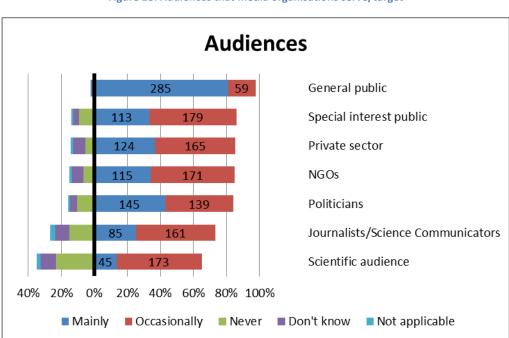


Figure 28: Audiences that media organisations serve/target

In our Global Science Journalist project we found that audience feedback is mostly received by 'occasional letters' and 'clickstream ratings' (58% and 56% respectively). It is rare for respondents to receive no feedback at all: only 9% operate in a void (without any feedback from readers).²⁶ Journalists in MENA receive feedback via clickstream significantly more than any other medium. Comments from friends and family are also more prevalent in North and Sub-Saharan Africa. Regular research is more evident in Europe, Asia and southern Africa. Those who report that they operate in a void are more frequent in Europe and Asia than elsewhere.

²⁶ n = 592

5.3 The wider context

Figure 29 shows that only 60% of respondents or less feel either completely satisfied, very satisfied or satisfied about their work environment and the coverage of S&T topics, so there is room for improvement. Clearly, 'access to information from government agencies' is an issue with only 40% of respondents feeling positive about it (except for SA and SSA, with 60% and 50% respectively); this is worse in MENA where only 20% feel positive about this — in fact in MENA only 50% or less chose positive rankings to all variables shown in Figure 29. There seems to be fewer issues about 'freedom of press/information' and 'organisations freedom...' in SA, with over 90% of respondents feeling positive about these.

It is important to note that this survey was oriented towards the coverage of S&T and that it is possible that the working conditions for these topics are significantly different (maybe better) than those for media coverage of more sensitive areas, such as politics.

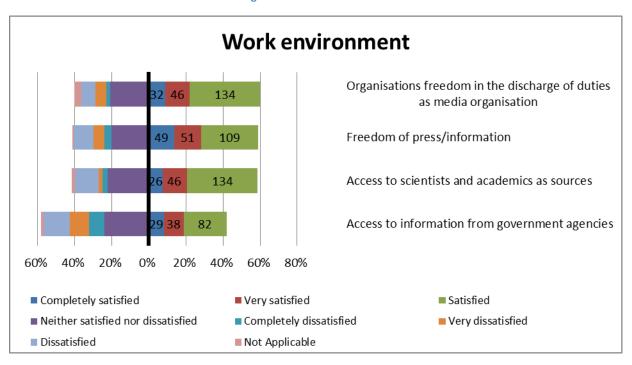


Figure 29: Work environment

In addition, some participants consider that the political context is missing (i.e. government policy on S&T that would create awareness and motivation for media stakeholders to increase coverage). Lack of funding and capacity and perceived lack of interest at government and wider public levels are also negative factors.

5.4 How to increase coverage of S&T topics

Chapter 3, section 3.5 raised issues about coverage of S&T topics, primarily the lack of human or financial resources. However, in the Global Science Journalist Report (Bauer et al., 2012) out findings demonstrate that most respondents (62%) welcome the idea of a science desk that is sponsored by third parties ('philanthro-journalism'), with 79% and 67% favouring national and foreign charitable foundations respectively. Such donor-led coverage might bring more long-term goals, addressing concerns raised in SEAP²⁷ that most media organisations work on short-time frames; which in turn prevents coverage of issues in the long-term and gives a false sense that there is a lack of public relevance, resulting in dropped plans for addressing issues via S&T.

Our SEAP research project also reported an increase in the production of S&T-related stories in print, web and radio — which is positive if the goal is to increase the exposure of evidence and research results. But of equal importance is the quality of science journalism. In fact many respondents, especially those with more experience in the profession, are concerned about the quality of stories or the decline in investigative reporting.

Our respondents believe that where there is a government policy on S&T, it would create awareness and motivation for media stakeholders and could help increase coverage. This should be backed by a funding programme.

Participants specifically mentioned the need to have content in languages other than English. Finally, some also suggest that the organisation of debates, videoconferencing, increased use of social media, and 'location specialisation on site' would also help cover S&T topics for development.

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²⁷ South East Asia and the Pacific Focus Group Report (Romo, 2012)

5.4.1 Capacity building needs

Another way of increasing coverage of S&T topics is by capacity building. In SEAP²⁸ participants feel that media organisations should invest in the professional development of their journalists, especially for subjects related to S&T. They say there is poor science reporting: scientists often feel journalists do not always report the whole story, that they oversimplify issues, lack inquisitive thinking (investigative reporting) or present incorrect information. Others pointed out a lack of broad representation of views when reporting and a focus on controversial points instead of generating discussion on important issues that need public engagement. Finally, the lack of capacity to understand S&T subjects is a challenge, resulting in low numbers of science communicators.

Our global evaluation survey was distributed to both journalists and managerial staff such as chief editors and directors. However, it was not possible to clearly divide these two groups to analyse training needs, mainly due to confidentiality choices made by respondents (i.e. omitting details of job roles). But we believe that demand for certain needs are higher for managerial staff such as 'setting up a S&T newsdesk' and 'information about markets and marketing for science news'. Demand for these is high (around 52%) and is considerably higher in some regions. For example both 'information about markets and marketing...' and 'managing and producing S&T news' have an average 72% demand in SSA and SA whereas 'setting up a S&T newsdesk' is in higher demand in SA with 57%, and in MENA it is the top priority.

In general, capacity building needs for women are slightly higher (about two to three percentage points) for most items, except for the top one ('nature and role of science journalists') where it increases more significantly to 71.8% - see Figure 30.

²⁸ South East Asia and the Pacific Focus Group Report (Romo, 2012)

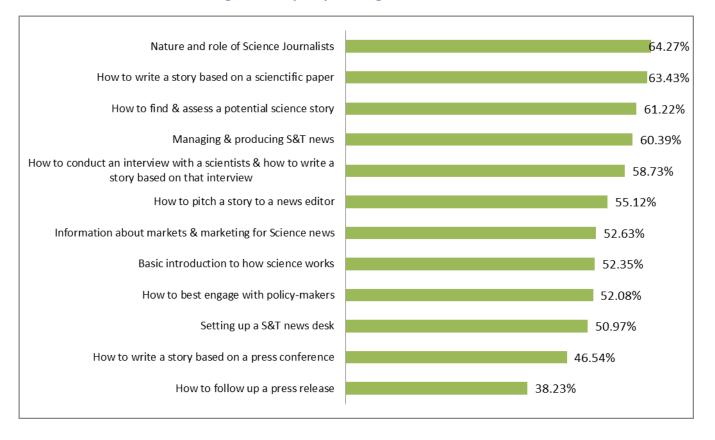


Figure 30: Capacity building needs — media sector

If we take as baseline the above chart we find that there are other factors whose demand increases by region: 'How to find and assess a potential science story' in LAC, SSA and SA (average 71%); 'How to conduct an interview...' in SSA and SA (average 78%); 'how to best engage with policymakers' in SSA and SA (67%); 'how to write a story based on a scientific paper' SEAP, SSA and SEAP (average 73%); 'nature and role of science...' in SEAP (90%) and 'How to pitch a story to a news editor' in SEAP and SA (average 70%; also the second priority in MENA).

The results indicate there is great demand for training around the world, especially for women and in regions such as SSA, SA and SEAP. Additionally, there is room to develop resources that enable science journalists to tackle challenges in communicating with the public sector and dealing with academia.

In our Global Science Journalist Report (Bauer et al., 2012) we found that science journalists experience the following challenges when engaging with the public sector: 68% of respondents say public sector figures are reluctant to share details; 62% note that people are unwilling to be interviewed; 61% find themselves obstructed by 'gatekeepers'; and 59% find it hard to target the right persons. When it comes to academia, other access problems prevail (as analysed in Chapter 3, section 3.2). Jargon is a big barrier for nearly 60% of respondents, highlighting academics' reluctance or

incapability to talk in non-technical terms²⁹. Therefore, training could also focus on strategies to overcome the aforementioned obstacles.

Finally, engaging the wider public in topics related to S&T is seen as a challenge, with about 60% saying the public 'lack motivation to participate...' and have a 'lack of interest in S&T subjects'. However, as part of our SEAP focus groups (Romo, 2012) we found participants disagreed with this. Many thought that the public is interested in S&T issues and that it is perhaps a communications issue, requiring relevant and inspiring stories to generate more interest and action. An example of an inspiring story could be the successful transfer of technology and its positive impacts on stakeholders.

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²⁹ Around 61% of the academic/research respondents said they need training on 'How to communicate research to media organisation and the wider public', which might help reduce the challenge faced by media stakeholders when engaging with this community.

Chapter 6: The role of the NGO and private sectors in S&T for development

Key findings

- Worryingly, the majority of NGO respondents (71%) said that they or their organisation does not
 currently consume information related to S&T for development (there are regional differences). This is
 of concern when we think about the expectations people have of these stakeholders. Therefore there is
 a lot of room for improvement in raising awareness in the NGO sector about the importance of S&T for
 development and policymaking.
- A small majority (59%) of private sector respondents say that their organisation consumes information related to S&T for development purposes and nearly 80% of respondents believe their company would be interested or benefit from more business/industry sector S&T news and analysis. This represents a big opportunity for news and analysis provision to this sector. A service delivery strategy should be based on insights generated for the private sector as discussed in this report; conducting more research on this is also advisable.
- The great majority of private sector respondents (88%) believe there is a role for the private sector in S&T communication and/or knowledge transfer for development.
- Over 90% believe the private sector should be 'a partner for research development', followed by 'as implementers of S&T via company's activities in the developing world' (81%) and 'as innovation leaders' (80%) there were no regional differences identified for these top three ranked items.
- In another SciDev.Net research project³⁰ the role of the private sector was discussed in-depth; we learned that the private sector is seen as a key player in creating a space that could integrate science graduates and science communicators into the workforce, tackling brain drain and changes of career resulting from a lack of job opportunities and support. Participants also highlighted the need for the private sector to help tackle gender inequalities, such as with flexible working for working women.

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³⁰ South East Asia and the Pacific Focus Group Report (Romo, 2012)

6.1 NGO role and consumption of S&T information for development

Worryingly, the majority of NGO respondents (71%) reported that they or their organisation **does not** consume information related to S&T for development but there are marked regional differences. In SA and MENA the proportion of respondents who said they or their organisation consume information related to S&T for development is much higher (52% and 58% respectively), whereas only a small proportion uses S&T evidence for development purposes in SSA (8%), LAC (22%) and SEAP (25%).

Overall there is a high percentage of NGOs currently not consuming S&T information for development programmes. This is of concern given the expectations people have of these stakeholders. For example, during our research in SEAP³¹ the desirable role NGOs should play is similar to that expressed for media organisations in that both actors can identify needs on the ground for consideration by the research and policy community, while also helping with monitoring and evaluation (as 'watchdogs'). They are also ideally placed to encourage more social and environmental analysis of research results, helping to disseminate results and facilitating their uptake at local levels or where they are needed most (including policy level). Therefore there is a lot of room for improvement in raising awareness in the NGO sector about the importance of S&T for development and policymaking.

6.2 Private sector consumption of S&T information for development

A small majority (59%) of private sector respondents said that their organisation consumes information related to S&T for development purposes. Taking as a baseline this percentage, the proportion of private companies that currently consume S&T for development is larger in LAC and SA (64%) but smaller in MENA (43%). In Chapter 3, section 3.2 we analysed the attributes that respondents value the most when sourcing evidence. In order of importance, they are: trustworthiness, accuracy and completeness, relevance to activity/project or topic and authoritativeness — favoured by over 80%.

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³¹ South East Asia and the Pacific Focus Group Report (Romo, 2012)

Nearly 80% of private sector respondents believe their company would be interested in more business/industry sector S&T news and analysis:

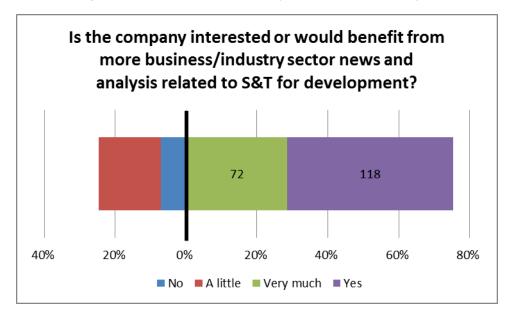


Figure 31: Demand for business/industry sector S&T news and analysis

The interest changes by region: in MENA and SEAP it is lower, with only 66% choosing 'very much' or 'yes' but it is higher in SA, at 92%. There is a big opportunity here to provide what seems to be a high demand for this type of information, basing service delivery on the most valuable attributes. Conducting more research on this subject is advisable.

6.3 Is there a role for the private sector?

The great majority of private sector respondents (88%) believe there is a role for the private sector in S&T communication and/or knowledge transfer for development. The proportion of those who think there is not a role is higher in MENA (21%) and SSA (16%), whereas in SA 100% believe there is a role for the private sector. Overall the results are mostly positive throughout the regions.

We went further and analysed the specific desirable roles the private sector should play — see chart on next page.

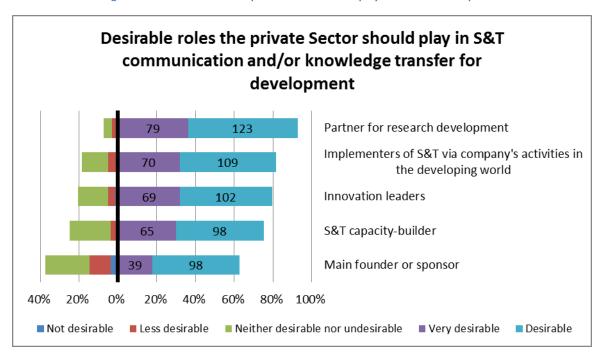


Figure 32: Desirable roles the private sector should play in S&T for development

Taking the above results as a baseline, we found no gender differences in ranking of all items. There are also no ranking differences by region (top three ranked items only), which makes this a strong trend.

The results are very encouraging, providing a lead that organisations such as SciDev.Net could follow to involve the private sector more in S&T for development. In the Focus Group Discussions (Romo, 2012) the role of the private sector was discussed in depth; we found that the private sector is seen as a key player in creating a space that could integrate science graduates and science communicators into the workforce, tackling brain drain and changes of career resulting from a lack of job opportunities and support. Participants also highlighted the need for the private sector to help tackle gender inequalities, such as by allowing flexible working for working women.

Chapter 7: The role of ICT in disseminating information, facilitating uptake and delivering training

Key findings

- The use of information and communication technologies (ICT) for consumption of information is clear: 45–50% of respondents named the Internet as a generic source when asked to think about their preferred sources of S&T information³².
- Over 60% currently prefer to consume information via 'online daily news' (top response) and as an 'online weekly digest' (second place). The same proportion also prefers to consume information via 'specialist formats (i.e. opinion and editorial pieces, key documents, features, etc.)' ranked in third place.
- We discovered that the top three preferred channels will continue to be popular in the next five years for over 60% of respondents as well. We can see the demise of TV and print and an increase in mobiles and tablets (e.g. iPad) use.
- The use of ICT expands beyond consumption of information; over 60% of respondents are likely to
 engage in online forums if given the chance to talk with specialists (this does not apply to the
 academic/research sector), and with other peers or the public.
- When we asked the academic/research, media and public sectors about preferences for training delivery, the top response was 'online course materials', favoured by over 80% of respondents. However in all regions, except for LAC, preference is given to training delivery 'in person'. In all of those cases online course material figures in second place, except for SEAP where 'printed materials only' comes second. In LAC, 'online course materials' is the top response.
- Participants were also given the chance to choose from two types of online delivery channels and nearly 80% favoured webinars (there were no regional differences for this).

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³² This correlates with information gathered in our South East Asia and the Pacific Focus Groups (Romo, 2012) where online resources were found to be one of the most popular channels used by the policy, media and academic/research sectors.

7.1 Current consumption of S&T information by channel

The use of information and communication technologies (ICT) for consumption of information is clear: 45–50% of all sector respondents named the Internet as a generic source when asked to think about their preferred sources of S&T information³³. Over 60% of all sector respondents prefer to consume information via online daily news and as an online weekly digest. The same proportion also prefers channels such as specialist formats (i.e. opinion and editorial pieces, key documents, features, etc.) – which ranks in third place.

We identified no general gender differences for the top five ranked items:

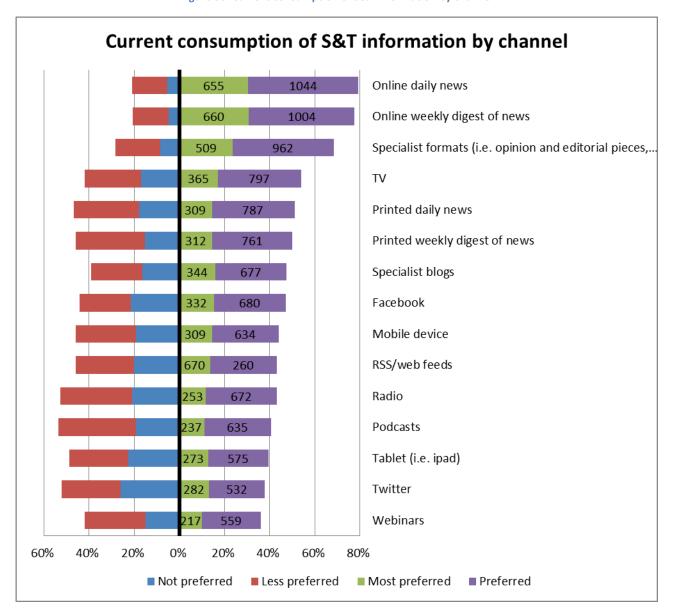


Figure 33: Current consumption of S&T information by channel

³³ This correlates with information gathered in our South East Asia and the Pacific Focus Groups (Romo, 2012) where online resources were identified to be the most popular channels used for the policy, media and academic/research sectors.

Most sectors have the ranking presented in the above chart (top five items only), except for:

- In the private sector 'Facebook' is preferred over 'printed daily news'
- The public sector favour a 'printed weekly digest of news' over 'TV'
- NGOs prefer to consult 'specialist blogs' instead of reading 'printed daily news'.

There were some significant regional differences for the top five ranked items as well:

- In LAC there is more preference for 'specialist blogs' and 'RSS/web feeds' than for 'TV' or 'printed daily news'
- In MENA, 'Facebook' is favoured over 'specialist formats'
- In SSA respondents prefer to consume information using a 'mobile device' than from 'printed daily news'.

Some participants mentioned conferences, meetings and symposiums as other common channels for information consumption and exchange.

7.2 Future consumption of S&T information by channel

We asked all sector respondents to think about consumption of information over the next five years. We found that the top three preferred channels that are currently used by over 60% (previous section) will continue to be popular in the future for over 60% of respondents as well — see chart below. Interestingly we can see the demise of TV and print channels and an increase in mobiles and tablets (e.g. iPad) usage:

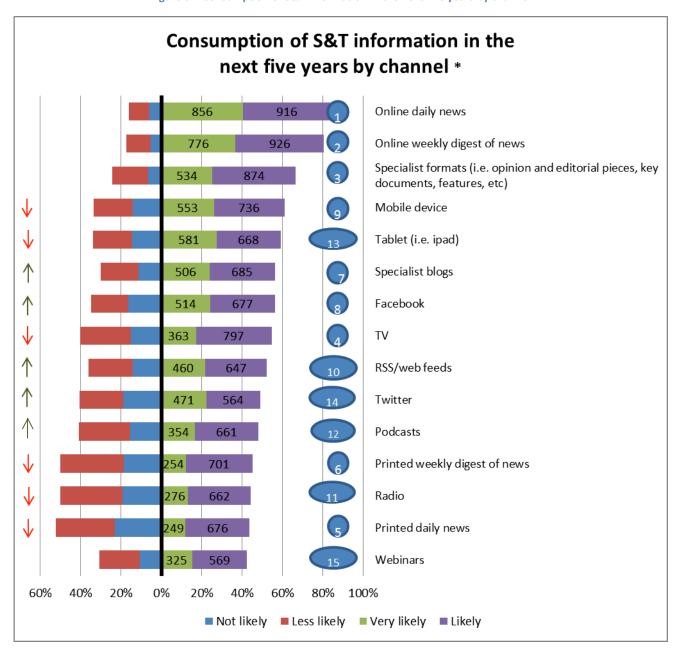


Figure 34: Consumption of S&T information in the next five years by channel

^{*} The coloured circles next to each bar illustrate the ranking of valuable attributes as per the previous chart (Figure 33), whereas the coloured arrows indicate whether there was a change in ranking (up or down).

We found no gender differences for the top five ranked items. There were regional and sector differences but it is important to note that despite these, all regions and sectors placed 'online daily news' and an 'online weekly digest of news' in their top five list.

Significant differences by region for the top five in Figure 34 are:

- In MENA respondents believe Facebook will continue to be highly used (ranked in second place) but they also see an increase in RSS/webfeeds and Twitter. These three items displace the increase in usage of mobile and tablet devices as well as 'specialist formats'
- In SA respondents anticipate an increase in the use of Facebook instead of tablets
- Respondents in LAC intend to continue using specialist blogs over the next five years, displacing mobile devices off the top five
- In SEAP the already popular channels such as TV and printed daily news will continue to be the norm, rather than in tablets and 'specialist formats'
- In SSA respondents believe Facebook will increase over tablets.

Below are the differences we found by sectors (top five only) compared with the overall results presented in Figure 34:

- In the media sector the already popular TV will continue to be the norm over the increase in use of 'specialist formats'
- In the public sector respondents foresee an increase in TV over tablets.

Related to the next section, there is projected increases in the use of online forums, videoconferences and SMS for information consumption in the next five years.

7.3 Online forum use

The use of ICT expands beyond the consumption of information; over 60% of respondents would likely engage in online forums if given the chance to talk with specialists (this does not apply to the academic/research sector), and with other peers or the public:

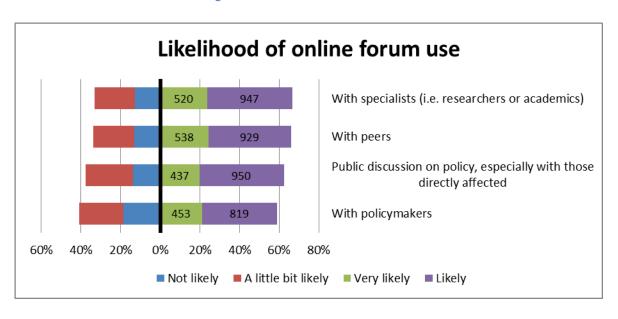


Figure 35: Likelihood of online forum use

Media sector respondents prioritise engagement with the wider public (top ranked response), whereas those in the private and public sectors prefer to communicate with specialists. Academic/research and NGO respondents are more likely to engage with peers.

This results match those presented for the public sector in Chapter 4, section 4.2, where just over 60% of policy respondents said they use networks and web platforms as main sources of information for policy development.

7.4 Demand for certain products and services

Overall, respondents favoured the provision of 'emails that are tailored to specific areas of interest' – see chart below. These results match those presented in our SEAP Focus Groups Report (Romo, 2012), which also strongly suggest that personalisation should be based on topics. It is important to note that topics are also the top drivers of traffic on our website.

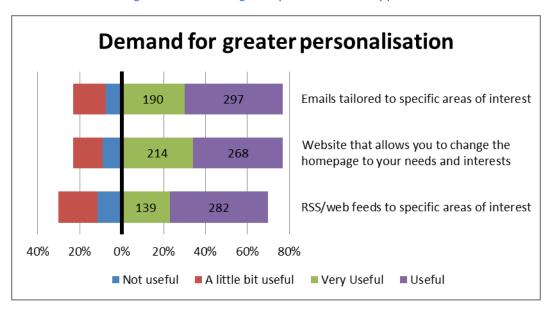


Figure 36: Demand for greater personalisation — by product

Demand changes by region: in SSA and SEAP 'emails tailored to specific areas of interest' is the preferred customised product/service and in SSA more than 90% of respondents favour this communication.

In LAC, SA and MENA website personalisation is the top ranked item, favoured by an average of 80% of respondents.

7.5 Capacity building delivery

When we asked the academic/research, media and public sectors about preferences for training delivery, the top response was online course materials, favoured by over 80% of respondents:

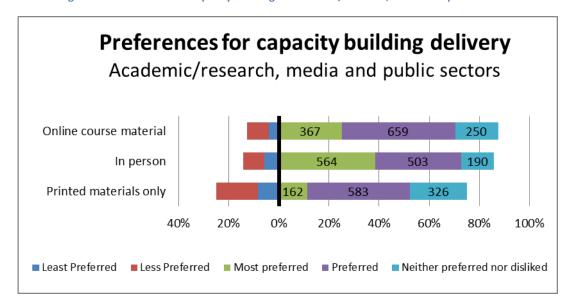


Figure 37: Preferences for capacity building — academic/research, media and public sectors

In all regions, except for LAC, preference is given to training delivery in person (top ranked item). In all regions, online course material figures in second place, except for SEAP where printed materials comes second. In LAC, online course material is the top response.

Participants were also given the chance to choose from two types of online delivery channels, and nearly 80% favoured webinars. Note there were no regional differences for this:

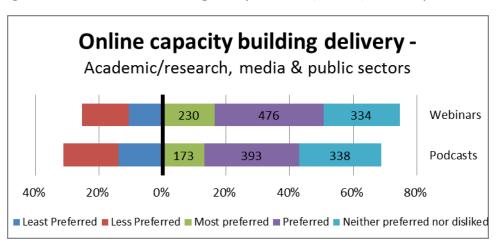


Figure 38: Preferences for online training delivery — academic/research, media and public sectors

Chapter 8: Revenue avenues

Key findings

- Although many of the results and leads resulting from the findings contained in this document could be transformed, with the appropriate attention, into potential areas for revenue, this chapter develops two that are included in the global evaluation survey — training and posting announcements.
- Over 60% of all academic/research, media and public sector respondents indicate that they or their organisation would be willing to either pay in full (18%) or contribute towards their training if subsidised by a third party (46%). The proportion willing to pay for training (in full or in part) increases in MENA to 63%, in LAC to 70% and is highest in SSA (79%); whereas in SEAP 56% of respondents are **not** willing to pay for training. Therefore it is advisable to consider moving from free training to a suitable pay arrangement, keeping in mind the relatively high percentage that are unwilling to pay for training (36%).
- Although not great, there are potential revenue opportunities from the private sector that should be further explored such as payment of fees for posting announcements. For example, about 30% of respondents say they or their companies would be willing to pay for events promotion and 21% for jobs advertisements. In some regions the willingness to pay for events changes significantly; for example, in LAC it is 40% and is highest in SA at 64%, whereas it is 11% in SA. In the case of paying for job advertisements, the percentage is highest in MENA (46%) and lowest in SA (14%).

8.1 Fees for capacity building

About 64% of all academic/research, media and public sector respondents indicate they or their organisation would be willing to either pay in full (18%) or contribute towards their training if subsidised by a third party (46%). Equally important is that a relatively high percentage also indicate they are unwilling to pay for training (36%), which should be considered when revising the training and revenue strategies.

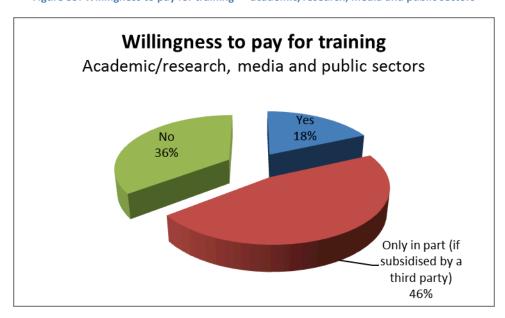


Figure 39: Willingness to pay for training — academic/research, media and public sectors

The proportion willing to pay for training (in full or in part) is 70% in LAC and is highest in SSA (79%), whereas in SEAP 56% of respondents are **not** willing to pay for training.

If we analyse results by sector and region we find that in both the public and media sectors 60% of respondents also believe they or their organisations would be willing to pay in full or in part for training — this proportion increases slightly (65–67%) in all regions within the media sector.

The proportion willing to pay for training (in full or in part) is nearly 70% of those in the academic/research sector. Within this sector and in SSA, the proportion rises to 77.5%, and the same goes for academic/research respondents in MENA (73.2%) and LAC (75.1%); whereas it is the opposite in SEAP and SA, where 51% and 40% of respondents respectively would not be willing to pay for training.

The overall results are encouraging and represent a viable revenue opportunity.

8.2 Fees for posting announcements

Although not great, there are potential revenue opportunities from the private sector that should be further explored, including payment of fees for posting announcements. About 30% of respondents indicated they or their companies would be willing to pay for events promotion and around 21% for jobs adverts:

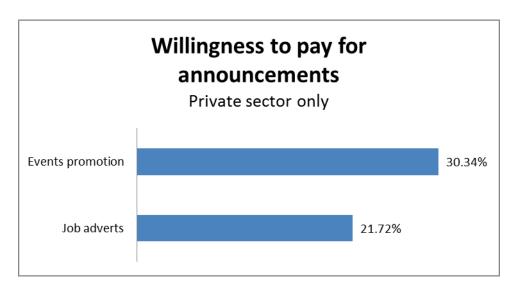


Figure 40: Fees for posting announcements

In some regions, willingness to pay for events changes significantly; for example in LAC it is 40% and is highest in SA at 64%, whereas it is just 11% in MENA. In the case of paying for job advertisements the proportion of those interested is highest in MENA (46%) and lowest in SA (14%).

Note that these figures are calculated on response rate, so it is possible that they might be higher as some respondents did not complete the survey.

Conclusion

Profiling sectors

There are areas where all sectors converge in terms of preferences and/or opinions. For example, most sectors would like to see socio-economic analysis of research results and most also face the same challenges in lack of human or financial resources that would help uptake. However, this section explores the most salient differences which characterise each sector and which should inform and shape any intervention.

We found that the <u>media sector</u> is the worst at aggravating gender disparities in the workplace. This should be taken into account and gender disaggregated data should be the focus of programmes targeting this sector. Most sector respondents also place a higher interest on the provision of political analysis of research results, perhaps indicating the influence and desired involvement media outlets have in the policymaking sphere. The majority of media respondents believe the wider public lacks interest in S&T topics, which might be linked in some cases to the low or null coverage of these subjects. However, during our focus groups in SEAP (Romo, 2012) the latter view was contested by participants, who believe that the wider public is indeed interested but is poorly served with interesting material.

The fact that half of all <u>public sector</u> respondents believe the wider public distrusts and doubts the potential positive effects of projects, policy and research exemplifies the need to rebuild the relationships between policymakers and the wider public to advance research and facilitate uptake. This sector also seems to rely heavily on print and TV for information and this will probably be the case in the next five years, which media organisations should consider when targeting this audience.

The <u>NGO or third sector</u> believes evidence should be used to raise awareness and create action. Despite having a higher focus on civic involvement than any other sector, it too believes that the wider public is not interested in S&T and that it distrusts and doubts the potentially positive effects of projects, policy and research. Worryingly, only 29% indicate that they or their organisation use S&T evidence for development activities. Efforts should be made to change this behaviour if S&T is to have a greater impact at a local level, where most NGOs work. In addition, NGOs naturally place more importance on the political analysis of research results, perhaps linked to their involvement in lobbying activities (60% of NGO respondents say they are involved in influencing policy). For them the media and public opinion polls are effective way of presenting evidence for policymaking, which should be considered when engaging with this sector to promote more evidence, noting also NGOs' reliance on specialist blogs for information.

Over 80% of <u>private sector</u> respondents believe the private sector has a role in S&T research, research communication and knowledge transfer for development. Around the same proportion believe there is a demand for more business/industry-related news and analysis. When engaging with this sector, knowledge brokers should keep in mind its practical and results-oriented approach. For example, respondents prefer to have access to 'conclusive evidence on what has worked best in which situations', and anecdotes could also help to influence policy when focusing on information for awareness raising and action.

Finally, the <u>academic/research</u> sector is at the heart of S&T for development, as it produces research, but it has difficulties in communicating its results to non-specialist audiences. Despite involvement in lobbying activities, the majority in this community still believe they need to learn how to present information for policymaking. The media and policymakers depend on this sector and capacity building efforts could help bridge the working relationship gap.

Profiling regions

There are areas where all regions converge in terms of preferences and/or opinions, but this section describes the main differences that characterise each region and that should inform an intervention.

The Middle East and North Africa (MENA) seems to be the most challenging of all regions, with the worst gender disparity across the academic/research sector and the worst conditions for media organisations. It is the region with the highest proportion of respondents who say that media and private sectors should **not** have a role in research, development or policy. It is also the region with the lowest proportion of private sector individuals and organisations using S&T for development, the lowest demand for business/industry news and analysis and the lowest proportion of media coverage of S&T topics. The region uses researchers in a personal capacity and policy assistants/advisors as top sources for policy development and believes anecdotes are effective for presenting evidence — which illustrates a policy context that is highly reliant on personal connections and less formal than other contexts. It is a region that is also one of the worst at using evidence in the early stages of policymaking. It is important to note that Facebook and Twitter are some of the most popular channels for information, along with RSS feeds.

Latin America and the Caribbean (LAC) respondents tend to use information for benchmarking, and they also use information from external think tanks for policymaking and favour specialist blogs over mobiles for S&T information. There are also challenges: it is the region with the highest gender disparity for managerial roles and has a lack of formal avenues for involvement in policymaking and development.

The same can be said for <u>South Asia (SA)</u>, this is the region with the highest interest shown in business/industry news and analysis and the highest in interest in paying for events promotion. However, it is also a region with some of the most acute gender disparities (across all sectors) and capacity building needs. Other challenges are: the low media coverage of S&T topics (yet it is one of the two regions where media is one of the most used sources for policymaking); the use of evidence at late stages of policymaking (e.g. once a decision is made); and a policymaking context that does not favour uptake of evidence.

<u>Sub-Saharan Africa (SSA)</u> is similar to SA in that it also has high gender disparities (the highest for executive roles) and acute capacity building needs. Respondents use external think tanks and media outlets as the top sources for policymaking, using such information at later stages of the policy cycle. It is also the region with the lowest proportion of NGOs using S&T information for development (only 8%). On the positive side, this region is the most aware of our practical guides, with strong use of mobiles for S&T information and the highest willingness to pay for training (79%).

<u>South-East Asia and the Pacific (SEAP)</u> also has acute capacity building needs and has the lowest proportion of respondents showing interest in more business/industry news and analysis. This region has the highest percentage of people **not** willing to pay for training (56%) and respondents favour print and TV over tablets for information.

Action points and recommendations for SciDev.Net

This section provides more details about the action points or recommendations in the Executive summary. The recommendations are aimed at getting more evidence into policymaking and development activities as well as helping to build a culture of science.

1) Designing profile-raising activities – the importance for science communication

Raising awareness of the availability of information is key for promoting access to evidence but also for increasing demand for products and services. For example, of the pool of respondents who are not SciDev.Net registrants/readers (n = 1,647), the vast majority (90%) have not registered with us for weekly email alerts simply because they have never heard of SciDev.Net. In fact this research project was instrumental in raising the profile of SciDev.Net, resulting in 515 new registration requests, which represents 34.2% of those respondents who were not already registered when the survey took place.

Raising awareness of the availability of information is paramount for the NGO sector since the majority (71%) say that they or their organisation do not currently use information related to S&T for development.

Finally, it is important to highlight that popular sources of information are judged for their level of trustworthiness, authoritativeness and accuracy. These attributes are key to building a reputation and for successful profile raising.

2) Encourage content sharing— improving access, increasing outreach and facilitating uptake

This report presents information on the issues that media and communications organisations face in accessing information from governments, researchers and research organisations. Not surprisingly media coverage of S&T in the global south needs improving (mainly in MENA and SA). But people are using media outlets, both traditional and electronic, for policy development and for general S&T consumption. Therefore organisations such as SciDev.Net should help disseminate a larger number of high-quality S&T stories at country level via national and local media outlets, both traditional and electronic, which should help improve access to information as well as reach vulnerable and marginalised groups.

We also learned that increasing the relevance of information is important for uptake. Working with local media partners and knowledge brokers should help ensure relevance of information is contextualised for a specific audience or country. The focus should be around the least covered topics: science communication, grassroots innovation, science policy and science innovation.

Readers should also keep in mind that users need content in languages other than English. In addition, S&T information should be readily understandable for the public and in formats that can be repackaged to facilitate uptake for a wide range of activities and purposes

3) Practise responsible journalism — communication for policy, research and development

This report looks at the many expectations placed on media and specialist communications organisations for their role in policy, research and development. An ethos based on good and responsible journalism practice should underpin their activities and involvement. This is especially relevant to actions points 1 and 2 above: an organisation with a high profile and wide outreach can influence policy and public perception, generating pressure and ultimately action, with impact also in research and development. It is paramount that media and specialist communications organisations are neutral and objective, and avoid politicised journalism.

4) Provide socio-economic analysis of research results

The diverse findings presented in this report clearly highlight the urgent need to provide a socio-economic analysis of research results to increase uptake of evidence. This should be extended to the environmental and political impacts of research according to the needs and priorities of sectors and regions.

This is not to suggest that a single individual or organisation should be responsible for producing such an analysis. If researchers can only go as far as presenting scientific results, NGOs and media organisations can help analyse the impacts with a socio-economic, environmental or political lens.

5) Improve capacity to facilitate uptake

There is much need for capacity building across the developing world. Policy stakeholders need to learn how to find, appraise and incorporate evidence into policymaking; the academic/research community needs to learn how to communicate effectively with non-specialist stakeholders and how to present evidence for policymaking. The list of capacity building needs is much longer for science journalists and media organisations, and these actors are the ones bridging the gap between research, policy and the public sphere.

This report suggests that 'philanthro-journalism' is a way of tackling finance issues preventing investment in capacity building, such as by encouraging the creation of science desks. Our survey found that those in need are also willing to invest in their growth and this should be taken into account.

6) Adapt — be digitally led but mindful of the marginalised

Our findings indicate that information and communication technologies (ICTs) are not only increasing access to information but are also facilitating the exchange of information. New informal channels such as Facebook are being used for S&T-related information, which might push organisations to rethink their communications approach.

Our respondents believe that online channels will continue to be the most used in the next five years, accompanied with an increase in mobile and tablet use. Organisations should adapt to the digital world, continuing to innovate, but should not forget that the most marginalised still rely on 'traditional' communications such as radio.

7) Create key relationships for uptake

This report contextualises the different policymaking contexts in the developing world, generating much evidence about the challenges for mainstreaming more evidence into policy development. It is clear that even when all of the above actions points are put in place, there is still a need to understand the "underlying paradigms and forms of discursive practice that shape what counts as evidence and that imbue that evidence with meaning and significance" (Du Toit, 2012). The author believes that the effective use of evidence requires "good knowledge brokers: intermediaries, translators, activists and 'organic intellectuals' who can work strategically across the divide between policymaking and research, helping shape both research questions and how these inform political and policy decisions".

It is imperative for organisations such as SciDev.Net to create the space and incentives to facilitate relationship building that is based on trust (both with SciDev.Net and also between key stakeholders) and is participatory and consultative. Those involved should include S&T champions, knowledge intermediaries (both formal and informal), 'social network connectors' (SNC), epistemic communities and private sector stakeholders. The latter are some of the most influential stakeholders in the policy sphere.

8) Design a model that can adapt to the contexts and needs of gender, sector and regional differences

There are various regional and gender differences that help us to understand that intervention programmes should be adapted to increase effectiveness, and also priorities for action. For example:

- The proportion of women saying there is a need for capacity building outstrips male respondents in both the
 media and academic/research sectors, so women are a key target group. The same can be said for regions:
 SEAP, SA and SSA have the greatest need for capacity building, according to our survey
- Creating relationships is perhaps more urgently needed in SEAP and MENA, where the policy context is less favourable for the uptake of evidence
- Use of ICT should be carefully managed in regions where the more traditional formats (e.g. print and TV) are predominant, such as in SEAP.

9) Build a monitoring and evaluation (M&E) model for intervention design and implementation and continuous learning and improvement

An M&E structure should allow for continual feedback, keeping in touch with changing needs on the ground and helping to focus efforts and resources. So the importance of having an M&E model should not be underestimated. In the case of SciDev.Net the investment in a new M&E role has generated much needed data to inform the next set of strategic objectives (2013–2017), while also helping to develop a new Theory of Change based on evidence.

10) Adopt an open approach — share knowledge and lessons learned

Much development and research communication work comes from individuals and organisations willing to share knowledge and lessons learned with others. For example, there are many specialist networks that rely on the good will and free work of many to keep them running, allowing information to flow where it is most needed and even sparking action and new partnerships. SciDev.Net also believes in such an approach, resulting in the creation of a new SciDev.Net Learning Series [http://www.scidev.net/en/content/our-learning-series/] that aims to share insights with the wider public, contributing to the body of knowledge. This report is published as part of the Learning Series and will be shared with networks and communities working in the development and research communications sector.

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Our Learning Series

The publications in the SciDev.Net Learning Series derive insights from research projects and analysis regarding science communication. The series is part of SciDev.Net's monitoring and evaluation programme and provides valuable knowledge and lessons regarding the mainstreaming of evidence for policymaking, development programmes and when building a culture of science.

The publications should appeal to anyone with an interest in the use of science and technology in development and poverty reduction; including funders and knowledge brokers.



