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European Research in the Media: what do Media Professionals think?



**Report
December 2007**

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Directorate-General for Research
Directorate L — Science, economy and society
Unit L.5 — Communication

Contact: Teresa Sanchez Santos

*European Commission
Office SDME 02/156
B - 1049 Brussels*

*Tel. (32-2) 29-81473
Fax (32-2) 29-58220
E-mail: teresa.sanchez-santos@ec.europa.eu*

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1.0 INTRODUCTION

1.1 Background to the study

Despite wide consensus that science and technology are fundamental to society, and scientists are increasingly aware of their social duty to communicate about their work, there is still a considerable gap between the science community and society. This raises questions as to whether it is the type of information received by the public, which leads to concerns about the use of science, misunderstandings about the value of different fields of research, and scepticism on the value of science and the role played by scientists.

The media are key shapers of public opinion. More effective communication to the public is increasingly necessary for the scientific community, but without media support this goal remains out of sight. Meanwhile, Europe's current performance in disseminating its research results through the mass media often fails to match the excellence of its research. The multitude of opportunities for scientists to act as the interpreters of everyday occurrences is not taken up by the media and subsequently the chance to help people to really understand the world that they live in is lost. Whilst it is agreed that a new approach to communicating European science and technology is required, it is obvious that this is not currently a core task for the media or for scientists.

The European Commission and its Member States have been increasingly supporting this science media dialogue process through a wide range of tools and instruments, including the creation of discussion opportunities, development of media products; thematic web sites; different types of events; information magazines, brochures, leaflets, newsletters and posters; as well as activities to enhance public understanding of science. However, it is clear that there is a need for a real debate with those in the media and within the scientific community to identify concrete issues and possible solutions to help science journalists and editors meet current and emerging challenges, and enhance the profile of science and research in European media.

The impact of science is such that communicating research activities and results to the public must be helped and encouraged by a wider community of stakeholders, including not only the academies and funding agencies, but also the media and the scientific community itself.

1.2 About the Survey

Within this context, in December 2007 the Directorate-General for Research of the European Commission is organising the first European Forum on Science Journalism in Barcelona to facilitate a dialogue on how to improve the media coverage of European research. In particular, the Forum is expected to discuss the actions that can be taken to improve the visibility of EU research in the media.

In preparation for this event, DG Research commissioned a survey of senior media representatives from across the industry on the role of science journalists and editors in Europe, their relation with the scientific community, and the challenges and opportunities they encounter in their daily work. The survey was conducted online by The Evaluation Partnership (TEP) and Deloitte and remained open for three weeks, between 21 May 07 and 11 June 07.

The results presented consider the key issues that impact upon the coverage of scientific information and research results by the media. Where relevant analysis draws upon the findings from the in-depth consultation of some of Europe's most distinguished and accomplished scientists, which are presented in a separate report also commissioned by DG Research of the European Commission.

The main topics covered by this survey of journalists are as follows:

- Types of scientific and research information and topics of greatest appeal
- Present and future challenges in the communication of science and research
- Information sources for scientific information
- Relationship between media and the scientific community.

1.3 Profile of Respondents

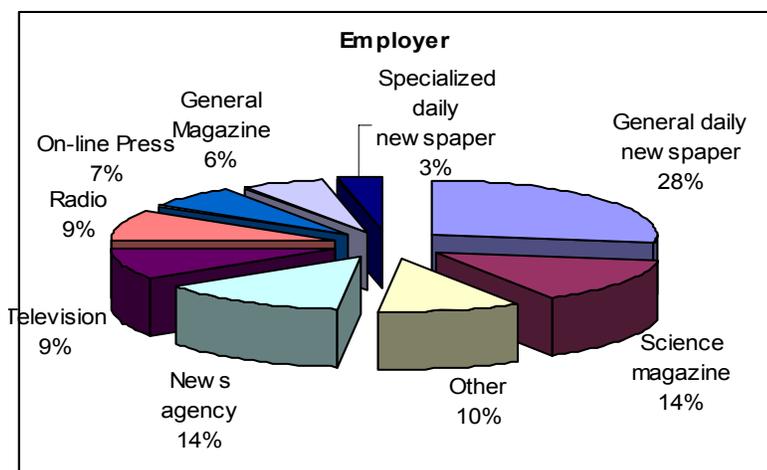
Nationality of respondents

Respondents from 27 countries (25 Member States and 2 non EU countries¹) took part in the survey. The range of countries covered was intentional to allow perspectives from national and international contexts. As the focus of this study is European research, media representatives were mostly drawn from the European Member States although several high profile international media organisations were also contacted.

Type of Media

When analysed by type of media, it is encouraging to note that respondents stem mainly from generalist media, because it can be considered that those already in the scientific media and specialist scientist press have already 'cracked' the issue of how to communicate about science to a certain extent. The response rate from those national daily newspapers that can be considered to be particularly influential is interesting, in that, of the printed media, these tend to have the highest circulation. Respondents employed by generalist newspapers represent 28% of the respondents, general magazines 6%, TV 9%, radio 9% and news agencies 14% summing up to a total of 63% of total respondents. Seventeen percent of the respondents work for the specialised press, that is to say science magazines and specialised daily newspapers.

Figure 1 Breakdown of respondents by type of media

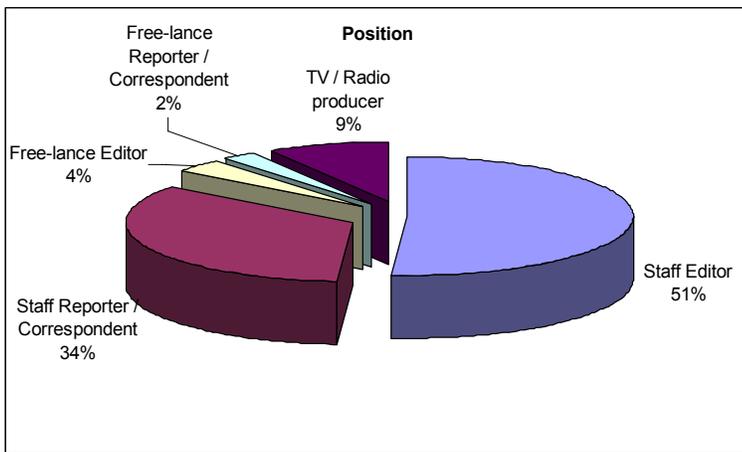


¹ Croatia and the USA

Position in the organisation

The sample who responded to the survey was mainly composed of staff editors (55% whereof 4% are freelance editors) and reporters (36% whereof 2% are freelancers), representing in total some 91% of respondents. TV and radio producers represent 9% of respondents. This final sample reflects the initial aim to cover principally senior media staff.

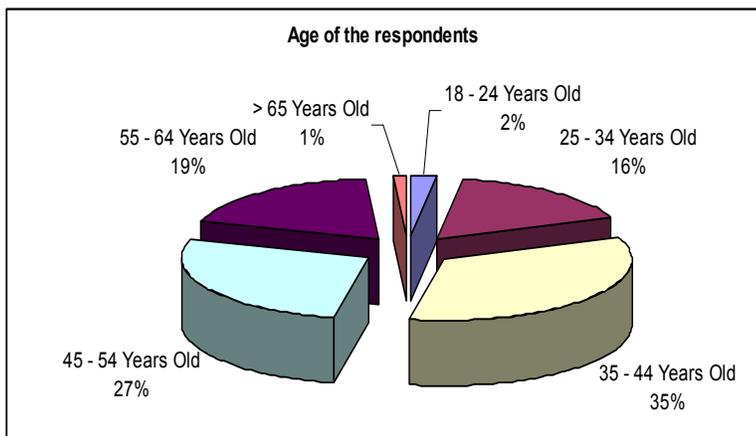
Figure 2 Breakdown of respondents by position



Age

When analysed the profile in terms of age, it is interesting to note that a wide range of ages was uniformly represented in the study, with half of respondents strongly concentrated within the age groups 35-44 and 45-54 which reflects the aim of the study to target senior media professionals. The other half of respondents is evenly split among the younger (25-34) and older (55 and more) age groups.

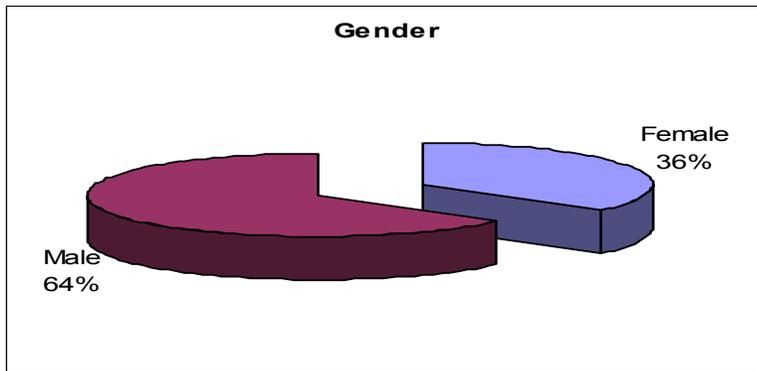
Figure 3 Breakdown of respondents by age – in percentage



Gender

In terms of gender, male respondents amount to 64% of the sample and female respondents represent the remaining 36%.

Figure 5 Breakdown of respondents by gender



2.0 SUMMARY OF KEY FINDINGS

2.1 Types of information and topics of greatest appeal to the media and the public

- As might be expected, journalists look for subjects which have a strong sense of relevance to their readers. This is the most important criterion that a science story must meet if it is taken up by the media.
- **The current “hottest topics” are environment and energy, both particularly related to global warming, along with health and medicine.** More than eight out of ten journalists ranked these above other topics. There was also a good level of interest in topics such as nanotechnology/new materials and information and communication technologies. Science and society, food and space elicited a lower level of interest, with others such as industrial technologies and transport trailing some way behind.
- In terms of newsworthiness, research results – no matter how important they are – are far from being sufficient to ensure media coverage. In an increasingly crowded media market-place, research stories have to battle for space just like all other news – political, financial, entertainment, sport, and so on.
- What matters is not just the content of the story *per se* but whether it fulfils the necessary journalistic criteria for newsworthiness. **Journalists responding to the survey consistently identified similar criteria, the most important being:**
 1. **Relevance:** a news item must be relevant to everyday life and this is the most important criterion confirmed by 65% of respondents;
 2. **Novelty:** a news item must tell something not known previously. It should also present significant or breaking news having a tangible impact, in addition to relevance this is also vital according to 42% of respondents;
 3. **Understandable**²: a news item must be easy to understand and mean something to the reader;
 4. **Proximity:** news items related to the particular country of the media concerned are more attractive;
 5. **Political or Controversial:** many highlight the need for a political angle;
 6. **Sensation and Originality:** stories that are able to “touch” readers are always more attractive.

It is important to stress that for a news item to be successful in the media, it needs to fulfil these criteria as well as providing an interesting story in an attractive field. Fulfilling one criterion is not sufficient to ensure newsworthiness. In broad terms, the more criteria a story satisfies the greater its chance of inclusion, the fewer criteria it satisfies, the greater the chance it will be rejected or ignored.

² For this question journalists selected their own criteria rather than choosing from a pre-defined list. Criteria 3 – 6 were mentioned by significantly less journalists than the first two.

2.2 Current and future challenges to media reporting on science

- When reporting on science, journalists and editors who took part in the survey experience challenges related both to practical constraints in the context within which they work and to the quantity and quality of scientific information available.
- **As far as the work context is concerned, the main challenges are lack of time** (mentioned by 55% of journalists) **and lack of space in the media for science stories** (40%). Lack of space is a particular issue for those working on TV and daily newspapers.
- It is noted that lack of time and lack of space have been the daily complaints of journalists since the profession began. However, if the research community can help the media by providing stories which are easy to understand – and thus save journalists time – and really newsworthy (see above) – it is fair to assume that they will be allocated more space.
- What seems to be clear is that **those in the media believe that their audiences are interested in science**, only 9% were unsure about this. However, for a quarter of respondents this interest is not taken into account at editorial level, where support is not always received for these types of issues.
- Journalists suggest that the challenge relates to information overload rather than to a lack of information. However, **volume of information can act as a significant barrier to identifying the key issues to be reported** given the complexity of scientific information and lack of available time in the pressurised media environment.
- However, on quality of information, there is a clear split which makes it difficult to draw overall conclusions. Half of the respondents indicated that issues such as lack of substantiated information, difficulties in popularising and complexity of information represented major constraints to their daily work, half felt no such constraint.
- **Future challenges are not significantly different from current challenges.** Looking to the future, one out of four respondents highlight difficulties in writing attractive media stories on topics that become more and more complex. Information overload (20%), lack of space in media for science (11%), and lack of time to verify data (10%) are also among the other main perceived challenges for the future.

Overall, the results indicate that the principal challenges in science coverage are related to the nature of the information which is provided to journalists and editors. Science information targeted at the media stems from multiple sources. But too often such information is provided out of context, or in a manner which is not interesting, not easily verifiable and not presented in a “story format”.

The result is that journalists find it difficult to work with science information and difficult to select the right information. Stories have to be translated into everyday language and sources have to be verified. This is a serious handicap in a market-place where little space is provided for science in the generalist media.

2.3 Utility of information sources among European media

- General science and research news coverage, new scientific evidence and the results of research projects are all reported to be very useful or useful by over 90% of respondents. It is interesting to note that **the media is not necessarily driven only by new scientific evidence, as just as many respondents indicated their interest in science coverage. This highlights the potential role for scientists as the interpreters of every-day information.** Meanwhile information on research policy is perceived as much less useful and this is reflected by the above result that

information from research organisations, NGOs and European Institutions are less used as sources of information.

- Despite the perceived usefulness of scientific information, highlighted above, **a significant 61% of media representatives indicate that they believe that there is insufficient coverage of European science and research.** Although it is important to understand that the media were not asked to comment on European funded research and are likely to have understood research happening in Europe. Furthermore, 55% source their information from the European Union.
- The most used information sources are - in decreasing order - scientific and peer reviewed magazines (62%), the internet (54%), news agencies (39%), contact with researchers (37%) and newspapers (31%). Companies, research organisations, NGOs, European Institutions, broadcasters and blogs are less widely selected and perceived as less newsworthy. However, when compared with views on the newsworthiness of information **there is a dichotomy between the fact that 82% of media respondents consider that scientists provide newsworthy information but only 37% are in contact with this group.**
- A further paradox highlighted by the results is the following: over 90% of the respondents consider that specialised science publications provide newsworthy information, and over 80% believe that researchers and scientists provide this type of information too. However, for both sources, circa 60% of the respondents report that the information they provide is difficult to understand and particularly with regard to scientists, who are perceived as difficult to access. Here news agencies play an important role. News agencies are perceived by more than eight out of every ten respondents (86%) as the source that is easiest to understand and to access. Information provided by the European Commission is perceived by many (60%) as reasonably easy to understand and access.

The sources regarded as providing the most newsworthy information are specialised science publications (95%) and researchers (82%). Journalists like to get as close to the original source as possible.

However, science publications and researchers are perceived by more than half of the journalists to be difficult to understand and difficult to access and this is reflected by the fact that a majority believe there to be insufficient coverage of EU science and research.

2.4 The media and the scientific community

- There is a wide consensus among journalists and media editors that when they are in contact with the scientific community the overall relationship between the scientific community and journalists/editors is productive (91%). However, the results also indicate that the relationship could be significantly improved if the media and the scientific community interacted more closely and more often.
- A few journalists call for a more in-depth change of attitude among researchers - highlighting the perceived lack of commitment to media communication among scientists as key obstacle for fluent science communication. Others call for increased institutional support from research organisations.

Journalists tend to concentrate on initiatives which they feel need to be undertaken by the scientific community. In particular they highlight:

- **the development of media handling abilities within the scientific community;**
- **the development of scientists' understanding of the way that media operate;**
- **increased availability of researchers to respond to media request;**
- **provision of media-friendly information and details on research results.**

3.0 SURVEY RESULTS

This section presents the results of the survey. It is organised around 4 themes:

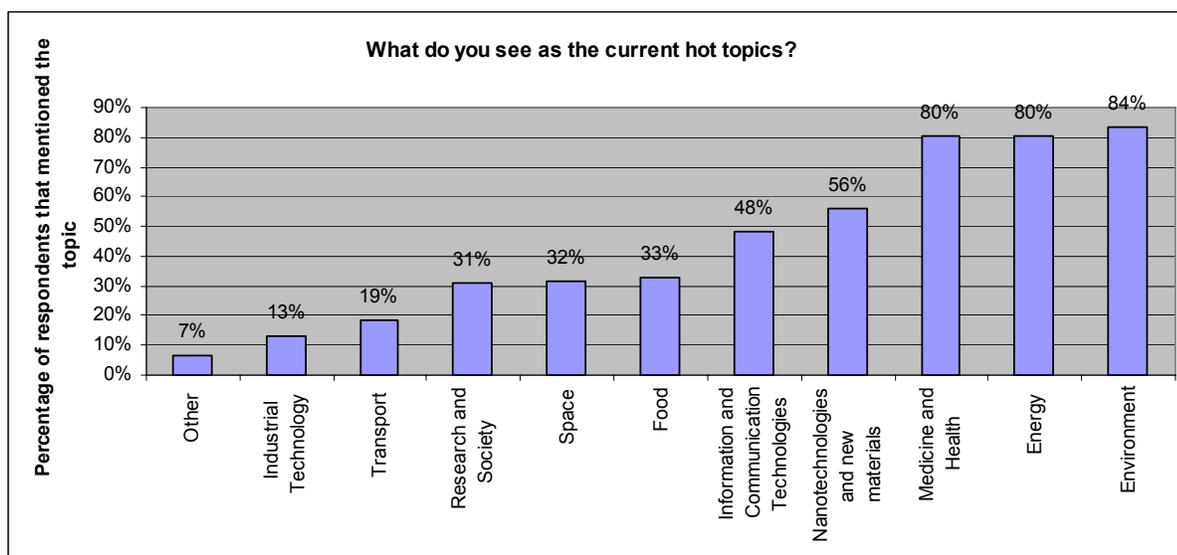
1. Communicating research: types of information and topics of greatest appeal to the media and the public.
2. Present and future challenges in communicating science and research.
3. Difficulties when talking about research: use and usefulness of media sources and coverage of European research.
4. Media and the scientific community: limits and constraints, interaction issues.

3.1 Communicating research: types of information and topics of greatest appeal to the media and the public

3.1.1 Themes and topics which are of most news interest

Respondents were asked to select from 10 pre-defined research areas³ and to indicate, which of these areas (if any) they considered to be of significant media interest. Journalists and editors were able to pick as many topics as were relevant. The results confirm that there are several subjects of significant media interest.

Figure 4 - Question 4: What do you see as the current hot topics?



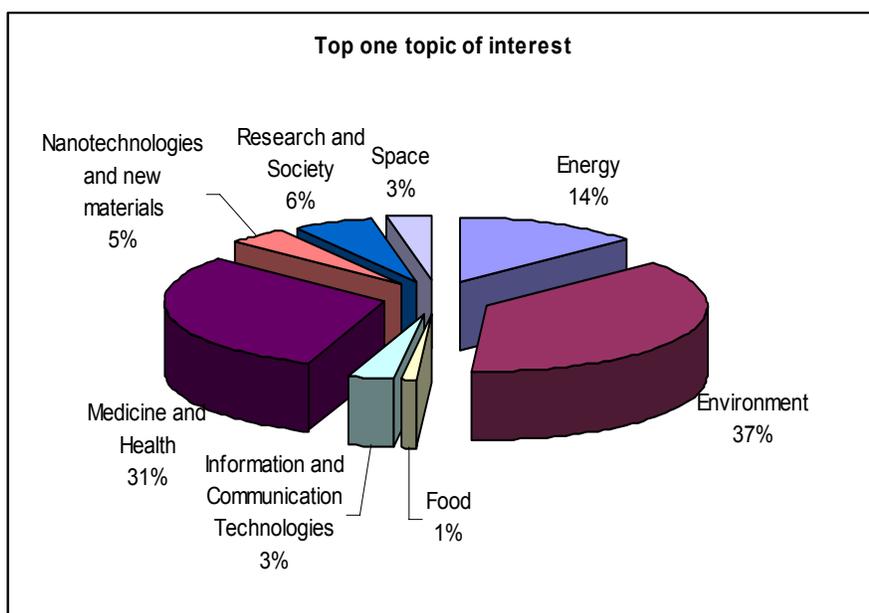
³ Scientific areas were chosen because they corresponded to the main topic areas of the 6th Framework Programme

On average each respondent chose six topics, and this result was similar for generalist and specialist correspondents. As highlighted in the above chart:

1. The most significant scientific issue is the environment as indicated by 84% of journalists;
2. In second place, medicine and health, and energy are considered to be of high interest to the media according to 80% of respondents.
3. Third and close fourth are nanotechnologies and new materials (56%), and Information and Communication (I&C) Technologies (48%).

In an attempt to dig deeper into the real issues of interest to the media, journalists and editors were also asked to indicate which topic they would select as their own hot topic in contrast to the topics that are considered to be of interest to the media. The below chart highlights that although the environment and medicine and health still come out on top, there are significant differences between the topics that journalists perceive to be of interest to their profession and those that they would themselves select. This confirms that although there are a number of topics that can be considered to be newsworthy, there is a tendency to report on a much smaller number of topics which are really the issues of the moment.

Figure 5 - Top 1 topics of interest



3.1.2 Information of greatest appeal to the media: identifying newsworthy stories

This was an open question. Journalists and news editors were asked to give their views and were not prompted to respond to set answers. The outcomes show that there are a number of fundamental elements that are required if scientific information is to be of news value. The main criteria may be summarised as: relevance; novelty; ease of understanding; proximity; being political and/or controversial; sensationalism and originality. To ensure coverage, information on science needs to fulfil a mix of these criteria; fulfilling one criterion does not make a story/report newsworthy.

The majority of respondents (65%) confirm that research information needs to be relevant for readers, journalists and society in general. Relevance is a key criterion and is assessed in terms of the current and potential impacts of the information in everyday life, and the importance for society in general. Science and research results that can be easily related to readers, that have a human angle and/or (re)present some social utility, or on the contrary present some negative impacts on society, are much more likely to receive media coverage than other research topics. In this respect, science that has direct and almost immediate “societal use” is of particular interest. The immediacy of information desired by the media is perceived to be a particular issue by scientists, given that many scientific developments and discoveries take place over a long time line, whereas the media needs to have latest news. Here, it is important to draw out the difference between reporting of scientific discoveries, which tend to be somewhat infrequent, and the potential of the media to make use of scientists to interpret everyday phenomena, and it is in this area that there seems to be greatest scope for developments in the relationship between the media and scientists.

Novelty – which is linked to the featuring of significant or breaking news with tangible impacts – comes next in the list of criteria, highlighted by over four out of every ten respondents (42%) as a necessary aspect to make a story newsworthy. Research stories need to tell something that was not previously known and which represent a significant scientific advance. The scientific value is, however, not sufficient to comply with the novelty criteria. Science results also need to have direct or potential significant impact on society or human nature. In this respect novelty and relevance are two media criteria that are closely interlinked.

Besides relevance and novelty, 15% of respondents highlight that news items or project results need to be understandable and meaningful for the public. Scientific results that cannot be simply explained are not likely to receive media coverage. In this respect being understandable is rather a criterion for exclusion from media of science stories rather than inclusion: if a science story may be explained in an understandable form it may eventually be covered and eventually not, but if a story cannot be easily explained it will not be covered.

The political importance and controversy, sensation and originality are the next criteria mentioned in each case by 11% of journalists and media editors. Several indicate that the project/news item should have a political angle or be of a controversial nature to be attractive to the media. A political angle ensures that diverging views can be expressed. Meanwhile, the newsworthiness of original, sensational, provocative stories means that they are able to “touch” the readers. The more sensational, surprising or entertaining the story is, the more likely it is to receive media coverage, and the more likely it is to get to the front page in generalist media.

Proximity was also mentioned by 10% of respondents. The connection of a research story to the country in which the media is situated is of importance to many respondents, both in southern and central Europe as well as in the EU-12. This connection may be described in terms of (research) participants (from a specific country or region) or in terms of the subject of the research (comparison between countries or national focus of the research). In all cases it is the link with the country or the region that contribute to ensuring the relevance of a story.

The difficulty for scientists is that while they are able to highlight issues that are novel, original and relevant to the public (although a parallel study with scientists suggests that this latter aspect can in fact be tricky) it is difficult to fulfil the sensational and controversial criteria, and scientists are very wary of their information being presented or misrepresented in this way. How to address this issue is not clear from this survey, but greater categorisation and segmentation of scientific information and type of news story may be a helpful step to identifying potential solutions.

Other criteria, such as trustworthiness, understood as access to reliable and verifiable data, or access to visual material and scientific value are mentioned by fewer editors and journalists and therefore appear less fundamental to ensure the newsworthiness of research projects/stories. However, when prompted in a later question journalists do highlight that it can be difficult to substantiate the results. This is a significant gap in the relationship between the media and scientists. Scientists highlighted that the establishment of trust with the media is a basic need to allow them to enter into the science media dialogue.

ANALYSIS BY MEDIA

- Most journalists agree that the most interesting/topical 'hottest' scientific topics are the environment, followed by medicine and health, and energy. There are no significant differences to report by media and this is the same for the generalist and specialist press, who tend to cover a range of topics beyond the top three indicated including nanotechnologies, space, research and society and so on.
- Employees within TV stations seem to have a particular interest in the environment and climate change as the topic that they would select if required to choose one scientific area to report on. This topic is also the choice of preference for news agencies who also select medicine and health as their first choice.
- In addition to the key topics already highlighted (environment, energy and so on), those working in radio are particularly interested in research and society and this can be understood due to the need for person-to-person discussion of issues.
- The criteria outlined by journalists as being required to ensure the newsworthiness of a news item/story are common across the different media. This confirms that what makes a story for the TV also makes a story for the written media. The obvious difference is the need for images and footage for the audio-visual media.
- What is news is a commonly understood concept for journalists, although the study carried out with scientists at the same time as this survey suggests that these criteria are not commonly held by scientists. There is a clear gap to be filled.

3.2 Present and future challenges in communicating science and research

3.2.1 Current challenges to media reporting on science

When reporting on science, the journalists and editors who took part in the survey highlight that they experience different types of challenges. There are those challenges, which relate to the journalistic context within which respondents work (lack of time, lack of media space, and lack of editorial support); there are also challenges related to the quantity and quality of science information available. The perception of the importance of these challenges differs significantly among the journalists surveyed.

Practical constraints

Survey results indicate that whilst lack of time is mentioned by more than half of respondents (56%) as the constraint most frequently met when covering science and research, only 17% consider it represents little or no constraints to their daily work.

Views are more divided when consulted about space constraints. While more than 40% of respondents indicate that lack of space represents a major or large constraint in their everyday work on media reporting on science, a similar percentage either perceives it as a small constraint or does not perceive it as a constraint at all. The remaining 17% of respondents indicate that lack of space represents some constraint.

A clear majority disregard the idea that coverage suffers from lack of interest from their readers/viewers, less than one in ten journalists consulted (9%) express concerns about this. However, it is noted that a quarter (25%) consider lack of support from editorial level as a large or major constraint.

These results are significant. They highlight that readers, viewers and listeners are interested in science-driven information, but that there are a number of in-house constraints that are restricting the opportunities for the take up of this type of news by the media and these include the agreement of senior staff to include this information in their programmes, newspapers, and articles. It will be interesting to dig deeper to understand why this is particularly the case and what can be done to change this situation.

Challenges due to the quantity of science information available

Journalists and media editors are divided on the issue of information overload. Whereas nearly one third of respondents to the survey (31%) believe that information overload represents a major/large constraint on their everyday work in the field of science and research, a slightly higher percentage (40%) does not consider this to be a constraint.

On the other hand, lack of information is only perceived to be a major/large constraint to 10% of respondents. The majority however (58%) perceive few or no constraints related to this particular aspect.

Information overload is a general issue for media, both specialised and general media. Nevertheless, it appears that information overload of science information is a particular challenge. Science is becoming increasingly complex and specialised. As a consequence it becomes increasingly difficult to

overlook all new developments and to identify the key agenda setting science stories while time is increasingly becoming scarce.

Responses to this question highlight that there is still a need for more, better information on science and research and how to access this information remains a constant challenge.

Challenges due to the quality of science information available

Journalists and media editors have differing views on the significance of the challenges from the quality of information. Unverified or unsubstantiated information is the biggest concern, with nearly a third of respondents indicating that it represents a major challenge to their work and just over a quarter (26%) highlighting that it represents some challenge. This is a key issue which prevents journalists from doing their job. Meanwhile, the study of scientists' views on communicating with the media highlights an interest and perceived need/requirement to communicate. How to put journalists in touch/make scientists available to verify scientific news is not indicated by the outcomes of this survey but is an issue that clearly needs to be addressed.

For just over half of respondents, difficulties in popularising scientific information and the complexity of information available represent little or no challenges. However for a considerable group –over 40%– this issue represents a constraint to their reporting of science. The fact that scientific news is competing with a range of other potential news items, which may well be immediately understandable and quickly summarised and reported, needs to be taken into account. This type of results suggests that when reporting scientific information there may be a need to gloss over the details because it is relatively difficult to understand the underlying facts and because there is insufficient time to research these properly.

3.2.2 Future challenges to media reporting on science and research

As an additional question, journalists were asked to comment in their own words what they saw the future challenges to media reporting on science to be. To a large these are very similar to the current challenges that are outlined above. Respondents highlight four main issues:

- Attractive translation/story writing;
- Information overload;
- Lack of space for science and research in the media, and
- Unverified/unsubstantiated data.

The issue of translation/story writing is among the challenges most frequently mentioned by 40% of journalists and media editors, the key future challenge to media reporting of science. Ensuring attractive interpretation refers both to making the story attractive to the audiences and guaranteeing that it is easily understood. Research today is highly complex and is expanding significantly into areas that are not easy to communicate in simple terms (for example in relation to nanotechnology, particle physics, and gene therapy).

As with current challenges, information overload comes next, mentioned by 20% of respondents concerned about the difficulty of finding relevant and important stories. In third place, 11% of respondents indicate that space is the major future issue. For a minority, winning space in the written or audiovisual media and lack of understanding of the importance of science and research among

editorial staff will continue to be key issues. Respondents also highlight the lack interest for more serious science coverage and the need to relate science stories to political issues in order to “sell” these in house. Lack of verifiable data and consequently lack of credibility of scientific news as well as lack of time to check the quality and correctness of data will also be challenges in the future.

Few editors and journalists highlight the development of media as a key challenge. Only some 5% percent of respondents indicate that they perceive the development and mutation of modern media as a challenge to science reporting. Amongst those pointing a media development as a key issue it is the fusion of electronic and audiovisual media that is perceived as a key challenge. The communication flow needs targeting to the different media (audio - vision - online and mobile) at the same time and in their specific way of communicating. The importance of the development of media and new media forms and its impact for science reporting is an issue that needs further investigation.

ANALYSIS BY MEDIA

- Lack of space in media is of more concern for respondents working in TV and general newspapers. Though to a lesser extent, respondents in these groups also highlight more often than others that lack of support at editorial level and lack of interest among their audiences are significant challenges.
- Not surprisingly, lack of space and of support at editorial level is not perceived as an issue by those working for specialised magazines.
- Lack of time is perceived as the main constraint by employees working for news agencies and TV.
- Information overload and complexity are more frequently brought up by employees working in news agencies and radio.

3.3 Difficulties when talking about research: use and usefulness of media sources and coverage of European research

3.3.1 Use and usefulness of media sources

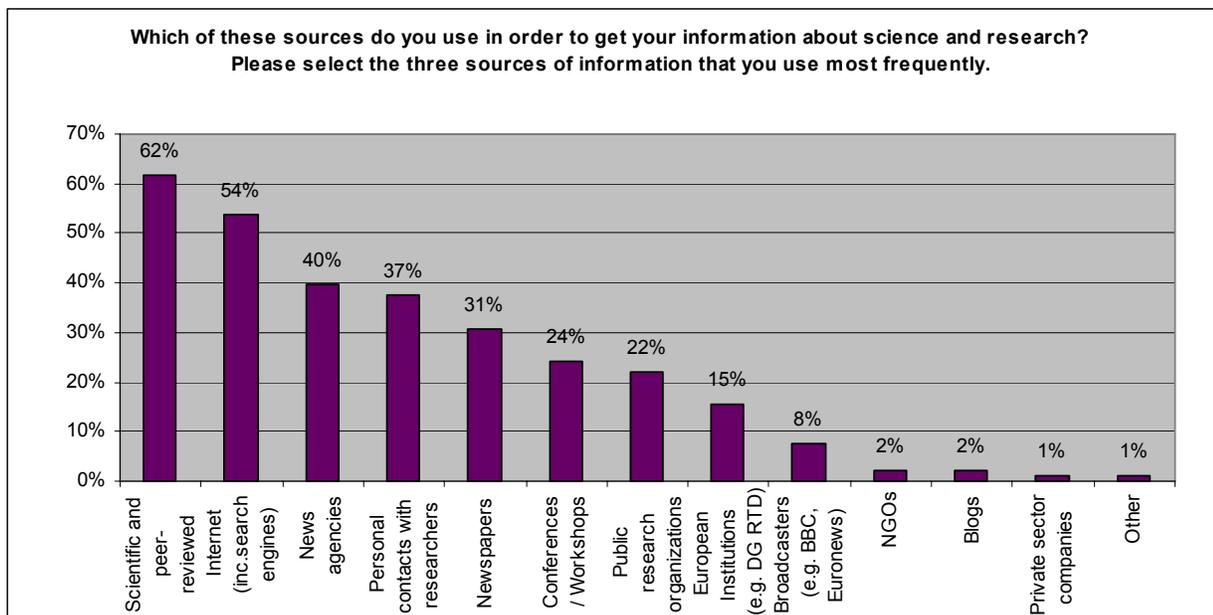
Journalists and media editors surveyed indicate that they look for information sources providing either a story, data that is easily accessible, or high-quality scientific results. Information from policy organs and institutions are less attractive and are accordingly less used.

Information sources consulted

Editors and journalists were asked to select from 12 pre-defined information sources the three sources they used the most in order to get information about science and research. The most used sources of information is scientific and peer-reviewed magazines, as confirmed by 62% of respondents. The internet, including search engines, is mentioned in second place by 54% of respondents. Personal contacts with researchers, news agencies and newspapers are highlighted in average as frequently consulted sources of information by one out of every three respondents.

Among the less widely consulted sources, journalists and media editors bring up conferences and workshops (24%), public research organisations (22%) and European Institutions, including DG Research (15%). Blogs, NGOs, broadcasters and private companies are mentioned in average by less than one out of every ten respondents.

Figure 6 - Q 1 Which of these sources do you use in order to get your information about science and research? Please select the three sources of information that you use most frequently?



Usefulness of information types and sources

Information providing science and research news coverage is unanimously perceived to be useful (98%). In a similar fashion, new scientific evidence (94%) and the results of research projects (93%) are also considered as either very useful or useful by nearly all respondents.

Information on research policy is perceived as much less useful. On average less than half of media respondents indicate that they find policy documents and position papers from industry, NGOs and think tanks useful for their everyday work. Thus although there is some interest among journalists and editors in information of a more political nature it is significantly less widespread than interest in research results and research news in general.

Newsworthiness of information sources

Considering the interest in research evidence and research results, it is hardly surprising that specialised science publications and researchers are considered to be the sources providing the most newsworthy information. Nearly all respondents (95%) strongly agree that specialised science publications provide newsworthy information, and more than eight out of every ten participants to the survey (82%) are of the opinion that the information provided by researchers is newsworthy. At a slightly lower level, news agencies are perceived as providers of newsworthy information for 80% of respondents.

More than two thirds of respondents (70%) agree on the newsworthiness of the information provided by the European Commission, although this source of information is not as appealing as that provided by specialised magazines, researchers and news agencies. Meanwhile, information from company and organisation announcements is perceived as least newsworthy in comparison, with less than half of media respondents (49%) considering this source to provide valuable news.

Extent that information sources are understandable

Although science publications and researchers are perceived to provide newsworthy information, more than half of respondents (55%) find these sources difficult to understand. On the other end, news agencies are considered by more than eight out of every ten respondents (85%) as the source providing information that is the easiest to understand. Information from the European Commission and from companies' and organisations' announcements stands in the middle with nearly six out of every ten respondents in average considering the information stemming from these sources as relatively easy to understand.

Accessibility

News agencies again score well in terms of accessibility, with almost 90% of respondents in agreement that these provide easy access to information. Information from company and organisation announcements comes next, with nearly two thirds of respondents (65%) recognising their easy access. Slightly below, information from the European Commission is perceived by more than six out of every ten respondents (62%) to be easy to access. Researchers (59%) and to a lesser extent specialised science publications (45%) are highlighted as the most difficult sources to be accessed.

The results on use and usefulness of information sources and the relative attractiveness of information types point at contrasting conclusions.

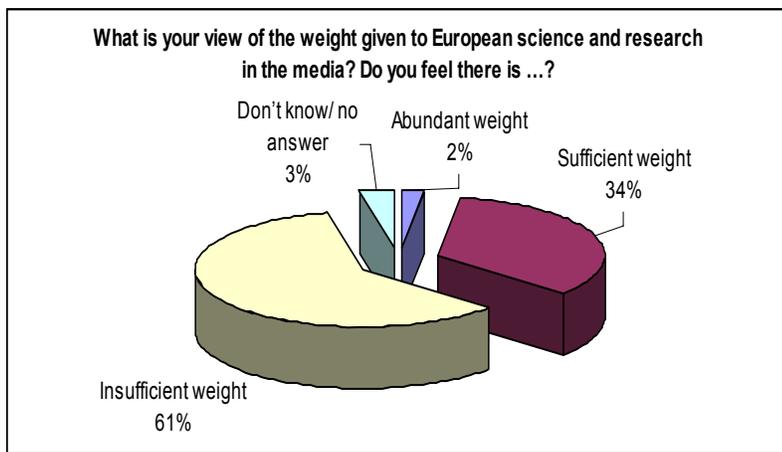
Scientific information sources (i.e. specialist research publications and researchers) are perceived as providing highly newsworthy information and belong to the information sources most used. The use of these sources increases the likeliness of quality coverage as well as a focus on subjects of the highest scientific value.

At the same time it is of concern that the scientific sources are perceived as difficult to access and difficult to understand. This is particular an issue considering media professionals time constraints. If scientific sources are difficult to understand and to access, sources providing ready to use information become relatively more attractive, provided that these meet the news worthy criteria highlighted earlier in this document. In this regard, there is a need further investigate how scientific sources, considering their news potential can be better exploited and to what extent intermediaries (including internet services) can facilitate the media process.

3.3.2 Use of European sources of information

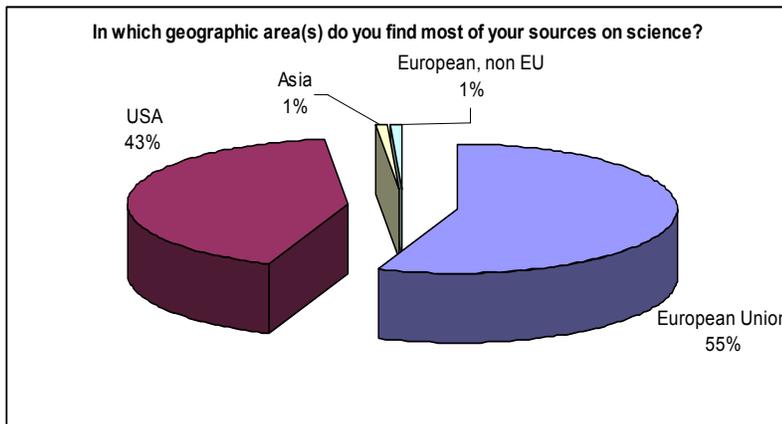
As highlighted by the two charts below, although the majority of respondents (61%) feel that European science and research is not sufficiently covered by the media, European sources of information on science and research are not systematically used by journalists and news editors.

Figure 7 - Q 7 What is your view of the weight given to European science and research in the media? Do you feel there is...?



When prompted on the origin of the sources used, an important group of respondents (45%) indicate that their main sources of information on science and research are non-European – with a clear preponderance of sources stemming from the United States. Slightly more than half of respondents (55%) indicate that they find most of their sources on science in the European Union. Whether this is a problem is not indicated by this survey, but it is suggested that this result reflects the international nature of science.

Figure 8 - Q 2 In which geographic area(s) do you find most of your sources on science?



ANALYSIS BY MEDIA

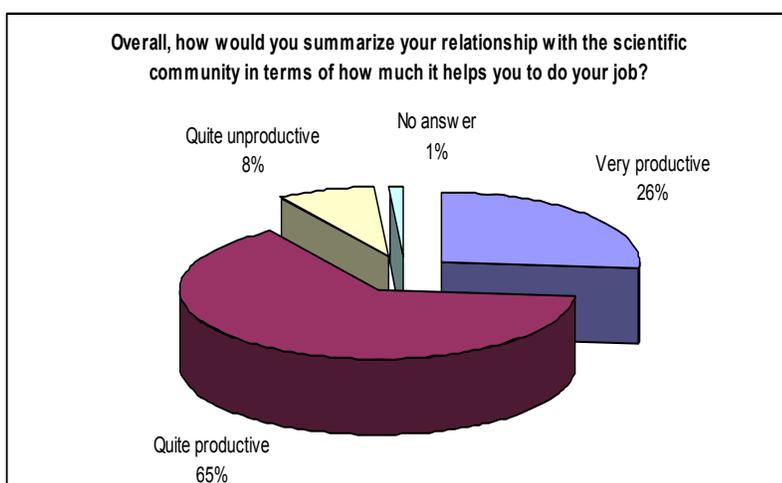
- Respondents from news agencies tend to collect scientific information from conferences, workshops and science magazines more regularly than other groups. In contrast TV reporters tend to favour more generalist sources such as news agencies, newspapers and internet.
- Whilst respondents from news agencies tend to evaluate scientific information more positively than other groups, they are also more likely to express negative views on the scientists' accessibility and their capacity to express themselves in an understandable language.
- A large majority of TV and radio correspondents have a negative opinion on scientists' accessibility and their capacity to express themselves in an understandable language. This is interesting considering that scientists expressed their lack of ease with these media in the parallel survey carried out.
- Respondents from news agencies are the only group where a clear majority considers that European research is sufficiently covered. At the same time, respondents in this group are more likely to consult non-European sources on science.

Respondents from TV and radio consider more frequently than others that European science is not sufficiently covered.

3.4 Media and the Scientific Community: limits and constraints, interaction issues

Survey results indicate that the overall relationship between the scientific community and journalists/editors is perceived to be productive by more than nine out of every ten respondents (91%). This suggests that on a human level, when the media and scientists are in contact this interaction is quite productive. However, this result must be taken in the context of earlier results which indicate that although the media see information from the scientific community as of high importance, they find this information to be complex and difficult to understand and consequently it is more difficult to use in a highly time-pressured environment. Results also indicate that the relationship could be improved if media and the scientific community paid more attention to each other.

Figure 9 - Q 10 Overall, how would you summarize your relationship with the scientific community in terms of how much it helps you to do your job?



In an open question journalists and editors were asked to give their views on what could be done to improve the way of working with the scientific community. The responses received highlight various initiatives that could be taken. While most of the suggested solutions demand efforts from the scientific community, there are some ideas that involve the media and some which focus on both, these are indicated below.

Changes required by the scientific community

Journalists and editors identify a number of concrete efforts that they suggest could be undertaken by the scientific community and researchers in particular. These actions are focused in particular on:

- the development of media competences within the scientific community;
- the development of scientists' understanding of the way that the media operates;
- increased availability of researchers to respond to media requests; and
- provision of media-friendly information and details on research results.

Many respondents highlight that the media competence within the scientific community is low. Researchers are perceived as not knowing how to communicate their science to a wider audience and having difficulties at describing the context and implications of the research for wider audiences in

layman's terms. Media training is suggested as fundamental to address this challenge. Related to lack of media competence is the perception that scientists do not understand the way that the media operates. They do not understand the urgency and the speed of media, and more generally the media criteria that govern the selection of newsworthy stories. Again it is suggested that media training may help address this issue. As would be expected there was no mention of the scientific method and the impact that this has over the speed with which scientists are able to respond. This was a fundamental concern to scientists highlighted in the qualitative survey carried out by the evaluation team. The lack of awareness confirms once again the way that the media and scientists are working in completely different contexts and find it difficult to understand the underlying reasons why each group suffers from a particular set of constraints.

A third important issue is the lack of availability of researchers. Many respondents consider researchers approach to media as reactive or in some cases even virtually non-existent. Scientists are criticised for lack of commitment to communicate and for allocating too little time for media contacts. Increased institutional support including support and encouragement to researchers from management and of organisations financing research as well as increased attention to outreach activities (for example through inclusion of an awareness raising criteria in evaluations) may help address this issue.

Some respondents also suggest that press officers within research institutions can help facilitate communication and a few voices also call for EU research stories from the Commission on science research findings rather than policy and administration.

A final issue highlighted is the lack of available media-friendly information and details of research results. Some respondents highlight that insufficient information is available and that it is difficult to receive comprehensive data on research results. Providing more information in an accessible format could be facilitated by better understanding of media, better communication skills and more institutional support. Overall access to useable information and media savvy scientists are limiting the take up of the scientific perspective in reporting.

Changes required by the media

It is interesting to note that journalists and media professionals have many more suggestions as to what scientists should do rather than what they themselves could do to increase take up of science and research. Respondents mainly point at allocation of increased time as a key solution to improve cooperation. There is consensus that lack of time is the main obstacle to improved cooperation. It should be remembered that a number of other issues were also highlighted earlier in the survey.

Addressing the issue of lack of time is difficult. In this regard further investigation is required especially on how to facilitate cooperation between the media and scientists in a way that ensures an optimal use of time on both sides.

Changes required on both sides

Respondents who indicate that efforts need to be undertaken jointly mainly provide general suggestions on increased cooperation. There is recognition, that media reporting is hampered by lack of discussion and consultation on key issues. Working relationships could be improved through increased consultation on points of disagreement and more accurate media reporting.

There are also a few voices that highlight that the problems related to media coverage of science are due principally to lack of public interest in scientific topics. These respondents highlight that more

needs to be done to interest the general public. While media can play a role it needs stronger support from the scientific community.

ANALYSIS BY MEDIA

- Respondents working for specialised newspapers and radio tend to evaluate more positively their relation with scientists. Employees within news agencies tend on average to be slightly more negative.
- There are no significant differences in responses by media sector regarding the efforts that could be undertaken to improve the relationship between scientists and the media.

4.0 MAIN CONCLUSIONS

- There is fertile ground to grow the coverage of science in the media. Science underpins every aspect of life and this survey highlights that the media understand the value of scientific news and believe that the scientific community has **a story** to tell and that their readers are interested in this story. This message is loud and clear from all sectors of the media (TV, newspapers, agencies, specialist magazines and on-line media) and is not limited to the specialist scientific media. Despite this, a majority believe that there is not enough coverage of EU science and research.
- Journalists are very interested in **good science stories** but this does not mean that the presentation of scientific results makes a good story. The strongest interest is currently in environmental, energy and health and medical issues. There appears to be less interest in the range of other scientific options put forward, although the key factor is relevance to publics and it may be that the three issues highlighted are either currently of more concern or are easier to relate to target audiences.
- There is an overload of scientific information that cannot be properly used or cannot be used at all because it has **not been adapted** to what the media needs. The media are not receiving information in a format that they can quickly and easily digest and this is a very significant problem. Science stories will not be used, or will be featured less prominently, if they are overloaded with complex information which is not easily useable or translatable into everyday language. Lack of relevance is a key issue and lack of understanding of what makes a good story means that because there is limited media space for science, there is less coverage overall, or a concentration on “sensationalist” stories which are easy for the media to use, but of lower quality. This perpetuates scientists’ fears that data is misrepresented by the media.
- Comparison with the parallel survey of the research community suggests that there is a wide gulf between **media perceptions** of scientists’ attitudes to the provision of information and those expressed by the scientific community. The media suggest that it is scientists who need to change their approach and be more proactive, because they are thought to have a lack of commitment to providing information for the media. This is reportedly reflected by a lack of availability, responsiveness and efforts to understand the media and the information that it needs. The comments provided do not take into account the scientists’ perspective or context.
- Direct **scientific sources** are much more valuable than reported second or third hand information. The best-rated sources for scientific information are scientific journals and direct contacts with scientists. These sources are perceived as providing the most newsworthy information and their use increases the likelihood of good quality coverage. However, despite this high interest, scientific information is thought to be complex, scientists are perceived to be difficult to access because they are not sufficiently available and responsive to media requests.
- The media values contacts with the scientific community. Most senior journalists and editors confirm that when there is collaboration between the media and researchers the outputs are useful to their work and the relationship between the two professions is productive. The problem is the **lack of relationships** between scientists and the media as well as the lack of natural opportunities for these two groups to meet. Although scientists are a potentially useful source, there is relatively limited direct contact and this leads to significant concerns about the credibility of unsubstantiated information. Those in TV and radio seem to have the least contacts.
- In addition to the lack of opportunities that bring together the media and the scientific community the reasons for the mismatch in needs and expectations between the two professions are

numerous, including the lack of high profile science personalities and that leading academics are unknown by society but the media consider that there are more improvements to be made by scientists than there are within the media profession. The scientific community is not programmed to court the media and there are a number of **changes suggested** including: training to develop media competences, increased availability and developing media friendly information. Whilst these key issues are highlighted these points can only be addressed by the scientific community and if and how this is possible goes beyond the media's competence.

- There is potential for more effective cooperation between the scientific community and the media, because this survey highlights that there is a strong interest from the media and the parallel survey conducted of the scientific community highlights a similar picture. An overwhelming 91% of respondents to this survey reported that when they work with the scientific community this contact is productive. Therefore, it can be concluded that if the media is able to work more closely with the scientific community this will lead to **better coverage** of science. However, how to facilitate this improved and increased exchange is not identified and it is suggested that this is an important area for further discussion and action between the leaders of these two communities.

ANNEX I - SURVEY

1. Which of these sources do you use in order to get your information about science and research? Please select the three sources of information that you use most frequently.

	1	2	3	
News agencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Private sector companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Public research organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
NGOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
European Institutions (e.g. DG Research)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scientific and peer-reviewed journals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Broadcasters (e.g. BBC, CNN, Euronews)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet (including search engines)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Personal contacts with researchers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Conferences / Workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Don't know/ no answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Others – Please specify:

2. In which geographic area(s) do you find most of your sources on science?

European Union

USA

Asia

Other (please specify)

3. To what extent are the following types of information on science and research useful for your everyday work?

	Very Useful	Useful	Not Very Useful	Not Useful At
All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New scientific evidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Results of research projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Policy documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Position papers by industry, NGOs and think tanks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science and research news coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Others – Please specify:

4. What do you see as the current “hot topics” in science and research?

- Environment
- Medicine and Health
- Space
- Food
- Energy
- Nanotechnologies and new materials
- Research and Society
- Transport
- Information and Communication Technologies
- Industrial Technology
- Don't know/ no answer
- Other (please specify)

5. Please indicate which you regard as the top three among these topics

1.
2.
3.

6. What are the criteria which makes a science story/project newsworthy to you?

7. What is your view of the weight given to European science and research in the media? Do you feel there is ...?

- Abundant weight
- Sufficient weight
- Insufficient weight
- Don't know/ no answer

8. Please identify which of the following challenges represents a constraint on your everyday work in the field of science and research? Please rank from 1 to 5, where 1 is not a constraint at all and 5 is a major constraint.

	1	2	3	4	5
Major constraint	Not a constraint at all				
Lack of time	0	0	0	0	0

Lack of information	0	0	0	0	0	0	
Information too abundant (overload)	0	0	0	0	0	0	0
Information too complex	0	0	0	0	0	0	
Difficulties in vulgarizing	0	0	0	0	0	0	
Information not verified/substantiated	0	0	0	0	0	0	0
Lack of space in your publication for science stories	0	0	0	0	0	0	0
Lack of understanding/support for science at editorial level in your publication	0	0	0	0	0	0	0
Lack of interest from your publication's readers	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	

Other - Please specify:

9. How much do you agree or disagree with each of the following statements regarding the provision of information about European research?

"News Agencies..."

	Agree Strongly	Don't know/ no answer	Agree	Disagree	Disagree
Strongly					
Provide newsworthy information	<input type="radio"/>				
Are easily accessible	<input type="radio"/>				
Are easy to understand	<input type="radio"/>				

"Companies and organizations' announcements..."

	Agree Strongly	Don't know/ no answer	Agree	Disagree	Disagree
Strongly					
Provide newsworthy information	<input type="radio"/>				
Are easily accessible	<input type="radio"/>				
Are easy to understand	<input type="radio"/>				

"The European Commission..."

	Agree Strongly	Don't know/ no answer	Agree	Disagree	Disagree
Strongly					
Provides newsworthy information	<input type="radio"/>				
Is easily accessible	<input type="radio"/>				
Is easy to understand	<input type="radio"/>				

"Specialized science and research publications..."

	Agree Strongly	Don't know/ no answer	Agree	Disagree	Disagree
Strongly					
Provide newsworthy information	<input type="radio"/>				
Are easily accessible	<input type="radio"/>				
Are easy to understand	<input type="radio"/>				

"Researchers and scientists..."

	Agree Strongly	Don't know/ no answer	Agree	Disagree	Disagree
Strongly					
Provide newsworthy information	<input type="radio"/>				
Are easily accessible	<input type="radio"/>				
Are easy to understand	<input type="radio"/>				

"Internet (including search engines)..."

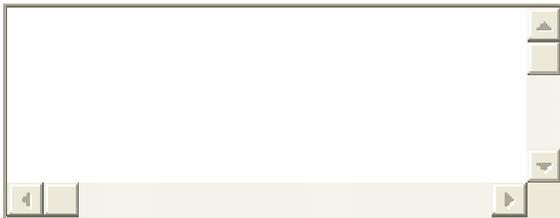
	Agree Strongly	Don't know/ no answer	Agree	Disagree	Disagree
Strongly					
Provides newsworthy information	<input type="radio"/>				
Is easily accessible	<input type="radio"/>				
Is easy to understand	<input type="radio"/>				

10. Overall, how would you summarize your relationship with the scientific community

in terms of how much it helps you to do your job?

- Very productive
- Quite productive
- Quite unproductive
- Completely unproductive
- Don't know/ no answer

11. In your view, how can that relationship be improved?



12. What do you see as the main challenges facing you in reporting on science and research in the future?



13. Last Name

14. First Name

15. E-mail contact address

16. Gender

- Female
- Male

17. Age

- 18 - 24 Years Old
- 25 - 34 Years Old
- 35 - 44 Years Old
- 45 - 54 Years Old
- 55 - 64 Years Old
- > 65 Years Old

18. Nationality

- Austrian
- Belgian
- Bulgarian
- British
- Cypriot
- Czech
- Danish
- Dutch
- Estonian
- Finnish
- French
- German
- Greek

- Hungarian
 - Irish
 - Italian
 - Latvian
 - Lithuanian
 - Luxembourger
 - Maltese
 - Polish
 - Portuguese
 - Romanian
 - Slovakian
 - Slovenian
 - Spanish
 - Swedish
 - Other (please specify)
-

19. Which of the following best describes where you work?

- General daily newspaper
- Specialized daily newspaper
- General Magazine
- Science magazine
- Television
- Radio
- News agency
- On-line Press
- Other (please specify)
-

20. Name of the organization where you work

21. Which of the following best describes your position?

- Staff Editor
- Staff Reporter / Correspondent
- Free-lance Editor
- Free-lance Reporter / Correspondent
- TV / Radio producer

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