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CLIMATE CHANGE AND DEVELOPMENT

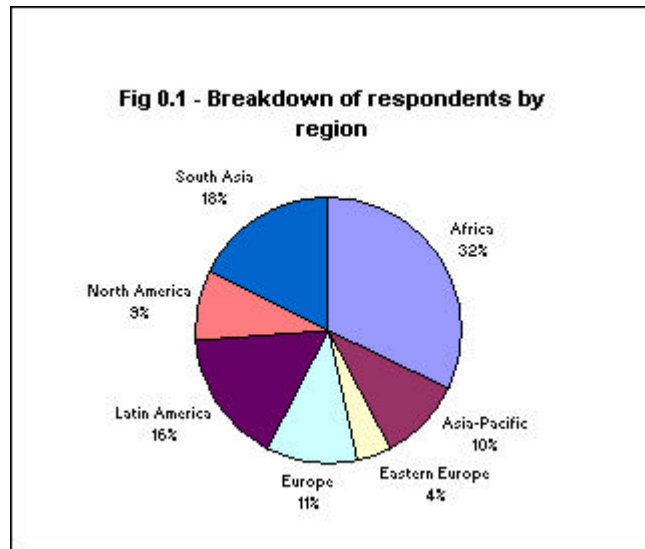
CONSULTATION ON KEY RESEARCHABLE ISSUES

SECTION 7: LEAD SURVEY
SECTION 7.1. OVERVIEW
TREVOR REES

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OVERVIEW

We received a total of 194 full responses to our survey.



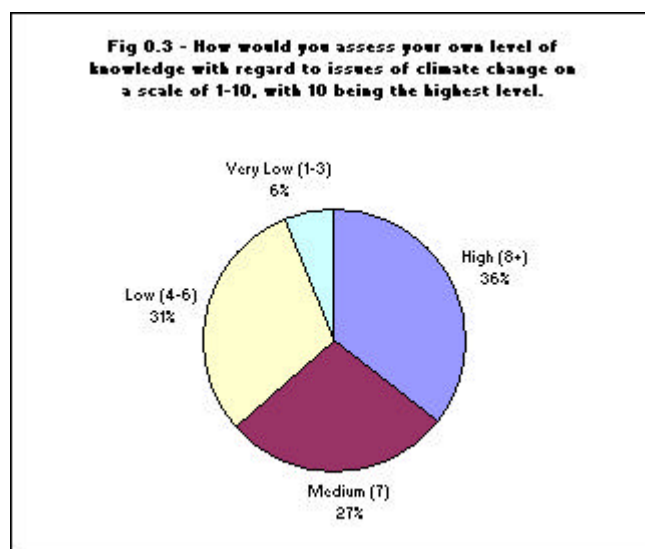
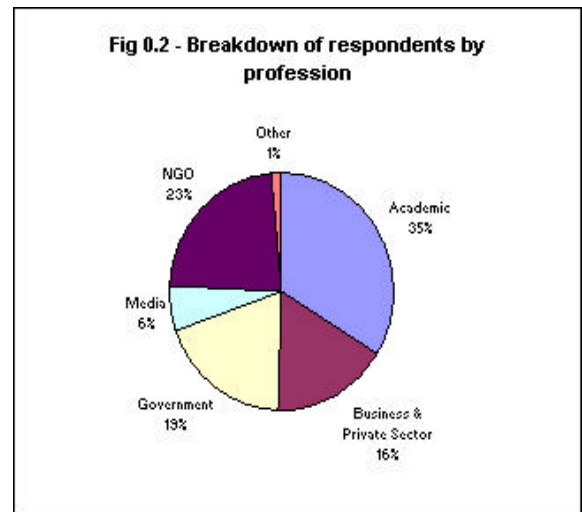
Profession

147 respondents gave their profession. A very large 35% of our respondents came from Academia, with Business and Private Sector and NGOs and Government also well represented. Media stakeholders were not so well represented.

Region

Of the 140 respondents who stated their region nearly a third (32%) were from Africa (45 respondents). Southern Asia (25 res.) and Asia-Pacific (14 res.) made up a further 28%, the Americas 25% and Europe 15%.

Of all areas Eastern Europe was probably least represented.



Knowledge

We asked the respondents to assess their own level of climate change knowledge on a scale of 1-10.

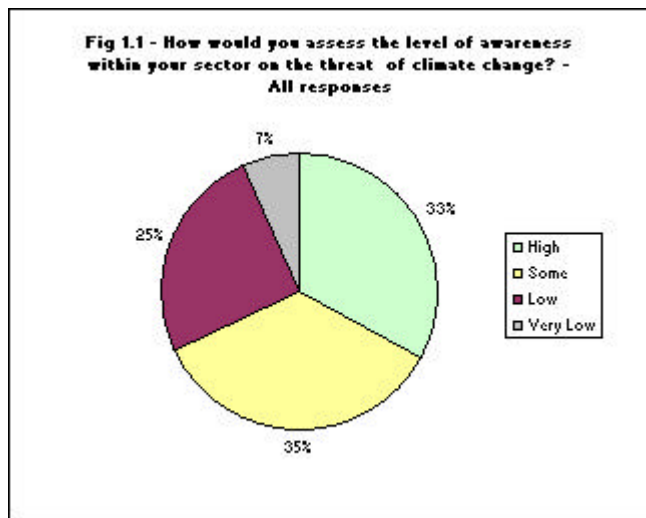
Of the 146 a substantial 36% told us that considered their knowledge to be an eight or above, with another 27% assessing their knowledge as seven – the average. 31% said between four and six while only 6% rated their knowledge of climate change three or less.

QUESTION 1 - HOW WOULD YOU ASSESS THE LEVEL OF AWARENESS WITHIN YOUR SECTOR ON THE THREAT OF CLIMATE CHANGE?

Overall Rating

We asked respondents to assess the level of awareness within their sector stating whether it was High, Some, Low or Very Low. 193 responded.

Out of 193 respondents approximately one third rated awareness as high (64), one third rated some (67) and one third opted for low (49) or very low (13).

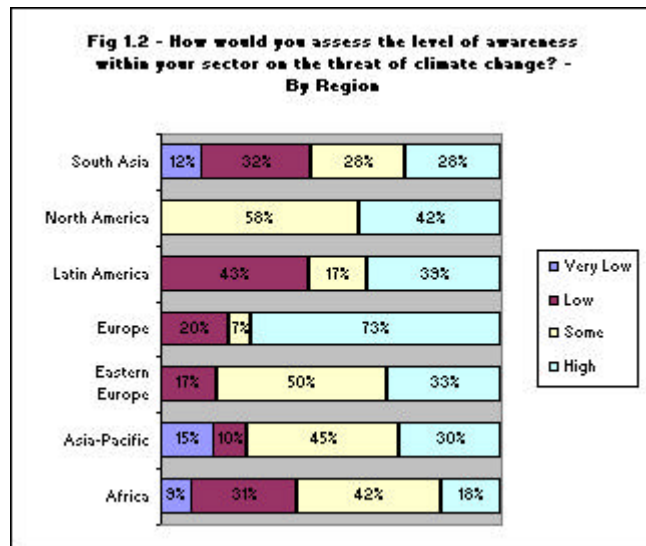


Mean rating ranked within region

We have broken down respondents' assessment of CC awareness by the region they are based in.

South Asia has a ratio of awareness's that roughly approximates the overall view with slightly more at the low (32%) or very low end (12%).

Respondents from North America all indicate either high awareness in their sector (42%) or some (58%).



Latin America shows no respondents rating Very Low Awareness, but a large proportion selected low (43%) However, the region still had an above average number of High responses (39%).

Europe's respondents reported a very high proportion of High Awareness in their sector. With far fewer than average measuring awareness as some or none and no very low.

Eastern Europe showed a similar trend except the high proportion was split between high and some.

Asia Pacific shows the highest proportion of Low Awareness of all the regions (15%), but still reflects an average amount of high awareness (30%)

Africa has an only slightly above average amount of very low and low levels of awareness - but this would be expected as they contribute a large proportion of all responses, however the region also shows the lowest overall number of High responses at only 18%.

The overall trend here is respondents from North America and Europe indicating there are higher levels of awareness in their sector than in any other region.

Mean rating ranked within Profession

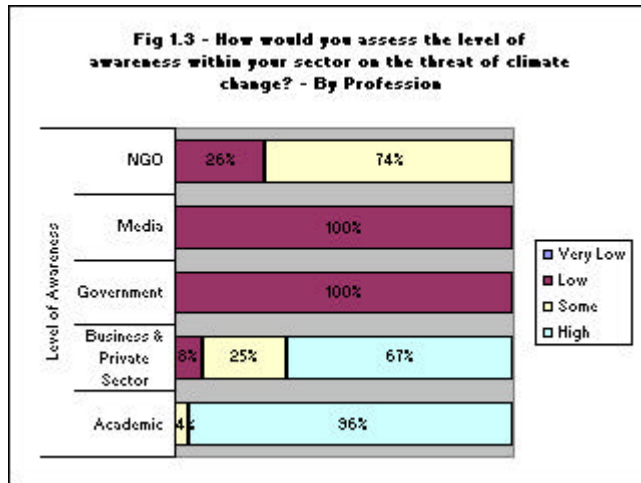
There are very significant differences when we breakdown the answers to Question 1 by the profession of the respondents.

All the professionals from Media (9) and Government (28) state the awareness in their sector to be Low.

In stark contrast, 96% of Academics (48) put the awareness in their sector as High.

Also of some interest is the high number of Business and Private (16) sector representatives who say that say awareness in their sector is High – 67%.

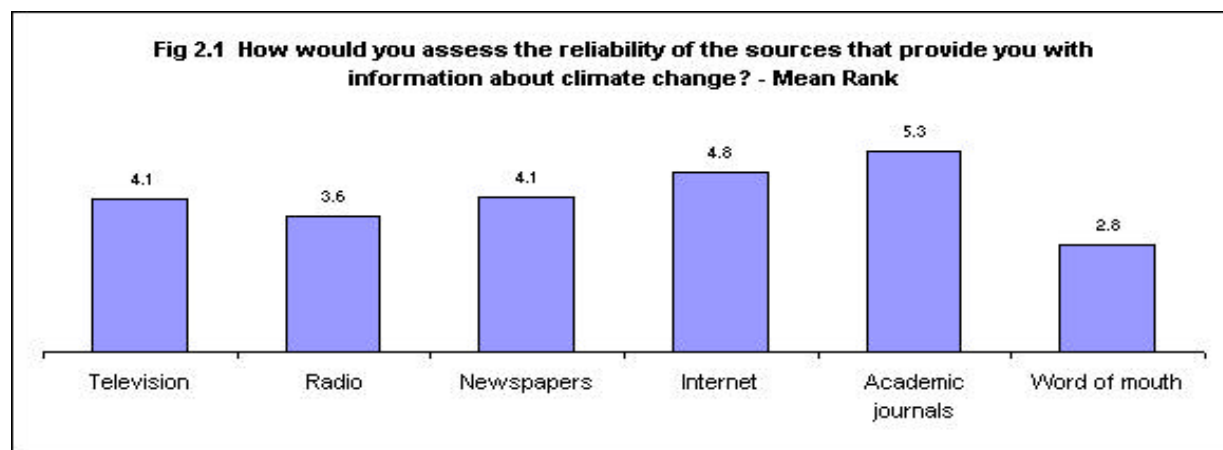
In comparison, a similar percentage of NGOs (25), 74%, say that awareness within their sector is Some. None in this sector characterise awareness as High.



QUESTION 2 - HOW WOULD YOU ASSESS THE RELIABILITY OF THE SOURCES THAT PROVIDE YOU WITH INFORMATION ABOUT CLIMATE CHANGE? RANK THE SOURCES FOR THEIR RELIABILITY FROM 1 UP TO 7 WITH 1 THE LEAST RELIABLE SOURCE.

Overall Rating

Those questioned were asked to assess the reliability of a variety of sources of information by means of a ranking exercise. Fig 2.1 shows the mean rank for all responses.



Academic journals are by some measure assessed to be the most reliable of the sources that provide information about climate change. One might put this down to the high number of Academics represented within our group but as we will see in later breakdown this is not the case. Perhaps somewhat surprisingly the next most highly ranked is the Internet.

Television is held in the same regard as Newspapers with both ranked higher than Radio. Nearly a full point off Radio, and almost half the mean rank of Academic Journals, is Word of Mouth.

We also gave the respondents an opportunity to mention and rank any other sources they felt had been omitted from our list.

Most significant amongst these other responses was the mention of conferences / workshops / seminars / meetings that were mentioned 11 times out of 60. With a mean rank of 5.3 they were held of equal value to Academic journals.

Other additional sources recognised included 'traditional knowledge' with three mentions; Inuit elders, knowledge of peasants and fishermen, traditional social networks, and books – also with three mentions.

Mean rating ranked within region

Table 2.1 - Reliability of source - rank within region

	Television	Radio	Newspapers	Internet	Academic journals	Word of mouth
Africa	3	5	4	1	2	6
Asia Pacific	3	5	3	2	1	6
Eastern Europe	2	5	2	2	1	6
Europe	1	5	4	3	2	6
Latin America	5	4	3	2	1	6
North America	4	5	3	2	1	6
South Asia	2	5	4	3	1	6

The breakdown of the rank within region – achieved by ranking the mean rank within region - shows that there is very little difference between regions with the following categories; word of mouth - sixth

in all seven regions – Academic journals (first in five and second in two) and Radio (fifth in six regions, fourth in one).

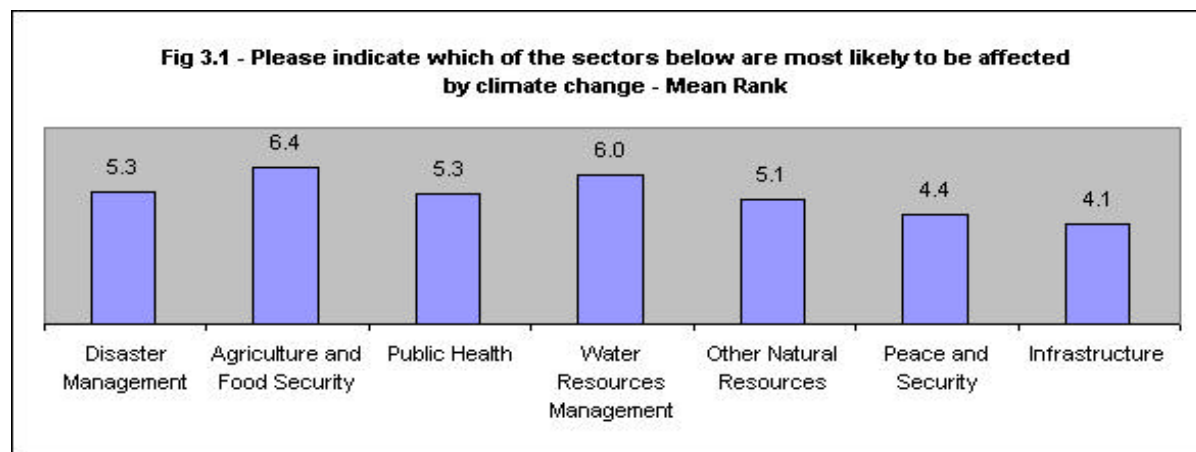
Significant differences occur in the assessment of the reliability of television where respondents from Europe ranked it on average as their 1st most reliable source of information about CC and South Asia their second. This contrasts with those respondents from the America, with North America ranking it fourth most reliable and Latin America fifth.

Other points worth noting include: Respondents from Africa's ranking of the internet as the number one most reliable resource; Eastern Europe's divergence from the norm with regard to Newspapers which they rank as the second most reliable resource compared to the third and fourth given by the other regions.

QUESTION 3 - PLEASE INDICATE WHICH OF THE SECTORS BELOW ARE LIKELY TO BE MOST AFFECTED BY CLIMATE CHANGE RANK THE SECTORS FROM 1 UP TO 8 WITH 1 AS THE LEAST AFFECTED SECTOR.

Overall Rating

The third question of the survey asked the respondents to rank seven sectors (with space for another sector if the respondent thought that we had missed something) by how likely they were to be affected by climate change with 8 as the most affected. Fig 3.1 shows the mean rank of all answers.



Agriculture and Food security was seen to be the most likely to be affected followed by Water resources management. Disaster Management, Public Health and other Natural resources were all, on average, held in a similar regard. Peace and Security ranked sixth out of the seven named sectors with Infrastructure being observed as the least likely sector to be affected by CC.

Of the 31 “other” responses that Tourism was mentioned five times with an average rank of six.

Mean rating ranked within region

Table 3.2 - Most affected by climate change - rank within region

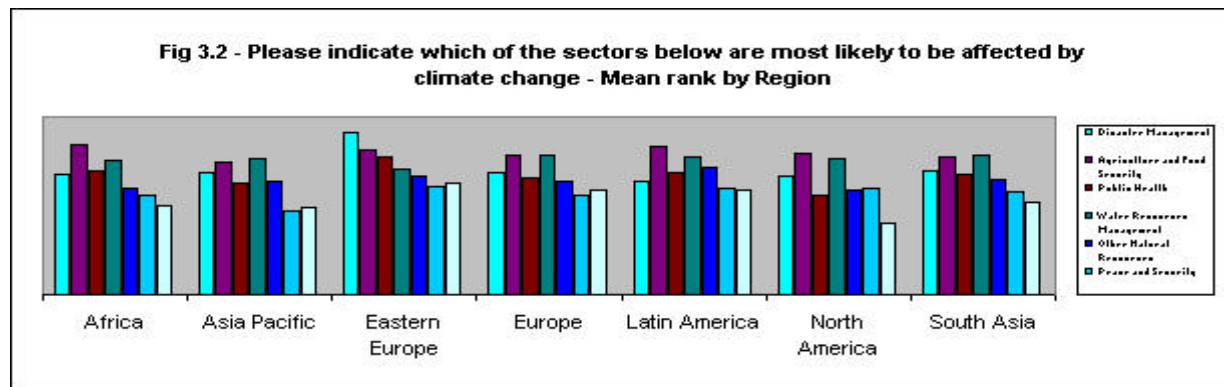
	Disaster Management	Agriculture and Food Security	Public Health	Water Resources Management	Other Natural Resources	Peace and Security	Infra-structure
Africa	4	1	3	2	5	6	7
Asia Pacific	3	2	5	1	4	7	6
Eastern Europe	1	2	3	4	5	7	6
Europe	3	1	4	1	5	7	6
Latin America	5	1	4	2	3	6	7
North America	3	1	6	2	5	4	7
South Asia	3	2	4	1	5	6	7

The breakdown of the rank within region – achieved by ranking the mean rank within region – show Agriculture and Food security to be ranked first within four regions and second within three – similar to Water Resources Management – ranked first by three regions and second by three. A significant difference was that Eastern Europe ranked water resource management fourth with Disaster management their most likely sector to be affected by climate change.

All regions followed the trend of placing infrastructure and Peace and Security as either the sixth or seventh most important except North America which had Peace and security in fourth.

Other Natural Resources were placed fourth or fifth by 6 of the regions; Latin America however put it as the third most likely to be affected.

Public Health was third or fourth most likely to be affected for all regions with the exception of Asia-Pacific (fifth) and North America (sixth). In placing Disaster Management fifth Latin America were some way lower than all the other nations.



Mean rating ranked within Profession

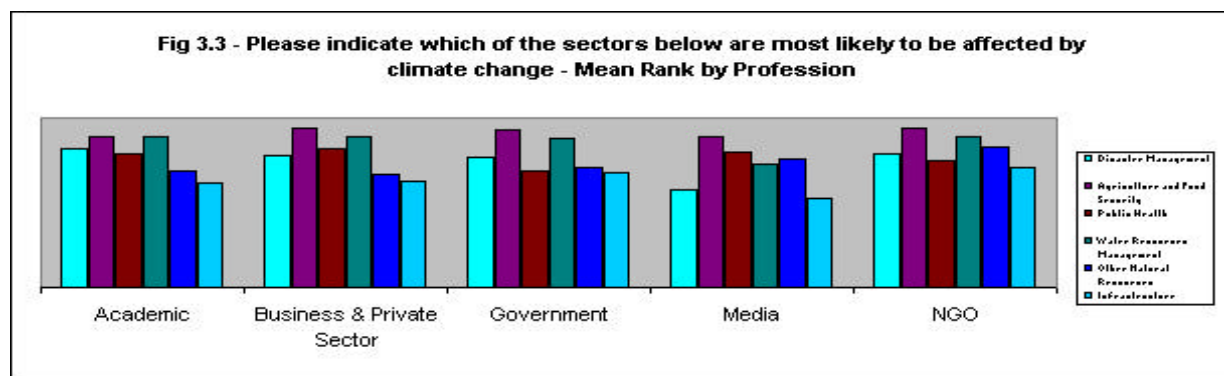
Table 3.2 - Most affected by climate change - rank within profession

	Disaster Management	Agriculture and Food Security	Public Health	Water Resources Management	Other Natural Resources	Peace and Security	Infra-structure
Academic	3	1	4	2	5	6	7
Business & Private Sector	4	1	3	2	5	6	7
Government	3	1	5	2	4	6	7
Media	5	1	2	4	3	7	5
NGO	4	1	5	2	3	6	7

Across professions, Agriculture and Food security is ranked as most likely to be affected by climate change. Water Resource Management is second for all professions except the Media who on average ranked it fourth with Public Health as their second most likely to be affected.

Business and Private Sector Professionals placed Public Health third while the other professions rated it as fourth or fifth most likely to be affected. Academics and Government both placed Disaster Management as the third most likely to be affected by climate change, while the Media and NGOs placed Other Natural Resources in third.

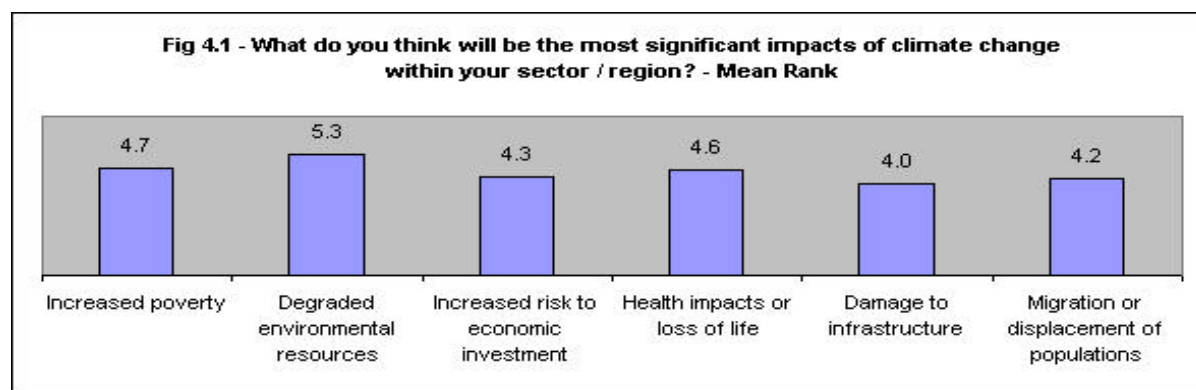
All but Media placed Peace and Security as sixth most likely sector to be affected by CC. All but the Media placed Infrastructure as the least likely be affected by climate change of all the seven sectors.



QUESTION 4 - WHAT DO YOU THINK WILL BE THE MOST SIGNIFICANT IMPACTS OF CLIMATE CHANGE WITHIN YOUR SECTOR / REGION? PLEASE RANK THE OPTIONS FROM 1 UP TO 7 WITH 1 AS THE LEAST SIGNIFICANT IMPACT.

Overall Rating

The fourth question of the survey addressed the impacts of climate change and asked respondents to rank seven (with a space for another they thought had been omitted) impacts in terms of significance within their region with the rank of eight as the most significantly impacted upon. The overall mean ranks can be found in fig 4.1. For additional responses to this question please see Annex One which details all responses.



Overall, Degraded Environmental Resources stood out as the most significant impact by all respondents.

Increased poverty and Health impacts or loss of life were rated as next most significant, with very little difference between the scores.

Also with similar scores were; Increased risk to economic investment and Migration or displacement for populations. Damage to Infrastructure was judged to be the least significant overall but by a small margin from the two impacts above it.

Only 17 'other responses' were given. Peace, Security, Conflicts and Political Instability made up for over a third of those responses with an average rating of 5.1. Threats/Loss of Biodiversity or Ecosystem shift made for nearly another third with an average rating of 5.4 in line with Degraded Environmental Resources.

Mean rating ranked within region

Table 4.1 - Most significant impact of climate change - rank within region

	Increased poverty	Degraded environmental resources	Increased risk to economic investment	Health impacts or loss of life	Damage to infrastructure	Migration or displacement of populations
Africa	1	2	4	3	6	5
Asia Pacific	3	1	5	2	4	6
Eastern Europe	6	1	4	2	3	4
Europe	2	1	5	4	6	3
Latin America	2	1	5	4	6	3
North America	6	1	2	4	3	5
South Asia	2	1	5	4	6	3

In line with the overall mean ratings, correspondents from all regions placed degraded environmental resources as the most significant impact of CC apart from Africa where it was ranked as number two.

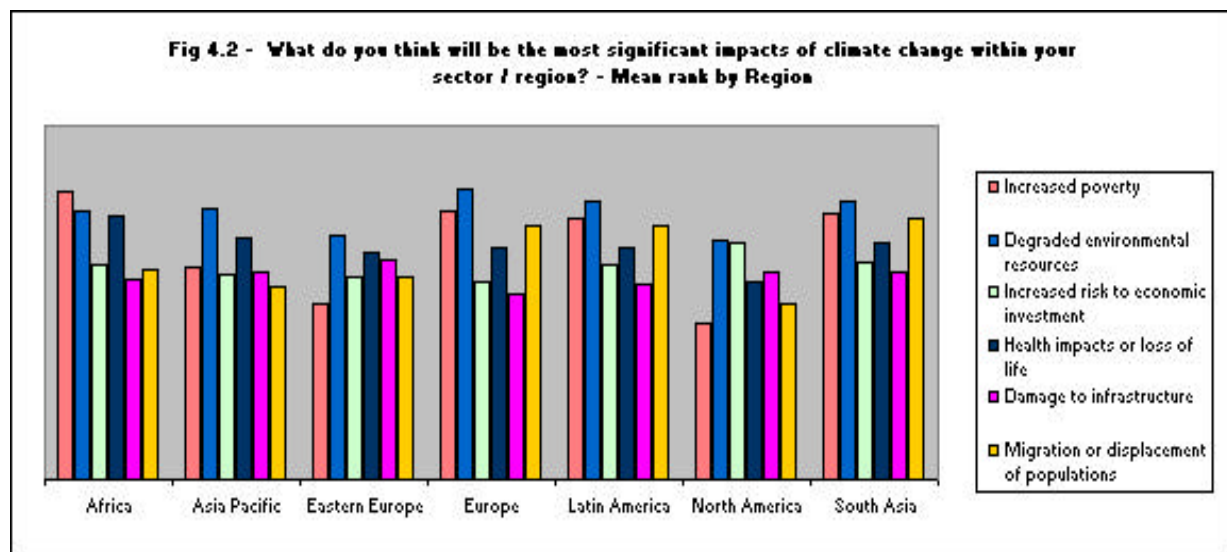
Africa Ranked increased poverty as the most significant impact of CC. Eastern Europe and North America ranked this impact as the least significant of the six named factors.

Health impacts or loss of life was ranked second or third by three countries (Africa, Asia Pacific & Eastern Europe and fourth by the four others (Europe, Latin America, North America, South Asia).

Three regions (Europe, Latin America & South Asia) rated Migration or displacement of populations as the third most significant impact of CC. Asia Pacific placed it sixth.

Africa, Latin America, Europe and South Asia all had Damage to infrastructure as the least significant impact of CC.

All regions placed Increased risk to economic investment either fourth or fifth except North America, which had it as the second most significant impact of Climate Change.



Mean rating ranked within Profession

Table 4.2 - Most significant impact of climate change - rank within profession

	Increased poverty	Degraded environmental resources	Increased risk to economic investment	Health impacts or loss of life	Damage to infrastructure	Migration or displacement of populations
Academic	6	1	3	2	4	5
Business & Private Sector	3	1	6	2	4	5
Government	1	2	3	4	6	5
Media	2	1	5	3	6	4
NGO	2	1	5	3	6	4

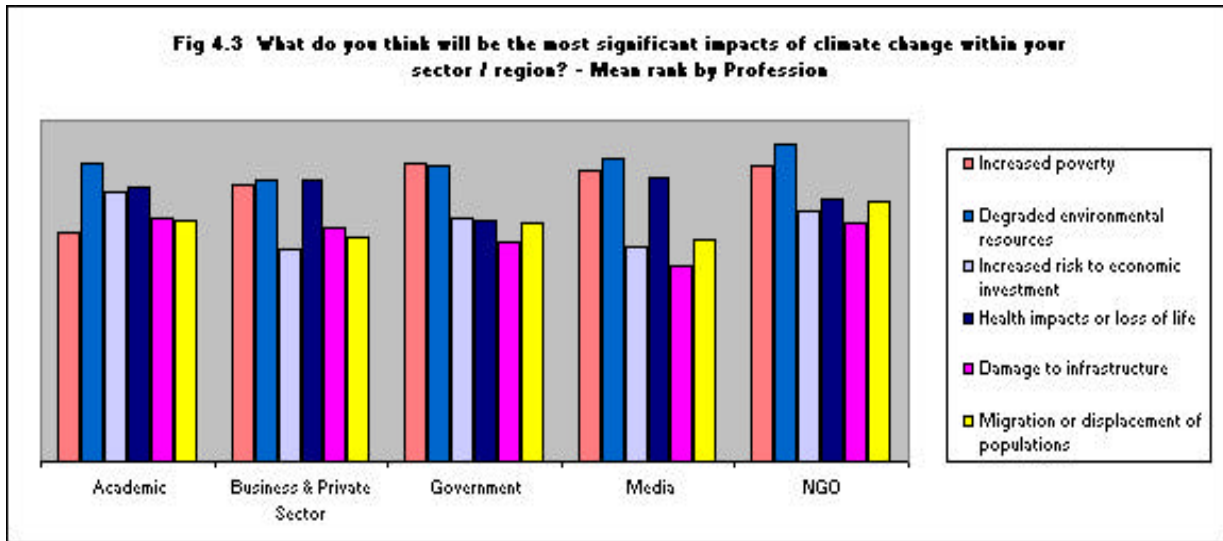
Degraded environmental resources were, on average, rated as the most significant impact of climate change by all professions except government, which placed it second.

Increased poverty was first or second for Government, Media and NGO and third for Business and Private Sector. Academics rated it as the least significant impact of CC.

Academics and Business and Private Sector both placed Health impacts and loss of life as their second most significant impact, Media and NGO third and Government fourth.

Academics and Government rated increased risk to economic investment third; the others ranked it fifth or sixth.

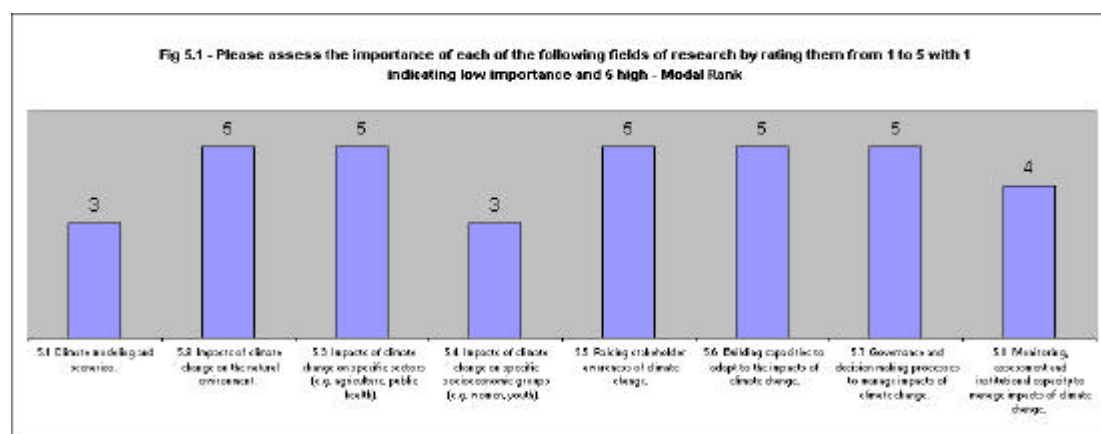
Damage to Infrastructure was rated as the least significant impact of the six by 3 of the professions.



QUESTION 5 - PLEASE ASSESS THE IMPORTANCE OF EACH OF THE FOLLOWING FIELDS OF RESEARCH BY RATING THEM FROM 1 TO 5 WITH 1 INDICATING LOW IMPORTANCE AND 5 HIGH.

Overall Rating

The fifth section of the survey asked the respondents to assess the importance of eight fields of research using a rating of one to five with five indicating high importance. The modal ranks are presented in Fig 5.1. Specific responses on projects or strategies are detailed in Annex Two – including suggestions for research.



There is little significant difference between mean ratings of six of the eight fields of research. Two fields of research, climate modelling and scenarios and impacts of Climate Change on specific socio-economic groups (e.g. women, youth) stand out with lower mean ratings than the other six.

Mean rating ranked within region (fig. 5.2, table 5.1)

Table 5.1 - Importance of each field of research - rank within region

	5.1 Climate modelling & scenarios.	5.2 Impacts of climate change on the natural environment.	5.3 Impacts of climate change on specific sectors (e.g. agriculture, public health).	5.4 Impacts of climate change on specific socioeconomic groups (e.g. women, youth).	5.5 Raising stakeholder awareness of climate change.	5.6 Building capacities to adapt to the impacts of climate change.	5.7 Governance & decision making processes to manage impacts of climate change.	5.8 Monitoring, assessment & institutional capacity to manage impacts of climate change.
Africa	8	3	1	7	4	4	6	2
Asia Pacific	7	2	2	8	6	4	1	5
Eastern Europe	7	5	3	8	3	5	1	2
Europe	7	6	3	8	1	5	3	2
Latin America	7	6	3	8	2	5	1	4
North America	7	4	4	8	4	1	2	3
South Asia	8	2	4	6	4	1	3	6

In agreement with the overall mean ratings, impacts of CC on specific socio-economic groups and climate modelling and scenarios are ranked lowly across all regions (seventh or eighth almost exclusively).

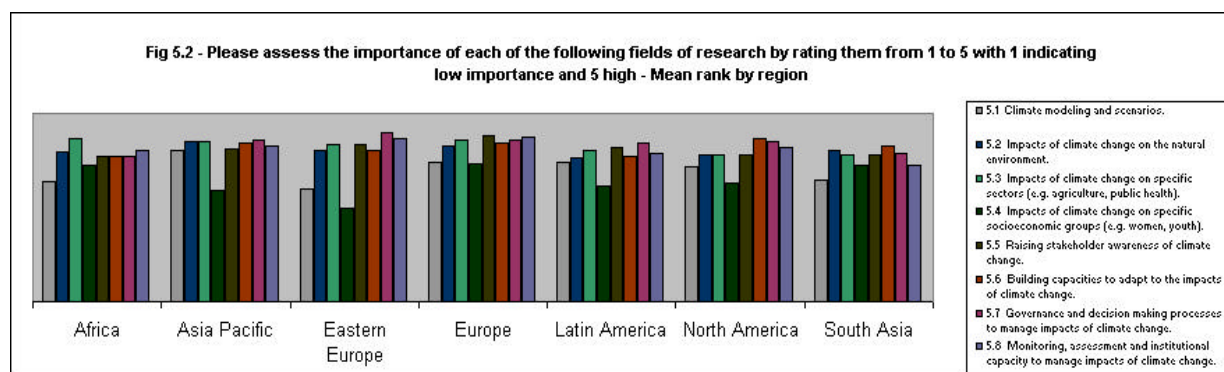
On average respondents from Africa place impacts of CC on specific sectors (e.g. agriculture, public health) as the most important field of research followed by monitoring, assessment and institutional capacity to manage impacts of climate change and then Impacts of climate change on the natural environment.

Respondents from Asia also rate the impacts of CC on specific sectors (e.g. agriculture, public health) and impacts of climate change on the natural environment as important ranking them joint second.

Governance and decision making processes to manage impacts of climate change is the most highly rated by Asia Pacific, Eastern Europe, and Latin America and is second or third for three of the other seven regions.

Building capacities to adapt to the impacts of climate change is, on average, rated the number one most important field of research by respondents from North America and South Asia – but is only of a middle order importance (fifth or sixth) in the other regions.

On average European respondents have ranked Raising stakeholder awareness of climate change as the most important field of research while Latin America placed it second and in Eastern Europe rate it third.



Mean rating ranked within Profession

Table 5.2 - Importance of each field of research - rank within profession

	5.1 Climate modelling and scenarios.	5.2 Impacts of climate change on the natural environment.	5.3 Impacts of climate change on specific sectors (e.g. agriculture, public health).	5.4 Impacts of climate change on specific socioeconomic groups (e.g. women, youth).	5.5 Raising stakeholder awareness of climate change.	5.6 Building capacities to adapt to the impacts of climate change.	5.7 Governance and decision making processes to manage impacts of climate change.	5.8 Monitoring, assessment and institutional capacity to manage impacts of climate change.
Academic	7	3	1	8	2	4	5	6
Business & Private Sector	7	2	1	8	6	5	2	2
Govt	8	5	2	7	6	1	3	3
Media	2	4	3	8	4	7	1	6
NGO	8	6	3	7	5	2	1	3

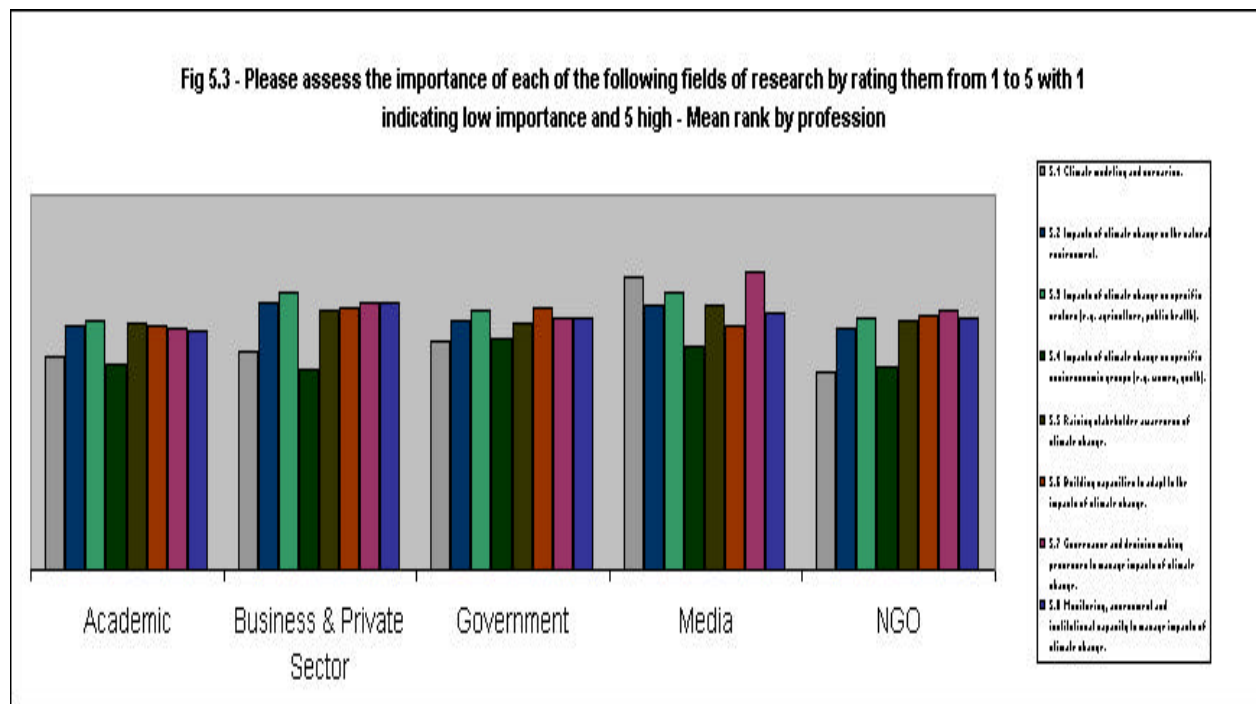
Impacts of CC on specific socio-economic groups and climate modelling and scenarios are ranked as the *two least important fields* of research across professions with the exception of those respondents from the Media – who on average rank **Climate modelling and scenarios** as the second most important field of research.

Impacts of CC on specific sectors (e.g. agriculture, public health) ranks highly with across all sectors – first within Academics and Business and Private Sectors, second within Government, third within Media and NGO.

Media and NGO both place **Governance and decision making processes to manage impacts of climate change** as *the most important field of research*. Business and Private Sector and Government also place it highly (second and third consecutively). On average Academics had it as the fifth most important field.

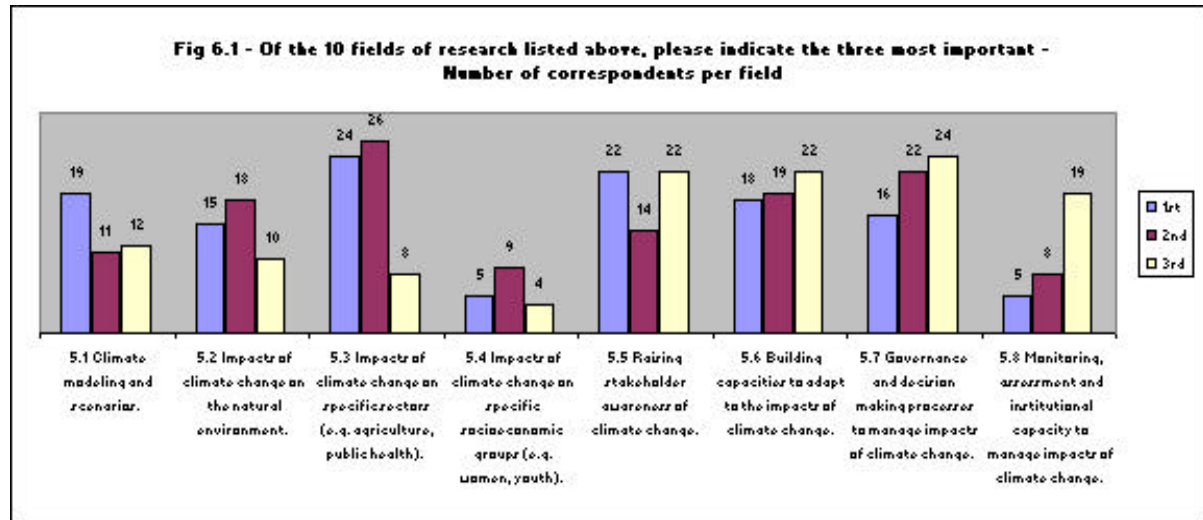
Stakeholders from **Government were alone** in making **Building capacities to adapt to the impacts of climate change** the *number one most important field of field of research*. NGOs had it second, but the remaining professions placed it fourth, fifth and seventh.

Academics were the sole profession to rate **Raising stakeholder awareness of climate change** *highly*, but this field averaged second overall.



QUESTION 6 - OF THE 10 FIELDS OF RESEARCH LISTED [IN QUESTION 5], PLEASE INDICATE THE THREE MOST IMPORTANT.

Overall Rating



Question 6 asked the respondents for their top three most important fields of research, in order of importance. Fig 6.1 shows how they ranked by field. Fig 6.2 shows a combined score for each field using a simple weighting of one for first two thirds for second and one third for third.

The combined weighted scores provide the following illustration: **Impacts of CC on specific sectors** (e.g. agriculture, public health) and **Governance and decision-making processes** to manage impacts of climate change are **regarded as the two most important fields of research by the respondents to the survey.**

Building capacities to adapt to impacts of climate change is rated the third most important field of research.

Raising stakeholder awareness of climate change and impacts of climate change on the natural environment are rated close fourth and fifth.

Climate modelling and scenarios and monitoring, assessment and institutional capacity to manage impacts of climate change are sixth and seventh.

Impacts of CC on specific socio-economic groups (e.g. women and youth) was by some way ranked the least most important of all the eight fields of research, with almost third of the two highest scoring fields.

