

Volume One: Evaluation of DFID Online Research Portals and Repositories

Final Evaluation Report

July 2016



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Citation: Phillipson, R., Brown, C., Sharp, H., Botchie, D., Bromley, J.M., Weigh, N. (2016) *Evaluation of DFID Online Research Portals and Repositories. Volume I: Final Evaluation Report*. London: Mott MacDonald

Information class: Standard

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Executive Summary

In 2014, DFID commissioned Mott MacDonald and The Open University to conduct an evaluation of its support to the dissemination of research online via portals and repositories. The evaluation focussed on three portals and repositories supported by DFID: Eldis, R4D, SciDev.Net. A fourth portal, GDNNet, was originally included in the Terms of Reference but was dropped in between inception and implementation due to DFID support coming to an end during that time. The evaluation comprised three primary methods: 1) market research in the form of a global online questionnaire; 2) three country case studies in Ghana, Tanzania and Nigeria consisting of interviews, contextual inquiry, a diary study and a heuristic evaluation;¹ and a 3) a value for money assessment of Eldis and SciDev.Net.

Intended Users and their online information seeking behaviour

The evaluation found that the portals' 'Intended Users'² **research evidence-seeking online is frequent, rapid and impatient:** Intended Users frequently referred to their lack of time to devote to searching; they also rarely went beyond the first page of results in Google. Although there are some sceptics, **Google gets results:** Intended Users cited it as more efficient and often more effective than the DFID-funded portals' own internal search functions.

Southern **Intended Users frequently use the government websites of the country in which they are based to obtain local statistics.** The data obtained from these websites is used in a variety of situations, including to validate or test the relevance of international research, and for comparisons. Although **government portals are popular for this,** there is variation in how reliable government websites were perceived to be. **World Bank and UN sites are frequently named as the "go-to" sites for international data.**

Four out of the five portals examined through their webmetrics (Eldis, SciDev.Net and three comparators) show increases in mobile and tablet use. This includes change of behaviour of existing users as well as new users, showing that **research evidence seeking is going mobile.**

The evaluation found that **a wide range of media, formats and services are used when seeking research evidence online,** with 87% of market research respondents stating that they read an overview, synthesis report or article to orient themselves to the subject last time they searched online for research evidence. **Credibility of evidence found online is assessed initially – and quickly - via the source³.**

Overall, **Southern users *per se* are not different in their information behaviour,** but there are differences in user types. The biggest differences in information behaviour are seen in the market research between (global) academics/researchers and Southern civil servants: unsurprisingly, academics/researchers tend to have more sophisticated search and validation strategies, using specialist online journals and employing internal site searches more often. Media types also appear to have notably

¹ A heuristic evaluation is an expert review of a website's interface that compares it with accepted usability principles.

² The categories of intended users are: development worker in civil society; development consultant; academic/researcher; elected member of national or local government; civil servant; knowledge broker for policy makers; media professional.

³ "Source" is broadly interpreted to include author, affiliation, host site or a respected referee.

different online information seeking behaviour from other categories of Intended Users, scanning and browsing widely rather than searching deeply. In terms of gender, women (especially Northern) are more likely than men (especially Southern) to use email newsletters/alerts as a tool for keeping up-to-date on their sector or profession.

Quality and accessibility⁴: how the DFID funded portals measure up

Generally, the internet is increasingly available⁵ but cost can still be a problem: Out of 497 Southern respondents, 28% reported problems relating to paywalls and firewalls, 21% reported problems with internet access, and 19% reported problems with searching the internet. There are also indications that the situation may be worse in the public sector (government offices and public universities) and where individuals do not subscribe to internet connection themselves.

We found **Eldis, SciDev.Net and R4D all have problematic design characteristics:** their web interfaces did not **encourage first time users** to become regular users; they also appear to **support browsing rather than immediate, targeted search needs**. The portals' internal search engines do not behave as expected and **navigation of the DFID-funded portals in general is perceived to be complex**.

Eldis frequently failed to load with several country case study participants waiting over 4.5 minutes for the site to load before giving up. **SciDev.Net has a wide appeal, particularly with media professionals, but could be improved.** Features of the site were problematic to our case study participants: the site's categorisation of topics was unexpected, the search function returned poor results and participants were occasionally unclear what the website was about. **R4D's link to DFID and wide range of DFID content is not clear**, despite several respondents citing association with DFID as instilling trust.

Plausible pathways between portal use and uptake in policy and practice

There is strong evidence of individual level behaviour change occurring, driven mostly by better *availability, accessibility and discoverability* of online research evidence. **There is some evidence of interpersonal behaviour change:** nearly one-third of market research respondents perceived an increase in the frequency with which they discussed research evidence found online with their colleagues. **There are also indications of both organisational and institutional behaviour changes** as the application of evidence becomes a more regular requirement in routine practices.

The evaluation identified three plausible pathways between portal use and research uptake:

- **The Personal Pathway - self-efficacy and motivation, credibility and influence:** greater availability and accessibility of online research evidence is rapidly promoting facility at a personal level with online research. By enabling greater use of research and data in policy debates, it bestows on users more credibility and influence in policy debates.

⁴ For the purposes of this report "Access" is defined as the opportunity to use the resources that are available. It depends on personal search and discovery skills, presence of alternative research sources, e.g. research assistants and librarians, as well as the design of the interface with the online resources. (Harle, 2010)

⁵ For the purposes of this report "Availability" is defined as the existence of the technology, connectivity and online resources. This depends on bandwidth, the quality of the IT, financial resources for online subscriptions, etc. (Harle, 2010)

- **The Technocratic Pathway: sign-posting solutions for policy makers and practitioners:** access to the ‘processed’ results of research, digests of research and experience into best practice, and evidence of what works on the internet helps provide users with the evidence they need to convince risk-averse, politicians and officials of successful policies and reforms in other similar contexts.
- **The Democratic Pathway – informing opinions, generating engagement:** This pathway is more complex than the previous two, not restricted only to the internet (social media – ‘Web 2.0’ - is a crucial part) and its content is only partly made up of ‘evidence’ of any kind. If it is timely, relevant and comes from a trusted source, greater use of research evidence can contribute to the constant checking and challenging of statistics and facts being ‘trafficked’ on this pathway. Trusted sources are often local, such as CSOs, NGOs and local foundations.

Do the DFID funded portals represent value for money?

Overall, we concluded that the two DFID funded portals assessed, Eldis and SciDev.Net, show due regard to value for money (VFM) principles and good practice across the 3 Es: **both show good management for the purposes of pushing down costs (‘Economy’). Both also appear to be managing inputs well to produce the agreed outputs (‘Efficiency’).**

Measuring and **demonstrating the extent to which the portals are promoting uptake and, ultimately, policy change, (‘Effectiveness’) is more complex.** The market research suggests that Eldis provides the range of services which Intended Users employ when seeking research online. However, Eldis’s logframe targets do not help the management or the monitoring of effectiveness of the portal. SciDev.Net indicators are more relevant, including specific measures of influence and connectedness of opinion authors and users who respond to surveys. **Both portals’ effectiveness targets have been met.**

Results and limitations of the methods used

The market research received 950 completed questionnaires, of which 671 met our original ‘Intended User’ sampling criteria and fell into seven categories of ‘policy actor’⁶. A further 63 identified themselves as belonging to multilateral agencies so we took the opportunity to include them in the analysis as a new 8th category. Four of the seven categories failed to reach the guideline 50 – 100 respondents required to provide an acceptable level of robustness as recommended by the National Audit Office⁷. This made them unsuitable for reporting on as separate groups, although their data was included in the wider analysis where appropriate. The case studies involved 44 participants from Ghana, Tanzania and Nigeria.

Both the market research and the case studies relied on voluntary, unpaid, participation. This required the evaluation tools to be brief. This necessary brevity and desired breadth of reach meant that easily understood language had to be employed in the questions while fluidity around definitions of ‘portals’,

⁶ To be categorised as an ‘intended user’ of DFID-funded research portals and repositories, respondents needed to (i) belong to one of seven categories of policy actor and (ii) have indicated in the online survey that they have had to find research evidence for themselves or other people, for work.

⁷ National Audit Office, Statistical and Technical team (n.d.). *A practical guide to sampling*. Retrieved from National Audit Office: <https://www.nao.org.uk/wp-content/uploads/2001/06/SamplingGuide.pdf> <https://www.nao.org.uk/wp-content/uploads/2001/06/SamplingGuide.pdf>

'repositories' and 'websites' were particularly evident in many responses. The conclusions we were able to draw around these particular distinctions were therefore also limited. Overall, however, the mix of quantitative and qualitative methods we employed allowed us to compile a rich body of evidence.

Key Findings

- Policy actors of all kinds, in both the North and the South, want to use research evidence in their work and are **increasingly able to use the internet to find it**. Rapidly improving 'supply' conditions – better availability, accessibility and discoverability – have been key in driving this increase.
- **There is little discernible difference between policy actors in the North and the South** in the way they use the internet to find research evidence: throughout, online interactions are characterised by a **perceived lack of time to search extensively or to assess deeply the quality of what they find**.
- **Starting a search with Google is almost universal** and generally considered to be highly effective; further linking to other sites or materials ('chaining') **often does not go beyond the first page of Google**.
- **Use of the DFID funded portals' own internal search function is very low**.
- **Searching online for research tends to be frequent, rapid and impatient**: failures such as broken links, paused downloads or unfulfilling searches lead to immediate abandonment.
- **A wide range of different media and products – videos, PowerPoints, content summaries and guides – are used** to orient online searchers when looking for research evidence.
- **PDFs are popular** – not only as a convenience for later reading on different devices but also as an indicator of readability and usability and as a source for repurposing.
- **Users of all kinds want access to data**, independently of research articles: national governments' own websites are frequently used to find the former, while the World Bank and UN sites are the 'go-to' for international data.
- **Eldis is increasing the accessibility of information**: it provides access to a large and increasing repository, some of the content of which is not available elsewhere.
- **SciDev.Net has rapidly increasing numbers of users and now has a huge reach**: 2.7 million in 2015
- **Both Eldis and SciDev.Net are increasing the accessibility of Southern material** and access for Southern users.

Key Lessons

- **It is appropriate to put effort into making research evidence available online** given the evidence of demand among DFID's Intended Users and of the frequency with which they turn to the internet to find it.
- Intended Users often rely on Google to direct them to relevant content and if a website does not appear on the first page of results, it is unlikely to be visited. Therefore, **understanding the search terms people use and how this affects Google searches is critical**.
- **Search engine optimisation is key for online research portals and their content to be found by their Intended Users**.
- **Government websites are important sources of research evidence**, particularly data, and particularly for Intended Users in the South.

- **Handheld devices, especially mobiles, are increasingly important ways of reaching Intended Users** with research evidence.
- **Social media can be a useful resource for some Intended Users to encounter or share information.**
- When research evidence is made available online, **it is more useful to Intended Users if it is portable - and easy to scan** for the key points.
- **Understanding what signals reliability and promotes “trust” in the Intended Users of research evidence, is important;** a common influencing factor is association with organisations perceived to be authoritative (especially UN organisations, governments or research institutes).
- **There is evidence of differences between specific groups of Intended Users** (e.g. Global Academic/Researcher compared to Southern Civil Servant) so **an undifferentiated approach to using the internet to reach Intended Users with research evidence is likely to have limited success.**
- **The term “research evidence” is not understood by all Intended Users in the same way** and was completely new to some of the research participants, so should be used with caution; “data” and “statistics” are more commonly used terms.
- **Although the DFID portals’ content is valued and perceived to be of high quality there is potential to increase their awareness and use.**
- **Service quality relies on external factors such as internet availability.** Although internet is increasingly available in the developing world, access is variable and the cost of the internet can be inhibitive.
- **Where access to content involves linking to an external site that is behind a paywall, this can be a barrier.**
- **System quality for all portals** (including usability and user experience aspects) **can be improved. However, deciding how to do this is complex because there are several ways in which the content could be accessed*.**
- **Design issues** e.g. webpages being too busy, weak search functions and confusing navigation **makes it difficult for users to find content through the portal webpages.**
- **The wealth of information available makes it particularly important for access mechanisms to be clear and straightforward.** For portals, these rely on two main features: their navigation/structure and their search function.
- **Participants from categories of Intended User who are not current regular users of the portals are less likely to browse and more likely to have a targeted information need.** The design issues identified are problematic for these Intended Users, and discourage them from accessing the portals’ content.
- **Filters based on country or on region, and country-specific profiles are important aspect** for users searching for context-specific research evidence.
- **‘Use’ and ‘uptake’ are different but both are valid intermediate outcomes that DFID should be measuring.** The new stricter definitional distinction we have proposed between ‘use’ of the online portals and the research they share (the time spent on the website, the employment of the different services e.g. search functions, the downloading and the reading of articles) and ‘uptake’ (the *application* of evidence in the policy-making chain) has aided not only discussion around the process of research dissemination but also the measurement of it.
- Although the extent to which ‘use’ is productive cannot be demonstrated (time on a site could be time spent concluding the website is not helpful; searching could be unfruitful or downloaded articles may

never be read - or once read concluded to be irrelevant), nevertheless, **'use' is evidence of a service that is being utilised and should be measured as a 'good' in its own right**: searching, sifting, selecting, sharing, citing and reading are all 'use' activities which are essential and inevitable parts of the process of finding relevant evidence even though the majority of pieces of evidence encountered in any one episode of 'use' may be discarded and disregarded. Furthermore, **a 'use' activity which may appear unproductive in the first instance may contribute to the efficacy of subsequent searches; 'uptake' may be indirect or delayed.**

- **By framing uptake in terms of behaviour change we have been able to address the seemingly unavoidable problem of relying on anecdote and recall of one-off examples to demonstrate the value of research.** While our evaluation tools still relied on recall and perception, by limiting the questions around uptake to a small number of defined types of behaviour change (personal, interpersonal, organisational or institutional) we have been able to begin to build up a larger, more coherent and more reliable body of evidence. This, in turn, can be tracked over time and analysed.
- The VFM message has been received and understood and portals are keeping costs down. However, **there may be little to gain by further putting pressure on Economy as this may lead to loss of quality/sustainability.**
- **It is important for portals to be clear about what they are going to do and how they will achieve it with their respective functions.**
- **Greater levels of investment are necessary for the portals to grow in the current context**
- **Topic Guides/Resource Guides/Practical guides all receive high levels of traffic, but portal managers don't currently have a clear defence of the curation value of these products**
- **Handheld devices, especially mobiles, are increasingly important ways of reaching Intended Users** with research evidence as a) increasing numbers and proportion of visits are from mobile devices and b) having a mobile friendly site improves your google rating
- As an increasing number of users are accessing research evidence on the portals via social media channels, **social media represents an important communication platform.**
- **Conventional assumptions that longer, deeper, engagements are of greater value may not apply to a news-based site like SciDev.Net** where visitors may be getting all they want from a short visit to a single page.
- As only a small number of visitors use internal search functions good **search engine optimisation is key to being found.**
- **Uptake of news items is improved by relevant language and locally relevant and topical content.**
- **User surveys may be better placed to explore likes and dislikes rather than to collect approval numbers.**
- **Eldis and SciDev.Net portal managers are highly motivated by equity issues but do not collect enough evidence to demonstrate effectiveness.**
- Both Eldis and SciDev.Net show good management for the purposes of pushing down costs ('Economy') and appear to be managing inputs well to produce the agreed outputs ('Efficiency'). **However, both promoting uptake (defined as behaviour change on the part of policy actors), and monitoring it, could be improved.**

Recommendations

To the managers of the DFID-funded online research portals and repositories:

- **Invest in search engine optimisation.** It's the most popular way to start a search for research evidence.
- **Publicise links to related websites more clearly.** We found both our market research respondents and case study participants were initially unaware of, but interested in following up on, the sites we named to them.
- **Make internal site searching easier.** An effective, transparent, site search engine is part of its usability. The curator role of a research portal will not be maximised without an effective way of investigating the site.
- **Make the overall design more user-centred.** Menus and sub-categories should be revisited; websites should be built for high and low bandwidth.
- **Make the site mobile friendly.**
- **Portals should consider whether and how they want to attract new users:** whether they want to increase user numbers or focus on existing users; and whether they want to focus on expanding their user base by attracting new users to return to the site, and hence turn them into regular users, or to expand the number of users who reach the portal content via Google, social media or newsletters, or whether they want to nurture existing users.
- **Utilise social media as a tool to attract users to portal content.**
- **Continue to package/repurpose research evidence into digestible products that can be quickly scanned by users.**
- **Continue to invest in making available locally relevant content.**
- **Make the DFID association more apparent**– amongst the development policy community we reviewed, DFID is regarded as a trusted source and therefore a prompt to follow the material found with a DFID link.

For DFID's online research dissemination strategy more generally:

- Consider **supporting partner Government websites** to improve their accessibility to policy actors seeking reliable national and local statistics.
- Utilise the 'democratic pathway' from online use to research uptake by **supporting Southern NGOs to disseminate online small pieces of locally relevant research** to feed into local political debates.
- **Train all new in-country DFID programme managers in internet searching and the range of DFID-supported research websites.** Programme leaders have both privileged access to senior policy makers and a remit to promote change, most effectively done by showing them 'what works'; they are busy people who need rapid access to lessons and 'how to guides'. They can also act as promoters of DFID supported websites.
- **Future surveys should be conducted across DFID funded portals periodically and at the same time.** Surveys should ask a set of standard questions as well as optional extras tailored to the learning needs of the particular services. A comparative analysis could then be done on the results and learning shared across portal management teams.

Suggestions for further study

- **Undertake a case study into elaborating and exploring the 'Democratic Pathway' which we have begun to draw out in this evaluation.** There is considerable new research dedicated to the role of the internet and social media in policy making. However, their findings are based almost exclusively on

mature, functioning democracies. The role of the internet in developing countries, with nascent democracies, is much less researched. Our preliminary work in drawing out plausible pathways from online use to research uptake in policy making suggests that, done with consideration, it may be an effective channel for research dissemination

- **Mine our market research and case study data to extract a more detailed analysis of Southern civil servants.** This could include following up with the Market Research respondents who said they were happy to be contacted. Over half of the respondents (including the civil servants) who said they were aware of one or more of the DFID-funded portals also said they were happy to do this.
- **Undertake periodic repetitions of the market research across all DFID funded portals.**

Abbreviations and acronyms

3Es	Economy, Efficiency & Effectiveness
3IE	International Initiative for Impact Evaluation
ADB	Asian Development Bank
AFDB	African Development Bank
API	Application Programme Interface
BBC	British Broadcasting Corporation
BCURE	Building Capacity for Uptake of Research Evidence
BLDS	British Library for Development Studies
BOND	British Overseas NGOs for Development
CABI	Centre for Agriculture and Bioscience International
CSO	Civil Society Organisation
DFAT	Australian Department for Foreign Affairs and Trade
DFID	Department for International Development
ELLA	Evidence and Lessons from Latin America
FAO	Food and Agriculture Organisation
GOKH	Global Open Knowledge Hub
GSDRC	Governance and Social Development Research Centre
HEART	Health and Education Advice and Resource Team
HTML	Hyper Text Markup Language
ICT	Information Communication Technology
IDRC	International Development Research Committee
IDS	Institute of Development Studies
IIED	International Institute for Environment and Development
ILO	International Labour Organisation
IMF	International Monetary Fund
IT	Information technology
LAC	Latin America and the Caribbean
M&E	Monitoring & Evaluation
MENA	Middle East & North Africa Region
MK4D	Mobilising Knowledge for Development Programme
NICE	National Institute for Health Care Excellence
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OKHub	Open Knowledge Hub
PDF	Portable Document Format
R4D	Research for Development
ReAKSS	Regional Strategic Analysis and Knowledge Support System
RSS	Rich Site Summary
SEO	Search Engine Optimisation
SEQAS	Specialist Evaluation and Quality Assurance Service

Sida	Swedish International Development Cooperation Agency
SSA	Sub-Saharan Africa
TA	Technical Assistance
ToC	Theory of Change
UN	United Nations
UNESCO	United Nations Education, Scientific and Cultural Organisation
UNICEF	United Nations Children's Emergency Fund
UPV	Unique Page Views
USAID	United States Agency for International Development
VFM	Value for Money
VOIP	Voice Over Internet Protocol
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation

Acknowledgements

The Evaluation team would like to express their sincere thanks to everyone who supported and contributed to this evaluation. In particular we would like to thank the following groups of people:

- The country case study respondents. We were impressed by, and grateful for, their willingness to contribute in interviews, face to face sessions and diary study. We learnt much from them.
- The Market Research respondents who completed our online survey.
- Our Advisory Group who, in particular, helped to identify channels to reach potential Market Research respondents and finalise our online questionnaire.
- To individuals who provided advice and support including: Dr Isabel Vogel, Blane Harvey, Simon Batchelor, and Jonathan Harle.
- To the staff of GSDRC, Pambazuka and Zunia who willingly gave up their time to act as comparators to the portals being evaluated.
- To the staff working on the portals under evaluation: Eldis, SciDev.Net and R4D who gave up so much of their time to give us the information we required. We were impressed by your learning attitude and willingness to share. We also appreciate the time given by the staff at GDN who contributed during the Inception phase of the evaluation.
- Finally, we would like to thank the DFID evaluation management team and others at DFID who gave useful feedback and challenge throughout the evaluation.

The Evaluation Team

This evaluation was led and managed by Mott MacDonald with the Open University. The team comprised of experts in evaluation, market research and online user behaviour to ensure all desired outputs could be delivered effectively and to a high standard.

Name	Home organisation	Role on project
Rachel Phillipson	Mott MacDonald	Team Leader
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Jane Bromley	Open University	Senior User Researcher
Cheryl Brown	Marketing consultant	Research Communication Specialist
John Rowley	Freelance consultant	Value For Money Analyst
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Nadia Weigh	Mott MacDonald	Project Manager
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Professor Giles Mohan	Open University	Quality Assurance
Kerry Scott	Mott MacDonald	Survey team
Laura Donovan	Mott MacDonald	Survey team

1 Purpose of the Evaluation

As part of its commitment to ensuring that its policies and programmes are based on evidence, DFID supports high quality research into strategic development issues. To support the communication of this research it also funds a number of intermediary organisations, including online research portals and repositories.

The growth of internet connectivity and the development of social media offer huge opportunities for research communication. A pressing issue is how best these rapidly changing opportunities can be harnessed in order to increase reach and promote use of research in policy, programmes, and practice. The evidence base on what works to communicate research and achieve uptake is fragmented and often restricted to evaluation of a particular service or programme. Therefore in 2014, DFID commissioned an evaluation of online research portals and repositories, focussed on four portals and repositories supported by DFID: Eldis, R4D, SciDev.Net and GNet.

The evaluation findings will be used to inform DFID's approach to research communication and uptake. They will also contribute to the global evidence base on research uptake, and inform the work of other donors, intermediaries and researchers. The primary target audience for this evaluation is DFID's Research and Evidence Division (RED). However, the findings of the evaluation are expected to be of value to other actors in the research uptake community, including portal managers (especially of the portals under investigation) and other practitioners and donors who support online portals and repositories such as Sida, the World Bank, Irish Aid and the International Development Research Centre (IDRC).

A Mott MacDonald team supported by The Open University was awarded the contract to conduct the evaluation in January 2015. During a three month Inception phase (January – March 2015) existing evidence was collated, synthesised and analysed in order to confirm the approach and methods used in the Evaluation.

The objectives of the evaluation were:

1. To assess the quality and accessibility of online research portals and repositories and to collate and analyse the available evidence on their use;
2. To describe user populations and examine how they interact with online research portals and repositories;
3. To draw out and illustrate plausible pathways between portal use and uptake of evidence in policy and practice;
4. To assess whether the DFID-funded portals and repositories present value for money, in their own right and in relation to portals and repositories not funded by DFID;
5. To provide recommendations for how the DFID-funded programmes might be improved and better monitored.

The full terms of reference for this evaluation can be found at Appendix F.

This Final Evaluation Report (Volume I) summarises the methods used in the evaluation and outlines the key findings and lessons. It also sets out recommendations to DFID and the portal managers. Appendices with more detailed descriptions of the methods and results are in a separate document (Volume II).

2 Summary of the portals under evaluation

Three DFID-funded research portals/repositories were ultimately chosen by DFID as the subject of the evaluation: Eldis, R4D and SciDev.Net.⁸ They all have the same broad purpose of disseminating good quality, relevant research on development issues to a global audience, with the primary target being users in the South. However each portal represents a very different model to achieve this, ranging from the simple repository functions of R4D to the science journalism broadcast approach of SciDev.Net. The costs accompanying these portals are equally different. The tables below summarises other salient differences in the portals. A webmetrics analysis of Eldis and SciDev.net showing their different patterns of use is at Appendix D.

⁸ Originally GDNNet was included in the list but was later dropped due to the fact that it was no longer supported by DFID by the time the evaluation got under way. Note too that only two of the final three (Eldis and SciDev.Net) were subjected to a full value for money assessment by the evaluation.

Table 2.1: Summary of Portal/Repository functions

PURPOSE						
Portal/Repository	Generating new information content (i.e. research products and news items)	Making information available from multiple sources	Helping people make sense of, and apply, information	Actively supporting knowledge sharing, debate and building connections	Strengthening capacity of researchers as providers	Promoting and strengthening a southern voice
Eldis		x	x			x
SciDev.net	x	x	x	x	x	x
R4D		x	x			

Table 2.2: Overview of the Portals

	Eldis	R4D	SciDev.net
Management Arrangements	Managed by IDS through its Open Knowledge and Digital Services Unit	Managed by CABI. Have been operating on maintenance and updating basis since October 2012. The current contract and service will finish in summer 2016, at the time of the launch of the new R4D service on gov.uk ⁹	Is a company limited by guarantee and a registered charity in England and Wales
Content Type	Summaries and links to research products including research reports, working papers, discussion papers, conference papers, case studies and policy briefings	DFID-funded research and outputs from the 1990s to the present day	Primarily unique content. Multimedia (including podcasts, photo galleries, videos, infographics, and audio interviews), news, data visualisation, practical guides and editorials
Subject Focus	Resource Guides cover 10 thematic areas: agriculture and food, climate change, conflict and security, evidence for policy and practice, gender, global health, governance, ICTs for development, nutrition, and rising powers in development	12 themes: Agriculture, Climate & Environment, Education, Economic Growth, Research Communication & Uptake, Infrastructure, Social Change, Governance & conflict, Water & Sanitation, Humanitarian Disasters & Emergencies, Health, and Food & Nutrition	Science-based topics for global development. It is broadly split into the following topics: agriculture, environment, health, governance, enterprise, and communication
Audience	Development practitioners, decision makers and researchers	Anyone wanting to access DFID project information and evaluations or DFID-funded research	Development professionals, policymakers, researchers, journalists and the informed public
Editorial Approach	Eldis' editorial team locates content from a variety of sources incl. submissions from users. Prioritises profiling research from organisations in the South including over 80 research organisations and intermediary partners under the GOKH project	CABI upload outputs to the database and search and locate DFID research material on the web to add to the database, adding content through production of summaries and improved metadata	SciDev.Net has regional teams which produce content and a network of freelance journalists. All content is under creative commons license
Delivery	Content can be browsed through resource guides and	Primarily a repository. Has a search function using	Users can subscribe to updates through social

⁹ R4D's current contractual arrangement will cease, however R4D will continue

	Eldis	R4D	SciDev.net
	a search function. Users can subscribe to updates via RSS, social media and e-newsletters called "Reporters". Eldis offers theme-based and general Reporters. Content is licensed under Creative Commons and available to re-use through the IDS Open API and the okhub.org API plus various tools for developers and website managers	filters, keywords and refiners. Browsing by country or region or theme. Research products have social bookmarking links and it's possible to subscribe to automated email updates. Content is selectively promoted by DFID social media	media, e-newsletters and RSS. Users can also browse and refine for content by thematic area, region, type and year published and search. Users can interact by leaving comments on articles
Funding Sources	Mainly funded by DFID through GOKH programme	DFID is the sole funder	Funding from multiple sources

3 Overview of the methods and analytical framework used

3.1 Overall approach

The evaluation objectives set out in the Terms of Reference, combined with DFID's preferences and expectations, strongly determined the methods selected. The evaluation's aims were ambitious in the global breadth to be covered, the contexts to be understood and the personal behaviours to be investigated; it therefore demanded a number of different methods. DFID specifically wanted a study design which would (i) reach policy actors, such as Southern civil servants and elected officials, whose online information behaviour is less well researched and (ii) would balance the bias inherent in the user survey results conducted by the websites themselves. A global online questionnaire (to reach the full range of types and geographical locations of policy actors) and a small number of in-country case studies (to understand better any influences of the policy-making context) were specifically requested. Of the various methods for testing the additional technical issues (of website usability and accessibility), we judged the most appropriate to be on-site observation of volunteer users supplemented by an independent (UK-based) expert 'heuristic' review of the websites.¹⁰ The online questionnaire was designed and administered according to well-established principles of good market research practice (duration, question types, speed of comprehension, etc.). The value for money assessment using the 3Es approach is in accordance with DFID standard practice. More detail on each of these is set out below. The study had to be designed within the given budget envelope and conducted in response to changing travel security conditions for the evaluation team.

3.2 The Market Research

The market research was an online questionnaire that combined closed and open questions. The purpose of the market research was to collect information from 500 -1,000 development actors worldwide, distributed across seven categories of Intended Users of portals, to understand how they use the internet to access research evidence and particularly their relationship with research portals and repositories¹¹. "Intended Users" is defined as the target audience for the DFID funded portals and includes both *actual* users and *potential* users. For the purposes of this evaluation Intended Users have been segmented into 7 categories of development actor as per Table 3.

¹⁰ These methods are described in more detail below.

¹¹ The type of use we focus on is that of the portals and repositories as sources of research evidence, rather than people making use of them as a platform for disseminating their own research outputs.

Recruitment and sampling for the Market Research

Our population of interest was development actors worldwide, but with particular emphasis on policy-makers in the South, since these groups are less well researched in the literature. Within this broad group we targeted individuals working in one of seven categories of development actor. See Table 3 below:

Table 3 Categories of Intended Users targeted by the Market Research¹²

South & North	South only
Development worker in civil society (e.g. employed by a national or international non-governmental organisation, or community based organisation)	National Legislature or elected member of local government (e.g. Member of Parliament, member of regional/sub-national legislature or council, Councillor/local council member, Minister)
Academic/Researcher (e.g. researcher or postgraduate student based in a research institute, university, or think tank) with an interest relevant to poverty alleviation or social change in the South.	Civil servant
Development Consultant	Knowledge broker/intermediary for policy makers (e.g. Parliamentary committee clerk, Parliamentary researcher, Parliamentary librarian, assistant/secretary to Member of Parliament, Government departmental librarian ¹³)
	Media professional (e.g. journalist, editor, commentator for online, print or broadcast media)

A more in-depth description of the market research method can be found at Appendix A.

3.3 The Country Case Studies

While the market research gathered a shallow set of data from a broad group and allowed systematic quantitative analysis of the results by type of user, the case studies employed a set of qualitative methods to better understand the portals' use and usefulness in context.

The country case studies were completed for Ghana, Tanzania and Nigeria. In addition to an initial semi-structured interview with each participant to explore the target user's background, role and activities, each country case study employed three main research methods:

1. Contextual inquiry gathering data to explicate a user's daily tasks and ways of working. It followed an apprenticeship model with the researcher working as an 'apprentice' to the participant in their place of work, using a combination of observation, discussion, and reconstruction of past events. The first part of our contextual inquiry involved a face-to-face session to rehearse a previously-identified example of using evidence in the course of their work. The second part of the session focused on the three live DFID funded portals (Eldis, R4D and SciDev.Net) and asked participants to use the portals to find information relevant to their example topic and specific articles.

¹² As explained in the Results and Limitations section, we were able to add an eighth category of policy actor based in the South: multilateral donor agency staff.

¹³ This more narrow definition of knowledge broker was used as other types were deemed to be already well researched

2. Research diary: Participants from the case studies recorded their activities on a daily basis over a 2 week period enabling us to analyse data about a user's normal everyday work over a longer time frame than contextual inquiry allows.
3. Heuristic evaluation: a well-established expert-based evaluation method. It is commonly used in commercial practice and has been adapted for some specific types of online product (although not specifically for portals). Nielsen's set of 10 heuristics form the basis of an expert review of the product that combines an expert view of good interaction design and a clear understanding of the user population (Budui & Nielsen, 2010).

The combination of these four methods allowed us to capture and analyse behaviour regarding portal interaction, stories of use and uptake that illustrate the broader picture of policymaking within which the portals sit, and an assessment of the usability of the portals from the point of view of the intended audiences (both actual and potential users).

Recruitment and Sampling for the Case Studies

Participants were chosen using purposive sampling, based on the likelihood that they would provide useful and interesting data for our purposes. We do not claim these participants to be representative of the wider Intended User population, although they were selected to fit in the agreed Southern user categories.

More information regarding the country case study methodology, including selection and exclusion criteria can be found at Appendix B.

3.4 The Value for Money Assessment

A preliminary VFM review of the portals conducted in the Inception phase confirmed that the four portals/repositories covered by this evaluation represent four very different models of online research dissemination. The logframes for each of the portals reflect this variety, setting out different targets and means of measurement. Furthermore, the portals have widely varying annual costs. The level of detail and style in financial reporting is also very variable. By requiring financial reporting by input only, the available DFID accounts do not readily permit detailed attribution of cost to activity or, thereby, to outputs or outcomes. Thus, assessing the value for money of the portals using a *comparative, quantitative* benchmarking approach would be challenging and ultimately unproductive. We therefore conducted the VFM assessment as self-standing *comprehensive performance reviews*, assessing the three Es (economy, efficiency and effectiveness) in terms of the quality of the portals' management practices, monitoring systems and responsiveness to new information.

As agreed with DFID, the value for money review was conducted in detail for just two of the four DFID-funded portals. As GDNNet is closed and the R4D contract is terminating, we focused **only on Eldis and SciDev.Net**. For comparative and lesson-learning purposes, we conducted a 'light touch' VFM assessment of three equivalent portals where staff were willing to share information and ideas. We are grateful to staff at GSDRC, Pambazuka and Zunia for their assistance. The assessments were used to inform discussions and raise questions about the different ways of working to improve performance and VFM among the different portals.

The VFM study consisted of the following components:

1. Site visits to Eldis and SciDev.Net to interview key management staff and collect management information;
2. Initial review of performance data, testing for accuracy, relevance and completeness;
3. Long-distance interviews with comparator portal managers;
4. Second review of performance data in the light of findings from market research and case studies;
5. Formulation of recommendations for improved VFM monitoring, including logframe targets and measurement approach;
6. VFM check of final evaluation recommendations.

3.5 Our Analytical Framework

Each of the four main evaluation objectives addresses a different dimension of overall portal/repository effectiveness, covering online information-seeking habits, policy-making behaviour change, technical interface issues and portal management. These all sit in different fields of technical and social science and call on different analytical frameworks. Drawing from the rapid literature reviews conducted during the Inception phase, we selected the most appropriate analytical frameworks for interrogating the theory of change (Section 7) and for analysing the results from the evaluation methods. They are summarised in the Analytical Framework figure overleaf.

Figure 1 Overarching Analytical Framework

Evaluation Objective	Methods to be used	Analytical Frameworks to be applied	Framework Domains	Recommendations
1. Assess portal quality & accessibility	1. Case Studies Contextual Inquiry Research Diaries Expert Review 2. Market Research Online Questionnaire	Adapted Ellis Framework Nielsen's 10 Heuristics Bottom-up analysis	Starting Chaining Browsing Differentiating Monitoring Extracting Processing System visibility Naturalistic User control Consistency Error support Error prevention Recognition not recall Flexibility Minimalist design Help & documentation	...to improve design and access ...to improve content and use
2. Describe user populations & their online behaviour	1. Case Studies Interviews Contextual Inquiry Research Diaries 2. Market Research Online Questionnaire	Adapted Ellis Framework Bottom-up analysis	Starting Chaining Browsing Differentiating Monitoring Extracting Processing	...to improve design and access ...to improve content and use
3. Draw out & illustrate plausible pathways between portal use & uptake of evidence in policy and practice	1. Case Studies Interviews Contextual Inquiry Research Diaries 2. Market Research Online Questionnaire	BCURE's '4 levels of behaviour change' Fishbein's behavioural intentions	Personal behaviour Interpersonal behaviour Organisational behaviour Institutional behaviour Intention Skills Environmental constraints	...to enhance impacts on decision-making
4. Assess whether the portals represent VFM	3. VFM Review Interviews Data Analysis Software Review	DFID's 3 Es VFM Framework	Economy Efficiency Effectiveness (Equity)	...to raise VFM

For *describing user populations' online behaviours*, we adapted Ellis's model of information seeking behaviour which uses generic information patterns of starting, chaining, browsing, differentiating, monitoring, extracting, verifying and ending. It captures the key actions internet research users undertake.

Figure 2 The Adapted Ellis Framework

'Online information behaviour' a draft framework
Starting – identifying where and how to begin a search (to meet a specific information need) e.g. search engines, abstract databases, homepages, etc. and the devices or channels to use.
Chaining – following links to access more information on the same website or on related websites.
Browsing – scanning headings, sitemaps, lists, etc. on a website
Differentiating – bookmarking webpages, printing or downloading material, based on evaluation criteria
Monitoring - Keeping abreast of what's new in an area e.g. by revisiting bookmarked sites or receiving email alerts
Extracting – using search engines and site searches to systematically extract information
Processing, Verifying & Using - deciding what to do with information once it has been found e.g. sharing, citing, etc.
<small>Adapted from Ellis; Wilson; Aguilar; Choo et al.</small>

For *assessing portal quality and accessibility*, Nielsen's ten-point website heuristic evaluation ('expert review') has been adopted. It was originally developed by Jakob Nielsen in the 1990s and is still in use today (Molich & Nielsen, 1990). Although many different sets of heuristics have been devised for specific types of system, none have been devised specifically for portals.

For *'illustrating plausible pathways...'*, we used DFID's Building Capacity to use Research Evidence (BCURE) programme's four behavioural changes model to identify the different levels (personal, interpersonal, organisational and institutional) at which change may occur, supplemented by Fishbein et al's set of variables that determine behaviour (e.g. a strong positive intention or commitment towards performing the behaviour, absence of environmental constraints making it impossible to perform the behaviour, etc.) (Fishbein, 2003), to interrogate these more deeply.

For *testing value for money*, original proposals aimed to supplement the Inception phase preliminary 3Es¹⁴ VFM survey with efficiency studies and detailed webmetrics analysis. This was changed following the Specialist Evaluation and Quality Assurance Service (SEQAS) recommendation to repeat the standard 3Es VFM assessment in more detail.

¹⁴ DFID's 3 Es approach looks at Economy (i.e. are they or their agents buying inputs of the appropriate quality at the right price?), Efficiency (i.e. How well do they or their agents convert inputs into outputs?) and Effectiveness (i.e. how well are the outputs from an intervention achieving the desired outcome on poverty reduction?) (DFID, 2011).

4 Results and Limitations for the Evaluation

This report and its findings are based on a set of evaluation instruments which have some well-known limitations: both the market research and the case studies, being voluntary, are prone to some unavoidable self-selection bias. Questionnaires conducted online must be short, to attract and maintain the respondents' attention and can therefore only elicit relatively short responses from each individual respondent (although when collated and synthesised can – and did – produce a rich body of data); definitions of 'portals', repositories' and websites, in particular, could not be explained at length or respondents' understanding assured so nuances of survey questions were sometimes lost. The case study instruments in particular had to fulfil several information-gathering tasks around the use of the portals which were dependent on participants' goodwill and their (limited) time. The value for money comparator component also depended on the goodwill of website managers with no link to DFID or the evaluation to share potentially sensitive information. All gave exceedingly generously of their time, which we exploited to the maximum. On many occasions however, due to time constraints, we were unable to extract all there was to be had from them.

In eliciting volunteers for the evaluation, we clearly assured participants of their anonymity in the final report. This is part of the code of conduct of the Market Research Society (Market Research Society, 2014) to which Mott MacDonald is accredited. It was also a condition of the Open University's Research Ethics Committee approval of our case study instruments. We are therefore limited in the extent to which we can set out examples of the way in which research evidence has been used.

In answering the evaluation questions, we have synthesised the results from the individual tools to provide as complete findings as possible. Before proceeding to those findings, we set out in more detail the results and limitations of each instrument below.

The evaluation, as directed by the terms of reference, focusses on the role of research evidence *disseminated online*. Our findings, discussion and recommendations therefore focus on online sources in general and online research portals and repositories in particular. This is not to deny that other means of dissemination are also important (these were mentioned in both the market research and the case studies); only that it was not the focus of this evaluation.

Market Research

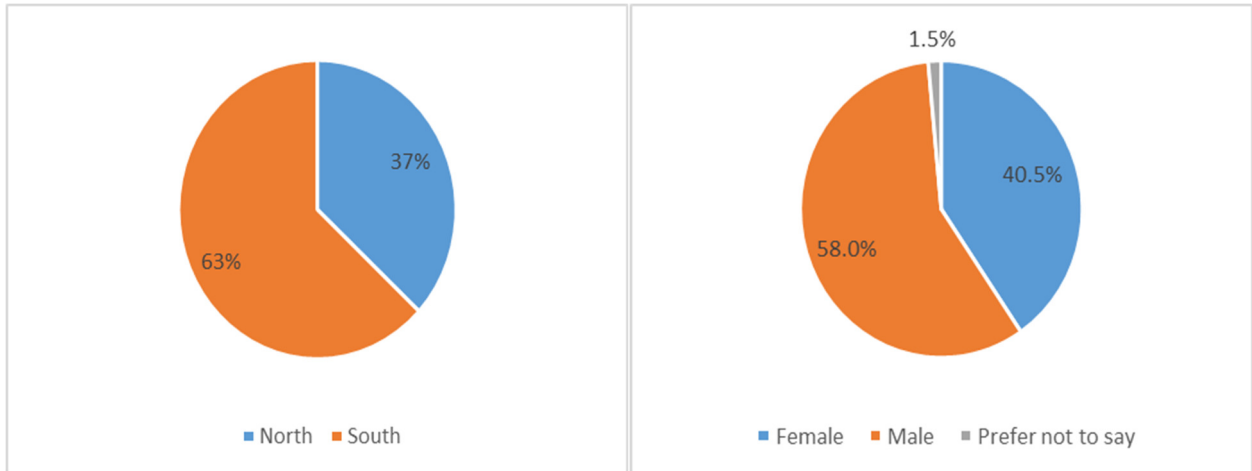
The market research received 950 completed questionnaires¹⁶ of which 671 met the 'Intended User' sampling criteria¹⁷. The composition of these 671 Intended Users is summarised in the charts below.

¹⁶ The response rate to the email invitation issued by the survey team to take part in the market research was 9.2% on average (between 14% to 3% for different waves of issuing). The response rate was as high as (21%) when an open link was emailed to potential respondents by someone in their network. Southern Government contacts were particularly hard to reach through online research. We examine this in more detail and what might be learned from it, in the Market Research Report (Appendix A).

¹⁷ To be categorised as an Intended User of DFID's research portals, respondents needed to (i) belong to one of 7 categories in the North and South, (4 of which applied only to respondents based in the South) and (ii) state in the market research that they have (ever) had to find research evidence for themselves or for other people, for work.

Figure 4 Location of Intended Users sample

Figure 3 Gender of Intended Users sample



Of the full set of 950 market research respondents, 850 confirmed they met the key sampling criteria of having a need to seek research evidence for themselves or others, for work. Of these 850 “research evidence seekers”, 671 fell into the priority groups of development actor identified for this evaluation (referred to as Intended Users) and 63 were identified as being staff working for Multilateral or Donor Agencies and based in the South so we took the opportunity to add a new group to the Intended Users. We therefore had a sample of 734 Intended Users available for analysis.

Figure 5 Market Research Respondent Categorisation

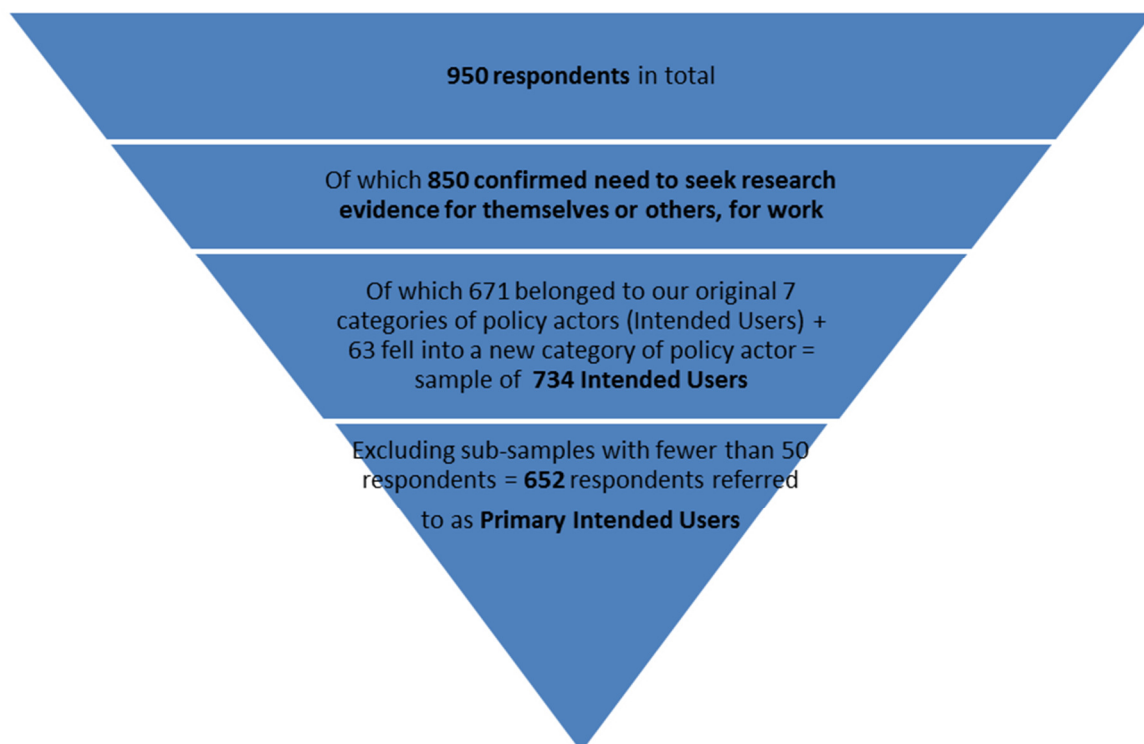
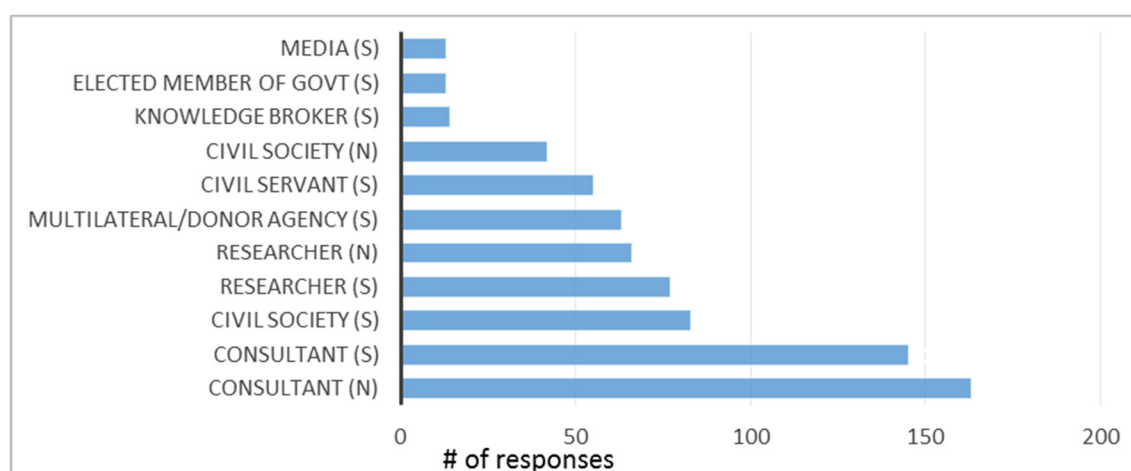


Figure 6 Intended User responses by Category (Market Research)



Locating respondents as ‘Northern’ and ‘Southern’ was predictably problematic, given the highly mobile nature of the international development community. We constructed the definition of North and South using the World Bank’s classification of low and medium income countries (South) and high income countries (North) (World Bank, 2016). Individuals are classified by the country in which they are currently based.

Figure 6 illustrates that four of the original Intended User groups did not reach the target number of responses (50-100 per group being analysed):

- Northern development worker in Civil Society
- Elected member of Southern local or national government
- Southern knowledge broker/intermediary for Southern policy makers (e.g. Parliamentary researcher, Government departmental librarian)
- Southern media professional (e.g. journalist or editor of national newspaper)

This makes them unsuitable for reporting on as separate groups, although their data is included in the wider analysis where appropriate. After excluding the four groups that have fewer than 50 respondents, we are left with 652 respondents across seven Primary groups. These seven primary groups are of different sizes (from 55 to 163 respondents). To avoid this skewing our findings, from this point in the report we present as headline findings the mean average of the percentages across these seven groups, and refer to the sample as **Primary Intended Users**. For comparison purposes, we also present the finding from the full sample of 734 **Intended Users** and from individual groups where appropriate to illustrate salient differences between their behaviour.

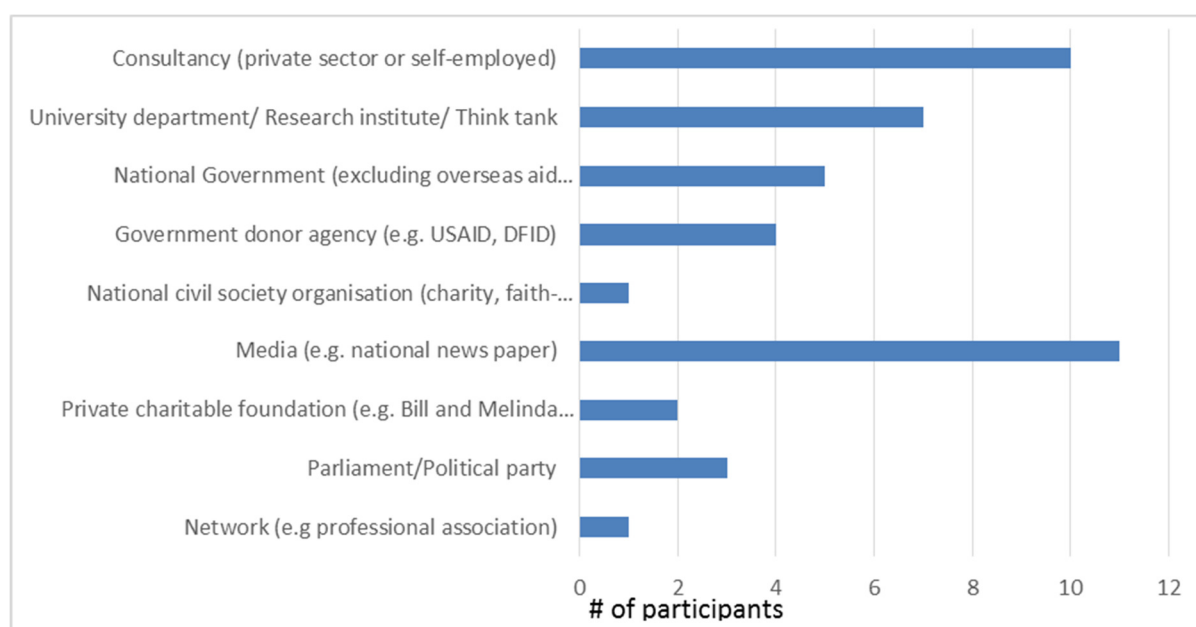
Case Studies

Each of the three country case studies were comprised of long distance interviews, an in-person session, and then a diary study completed remotely. Due to the short period in country there were time constraints and it was often difficult to arrange in person sessions due to the availability of participants. Despite this we managed to exceed our minimum targets for both the in-person sessions and completed diaries.

We had 44 participants in total from three countries: Ghana (14), Nigeria (16) and Tanzania (14). Selecting 3 African countries made analysis and comparison easier since the structure of the three economies are similar and the nature of ICT infrastructure is similar. However, it must be acknowledged that using 3 African countries did not allow us to explore in depth the full spectrum of southern users.

The charts below illustrate the overall distribution of case study participants by Intended User group category.

Figure 7 Case Study Participants by Intended User Category



11 women and 33 men participated in the case studies.

The VFM Assessment

The VFM assessment was conducted on two of the three portals: Eldis and SciDev.Net. Our VFM findings therefore do not relate directly to R4D.

The VFM Assessment Plan, agreed with DFID at inception (see Appendix C), included a comparison with other portals ‘conducted in the spirit of what can be learnt by DFID-funded portals on how other portals approach value for money.’¹⁸ Eldis and SciDev.Net were approached for suggestions for comparable websites but it was difficult to come up with fully satisfactory examples. It was also acknowledged in our risks mitigation plan that any other portal’s co-operation would be at their discretion. In the event, participation of comparator portals was secured from those wishing to learn from us, rather than the other way around. The well-known, leading exemplars we were hoping to engage had no such incentive and

¹⁸ SEQAS feedback on Evaluation Inception report, March 2015.

proved unable to give us much of their time. The comparator portals yielded useful evidence but their own time constraints limited the amount of in-depth material they could provide for us.

There were the expected conceptual challenges in defining effectiveness, and practical challenges in measuring it, both with webmetrics and with qualitative approaches. These are addressed in the VFM section below as they arise.

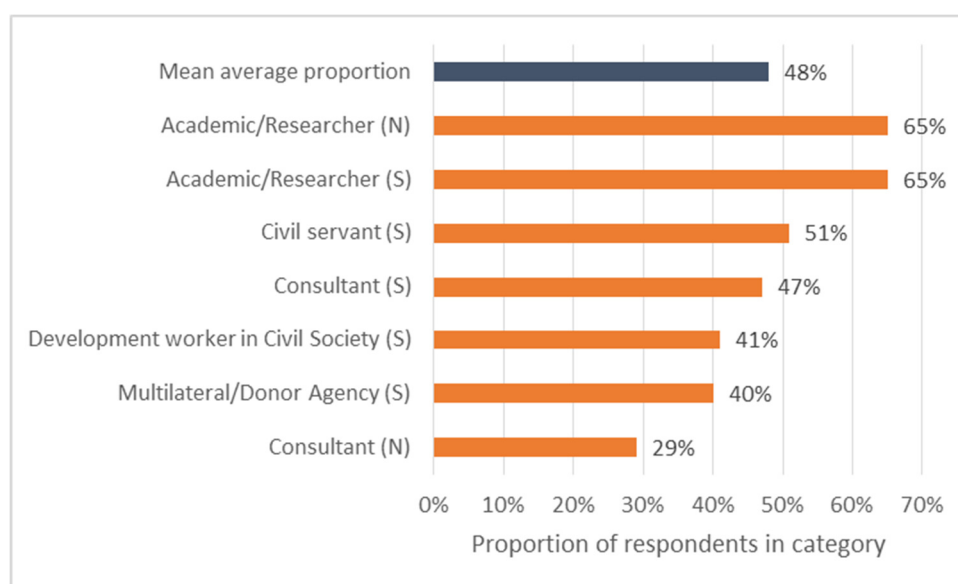
5 Findings and Lessons

5.1 Intended Users and their online information-seeking behaviour

5.1.1 Research evidence-seeking online is frequent, rapid - and impatient

Almost half (48%) of Primary Intended Users¹⁹ said they searched online for research evidence for work ‘a few’ or ‘many’ times a day. The chart below shows how this behaviour varies by category. The numbers of respondents in each Priority Target Group requires large percentage gaps between findings in order for conclusions about differences in behaviour to be inferred but we were able to identify that Academics/Researchers (globally) were more likely to be searching this frequently for research evidence, than any other group.

Figure 8 Primary Intended Users searching online for research evidence a few or many times a day



Case study participants frequently referred to their lack of time to devote to searching and we observed that they tended not to go beyond the first page of results in Google. If they experienced any ‘failures’ (discovering broken links, null returns on searches, out of date material on a website, etc.) they would immediately abandon that line of searching and try an alternative approach, e.g. a different website or search terms. This evidence of impatience is strongly supported by another of our findings: the market research found that it is common for Intended Users to use a search engine as a shortcut to reach a specific website (rather than type the address into their internet browser). The webmetrics for Eldis and SciDev.Net (as well as Zunia, Pambazuka and GSDRC) show a substantial drop off rate where users fail to navigate beyond the page where they have started their session.

Intended Users are *information seekers* not *browsers*. The case study participants in all three countries wanted to go straight to relevant material and not browse through a lot of articles and other information.

¹⁹ Based on a sample of 652 Primary Intended Users. Among all Intended Users, this figure was 46%.

From the market research, we learned that over two-thirds (71%) of Primary Intended Users used a search engine to try to find a specific journal article, report or paper the last time they searched the internet for research evidence. Asked in the market research to describe any problems they commonly experienced with using the internet to find research evidence, nearly one-quarter (23%) of Primary Intended Users who responded reported problems related to searching.

“..difficult to find relevant information [on] the topic you are interested on, so much time is being wasted in getting the right site.” [Southern Civil Servant].

5.1.2 Google gets results

Partly because of these time pressures, a general search engine – and, dominantly, Google - is generally preferred for starting a (often very specifically defined) search for evidence. Our case studies identified two key benefits to using Google when looking for research evidence:

1. Google is more efficient, enabling searching of multiple websites at once:

“easy lead to access information on relevant topics from different sources” [Multilateral or donor agency staff in the South]

“it is easy to use and readily available” [Southern academic/researcher]

“fastest and comprehensive engine” [Multilateral or donor agency staff in the South]

2. Google is more effective – Because Google retains individual’s search histories (when done on the same device), it delivers ‘customised’ search results:

“It gives results” [Northern Development Consultant]

“I work with USG systems and over time Google has ‘learned’ this and commonly drives me to information where USG work sits”. [Multilateral or donor agency staff in the South].

However, anecdotal evidence from the market research shows that this automated behaviour of Google (assuming users’ preferences based on previous searching) is not always welcomed.

“I think it is reliable”. [Southern civil servant]

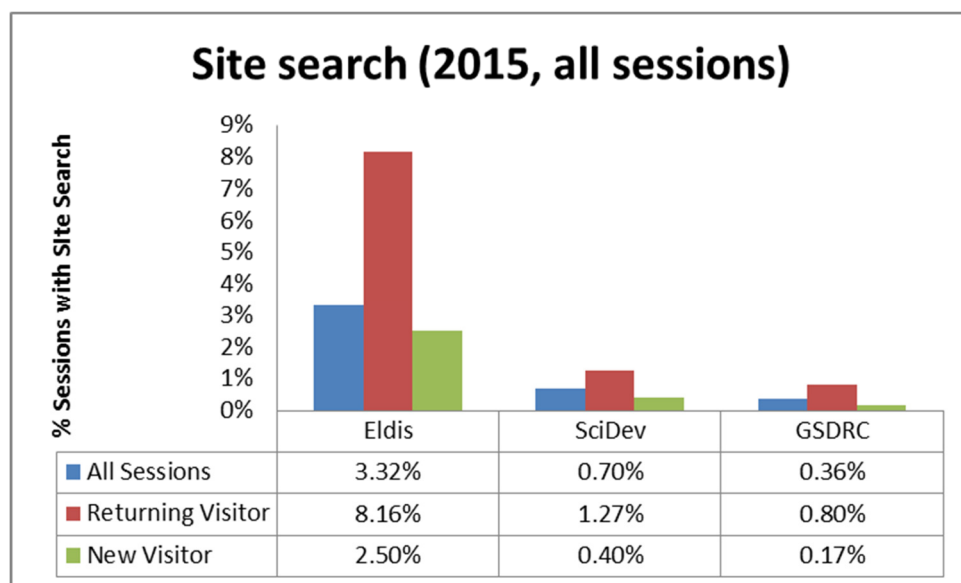
One case study participant [GH1] turned to Google to find material hosted on a DFID portal (and did so successfully), after failing to do so using the portal’s own search function.

This preference for a general search engine over a site’s own search function is supported by the portals’ webmetrics which reveal that few sessions involve internal searches.²⁰ We also found from this data that

²⁰ Eldis’s relatively high showing may be linked to popularity of its Jobs pages.

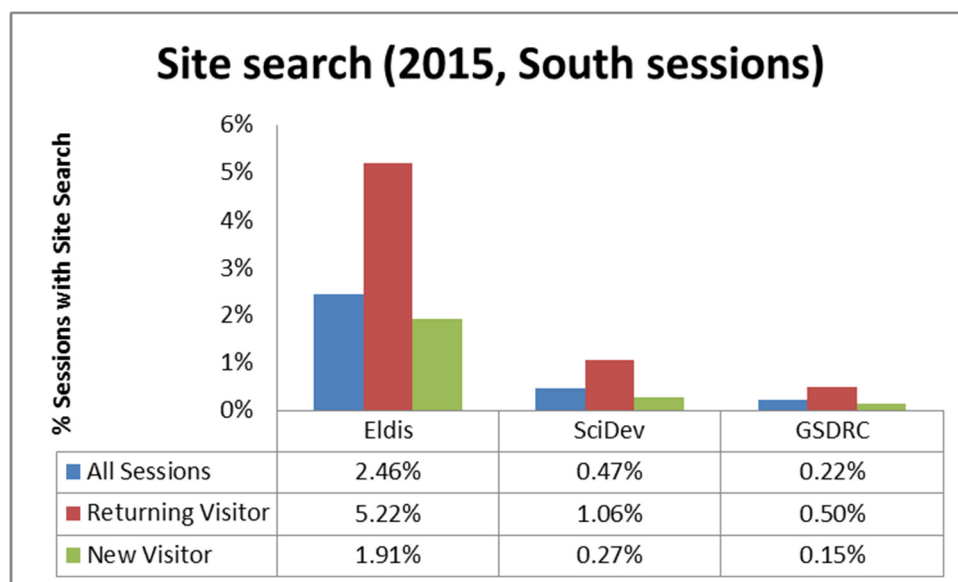
people using the internal search tend to be returning users, suggesting that some familiarity with the internal function is required for it to become useable.

Figure 9 Percentage of sessions with internal search - All traffic data 2015



The situation is similar when looking at traffic from the South (Figure 10), and indeed the percentages are slightly lower than for global traffic.

Figure 10 Percentage of sessions with internal search - traffic from South²¹ 2015



The Market Research data may initially appear to contradict this finding: 43% of Primary Intended Users said they used a website or database’s own search engine during their last search for research evidence. It is possible that some respondents interpreted this to include performing a search on a search engine such as Google; it is also likely that internal searches of repositories - websites intended simply as databases to be searched – are included in the market research respondents’ answers. The finding reflects that the market research attracted a lot of participants who use the internet frequently to seek research evidence. Respondents were asked to name a website they use frequently to find research evidence and explain why²². On average, 1 in 10 of Primary Intended Users who answered the question reported some aspect of ease of use as their reason for using their nominated website. Several respondents complained specifically about poor internal search functions when asked about the problems they commonly experience in finding research evidence online:

“The search engines on the bilateral and multilateral websites themselves are extremely poor and tend to return the most recent and popular items (e.g., blogs, press releases) rather than the Research Evidence items (working papers, data, publications).” [Southern media professional]

The websites most commonly named by Intended Users as sources used frequently to find research evidence were: WHO, World Bank, Google, PubMed, Lancet, ODI, Google Scholar, Cochrane, DFID and UNESCO.

²¹ Traffic from the South was identified creating a custom segment in Google Analytics. The segment filters out traffic that is generated in the following countries/regions: Europe, North America, Russia, Central Asia, China, Taiwan, South Korea, Japan, Australia and New Zealand. Google Analytics geographical data are automatically derived from the IP address of the hit. This may have some possible drawbacks in terms of accuracy, as IP-based locations are approximate. See more at <https://support.google.com/analytics/answer/6160484?hl=en>

²² This question was asked before the question where we name a lot of websites (including Eldis, etc.) so relates to unprompted awareness.

Figure 11 Infographic indicates which websites were most commonly named by Intended Users as sources frequently used to find research evidence.

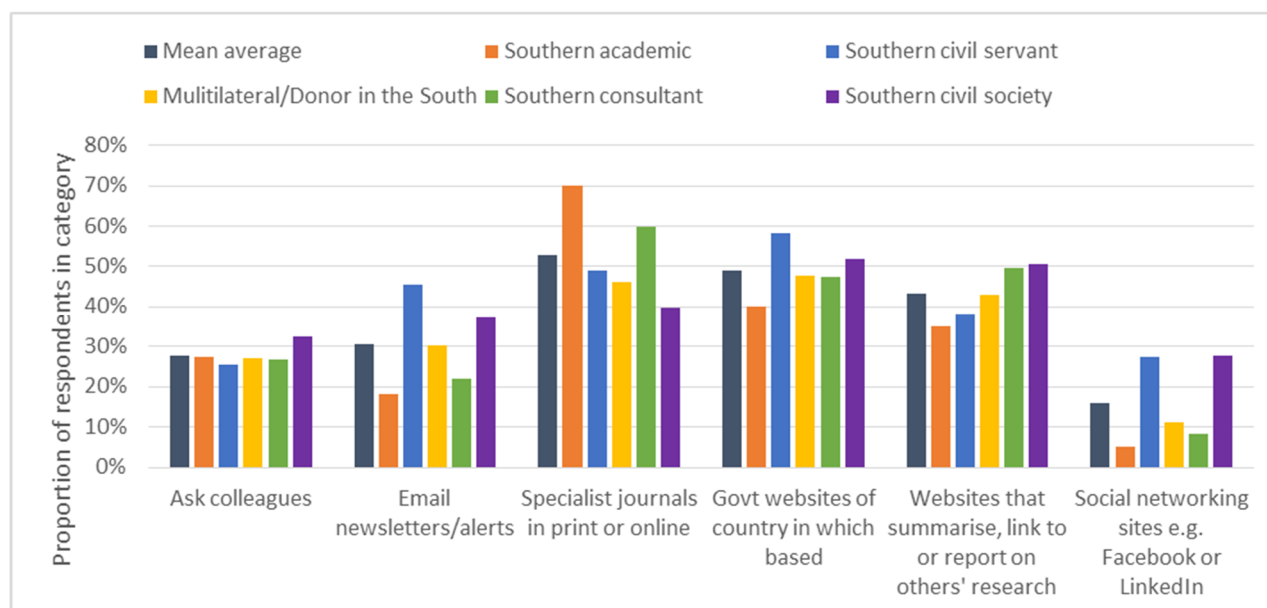


Ultimately, therefore, there is no contradiction in the popularity of Google and the reported frequency of use of internal search functions in the market research: **searches on Google direct users to the site; searches on the internal search function allow users to interact with the site**, once they are there.

5.1.3 Government websites are popular

The market research found that **Southern Primary Intended Users use Government websites almost as frequently as specialist journals**.

Figure 12 Sources used frequently by Primary Intended Users to find research evidence (Southern only), (Market Research)



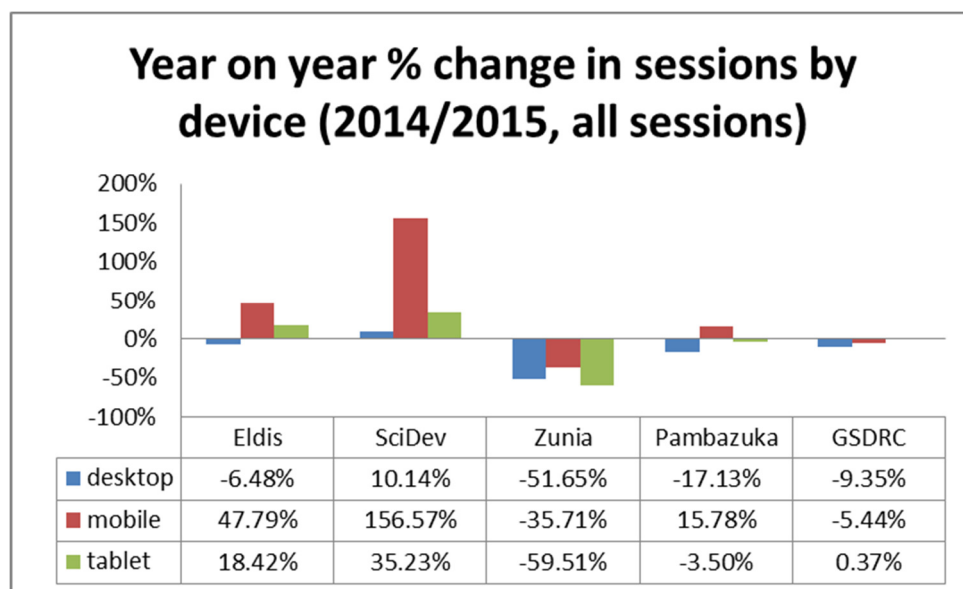
We found from the case studies that **government websites are valued as the source of local and national statistics** (rather than research pieces). However, it clearly depended on the particular country how reliable government websites were perceived to be²³. The World Bank and UN sites were frequently named as the “go-to” sites for international data. We found that very often, **data and statistics were sought independently of research articles**, with the case study participants very focused on information about their own country or region. Case study participants recognised that the definitions used to generate data and statistics and comprehensiveness varies between different sources, which added to perceptions of reliability.

5.1.4 Research evidence-seeking is going mobile

Four out of the five portals examined through their webmetrics (Eldis, SciDev.Net and three comparators) show substantial increases in mobile and tablet use. This includes change of behaviour of existing users rather than the increase solely coming from new users. Mobile sessions from Africa have increased by over 300% in the year on year comparison. This growth in access of sites by handheld devices is particularly notable for SciDev.Net. SciDev.Net has developed a mobile version of their site, while Eldis has not. This may have negative effects in the medium/long term as Google has been expanding the use of mobile-friendliness as a ranking signal. This change, affecting mobile searches, will have a significant impact in Google Search results.

²³ There was widespread scepticism about the reliability of Government statistics in Nigeria, for example, whereas Tanzania government statistics tended to be held in greater regard.

Figure 13 Year on year % change in sessions by device used



The market research revealed that large numbers of Intended Users use handheld devices, with 42% of Primary Intended Users reporting using a computer, a mobile phone *and* a tablet to access the internet. Case study participants were observed to move effortlessly between devices when performing search tasks when access to Wi-Fi internet connection failed [GH5, TZ5, TZ1].

5.1.5 Social traffic is a significant means of encountering or sharing information online

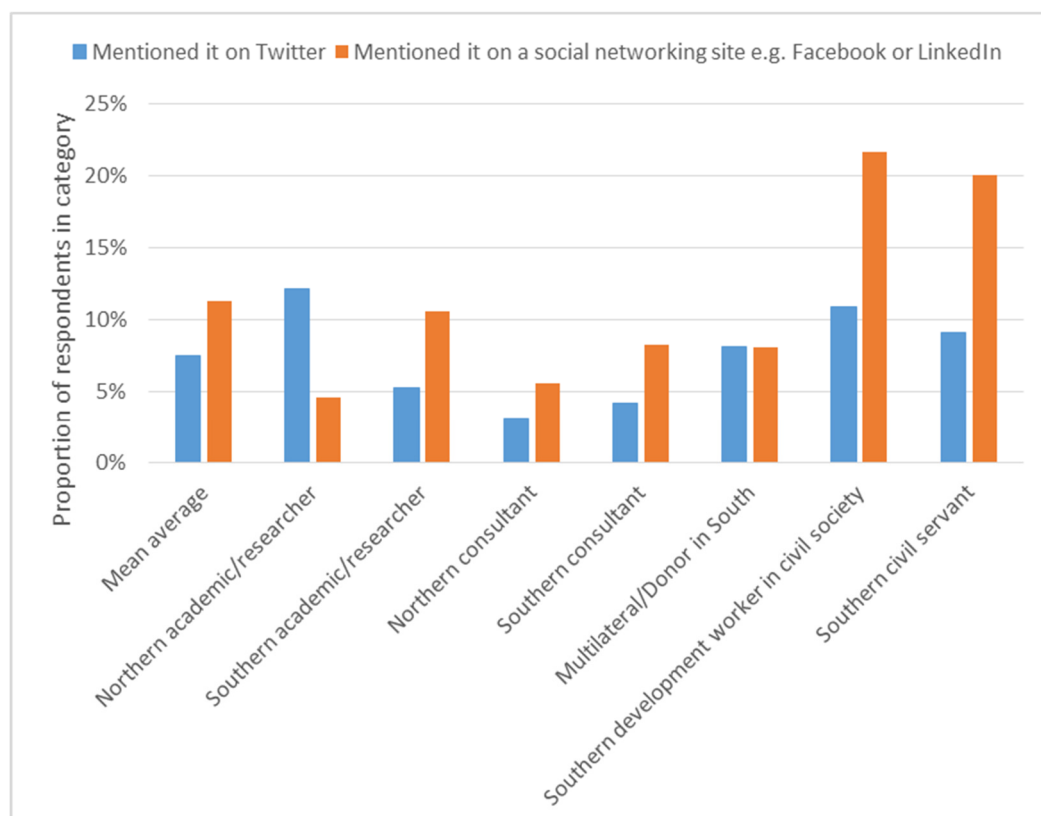
Social media generally is being used to ‘discover’ and share information (although we found in the case study that the portals’ own ‘share’ buttons are noted but not often used). Personal Facebook and twitter accounts are used for sharing or getting online information, rather than portals’ social media accounts or links:

“I read an article on SciDev.Net on the negative effects (bacterial resistance) of increased use of antibiotics in developing countries. I shared the link to the story on Twitter.” [GH10]²⁴

83% of all Intended Users said they kept up to date with their field or sector by emailing colleagues / contacts to exchange information / articles. There is a tendency in the South to use sites such as Facebook or LinkedIn, rather than Twitter.

²⁴ Also commented on or demonstrated by GH10, NIG2, NIG3, NIG10, NIG12, TZ3, TZ8.

Figure 14 Primary Intended Users who mentioned social media research evidence found during last search online (Market Research, 2015)



For SciDev.Net in particular, social traffic doubled (+96.71%) between 2014 and 2015. In 2015 it generated 28% of all sessions at the site, becoming the second largest channel for traffic. Push services such as emails and email alerts were used, although we did find in the case study that sometimes email recipients were unaware of their portal origin.

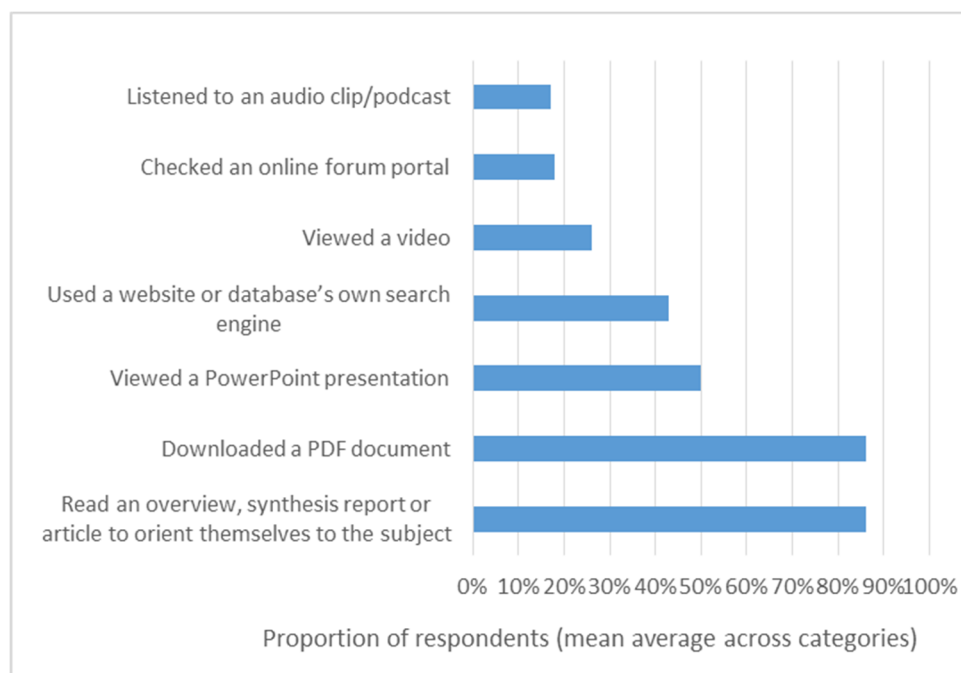
Eldis and SciDev.Net webmetrics suggest that social and mobile traffic between 2014 and 2015 grew at a higher rate for Southern users than for all users. This trend is strongest for SciDev.Net in Africa. This is, in turn, driven mostly by countries in the MENA region (Algeria, Tunisia, Egypt, Morocco and Libya) where social media²⁵ is the primary traffic channel.

²⁵ The popularity of social media as a means of communication in North Africa and the Middle East became apparent in the Arab Spring.

5.1.6 A wide range of media and formats are used when seeking research evidence online

The last time they searched online for research evidence, Intended Users²⁶ employed a surprising range of media, formats and services to do so (see chart below). This suggests **portals’ ‘curation’ role of *collecting, selecting and presenting* research information in a range of different ways is still valued.** It appears that the received wisdom of a *lack of* information for Southern policy makers no longer holds in the way it did.

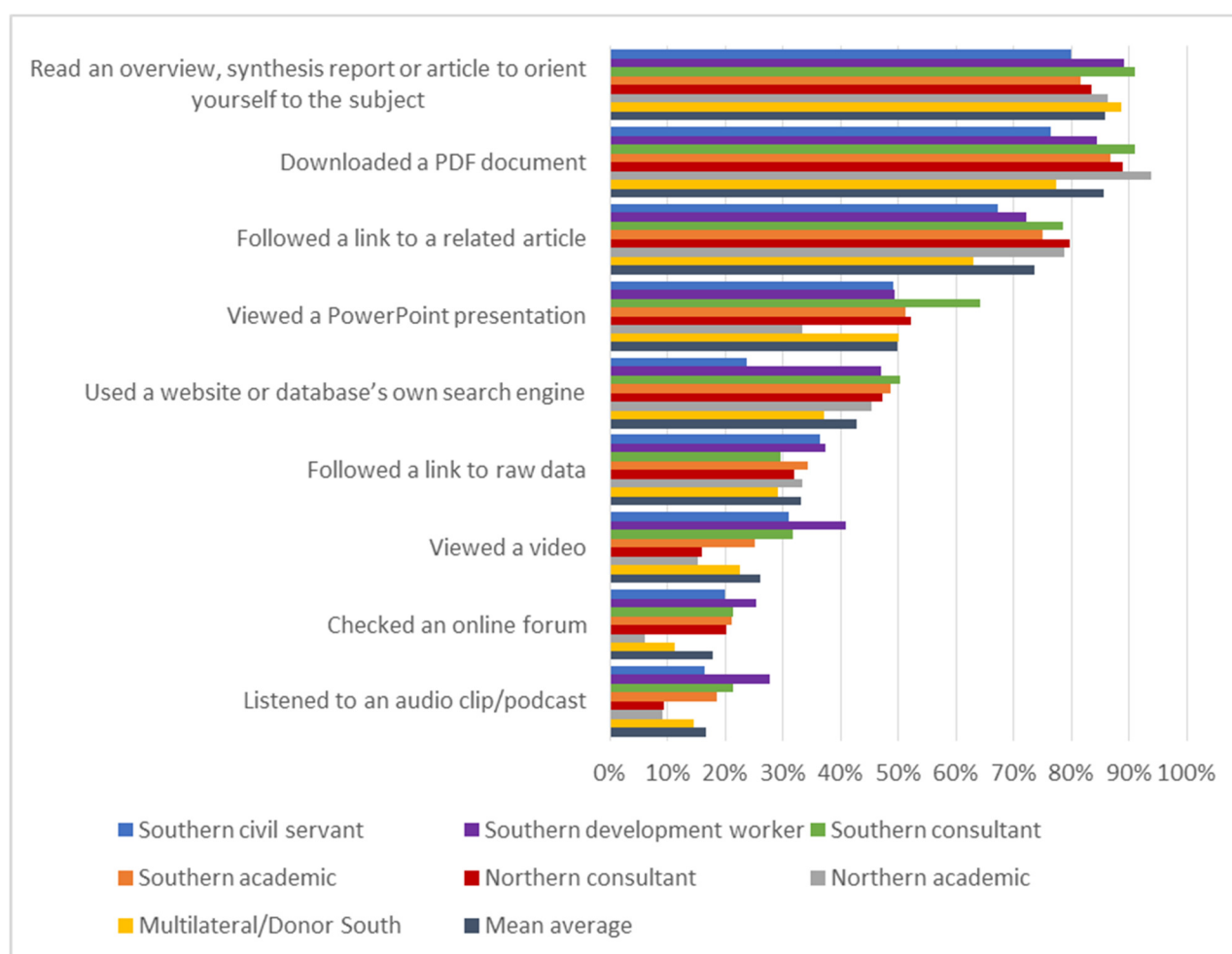
Figure 15 Media & services used by Primary Intended Users during their last search online for research evidence



When broken down by type of user, and focussing on our Primary Intended User groups, it is evident that there is a variation in preferences.

²⁶ N = 850

Figure 16 Approaches used by Primary Intended Users, the last time they searched online for research evidence



59%²⁷ of Southern Intended Users reported there would be some negative effect on their work if websites that summarise, profile, link to or report on other people’s research²⁸, evaluation findings or data were no longer available to them. Participants in the diary study highlighted in particular time implications, delays in getting evidence, the ease of accessing evidence, and challenges in finding out about previous work if portals didn’t exist. Northern Academics and Southern development workers in civil society differ most on the use of multimedia (video, PowerPoint, audio).

²⁷ Only respondents who had previously reported using these types of websites as sources of research evidence were asked what difference it would make to their work if these websites were no longer available; for Southern Intended Users, this was 444 respondents.

²⁸ This description was used in the questionnaire instead of "research portals" due to i) a lack of confidence that respondents would all understand what is meant by the term and ii) in the absence of a satisfactory definition of "research portals" being available

Table 5.1: What negative effects on their work did Southern Intended Users anticipate experiencing if no longer able to access websites that summarise, profile, link to or report on other people’s research, evaluation findings or data?

Types of negative effect on work	Frequency of mentions within 263 responses	% of respondents citing the effect (of 263 Intended Users based in the South who anticipated one or more negative effects)
Time taken to find information/evidence	73	28%
Availability of information/evidence	57	22%
Uncategorised effect (non-specific)	50	19%
Direct impact on quality of work/decisions	22	8%
Harder to find information/evidence	21	8%
Other (only 1 or 2 respondents per effect)	15	6%
Lose valued syntheses/summaries	13	5%
Harder to keep abreast/stay current	11	4%
Would be missing sources in search	8	3%
Affect ability to connect with others	7	3%
Less well-informed	6	2%
Have to turn to physical sources/photocopying	6	2%
Lose a key starting point for searches	6	2%
Harder to judge quality of material found online	5	2%
Forced to find other sources	5	2%
Less able to support writing with evidence	3	1%
Harder to verify/triangulate information/evidence	3	1%
Risk of duplicating research	3	1%

5.1.7 Credibility of evidence found online is assessed initially – and quickly - via the source

The market research asked people how they judge whether they can trust research evidence found online. 62% of Primary Intended Users who answered the question said they use the source of research evidence to help judge if they should trust it; 18% of those who answered listed no other criteria. This last finding varied by group being as low as 8% for Northern Academics and as high as 27% for Southern Consultants:

“ [!] usually trust the research evidences published in an authentic source, for example; UN, DPs²⁹ (DFiD, USAID, DFAT...), international organisation, national but renowned organisation.. Also the agencies whom the DPs and UN bodies trust” [Southern Consultant].

Case study participants were asked about credibility and use of evidence³⁰ and the source was frequently cited across all countries and all categories of Intended User. ‘Source’ includes the author, the author’s affiliation, the host website, or a respected ‘referee’ (either an individual or a peer reviewed online journal).

“The key of trust is the source and the messenger” [Multilateral/Donor agency staff in the South].

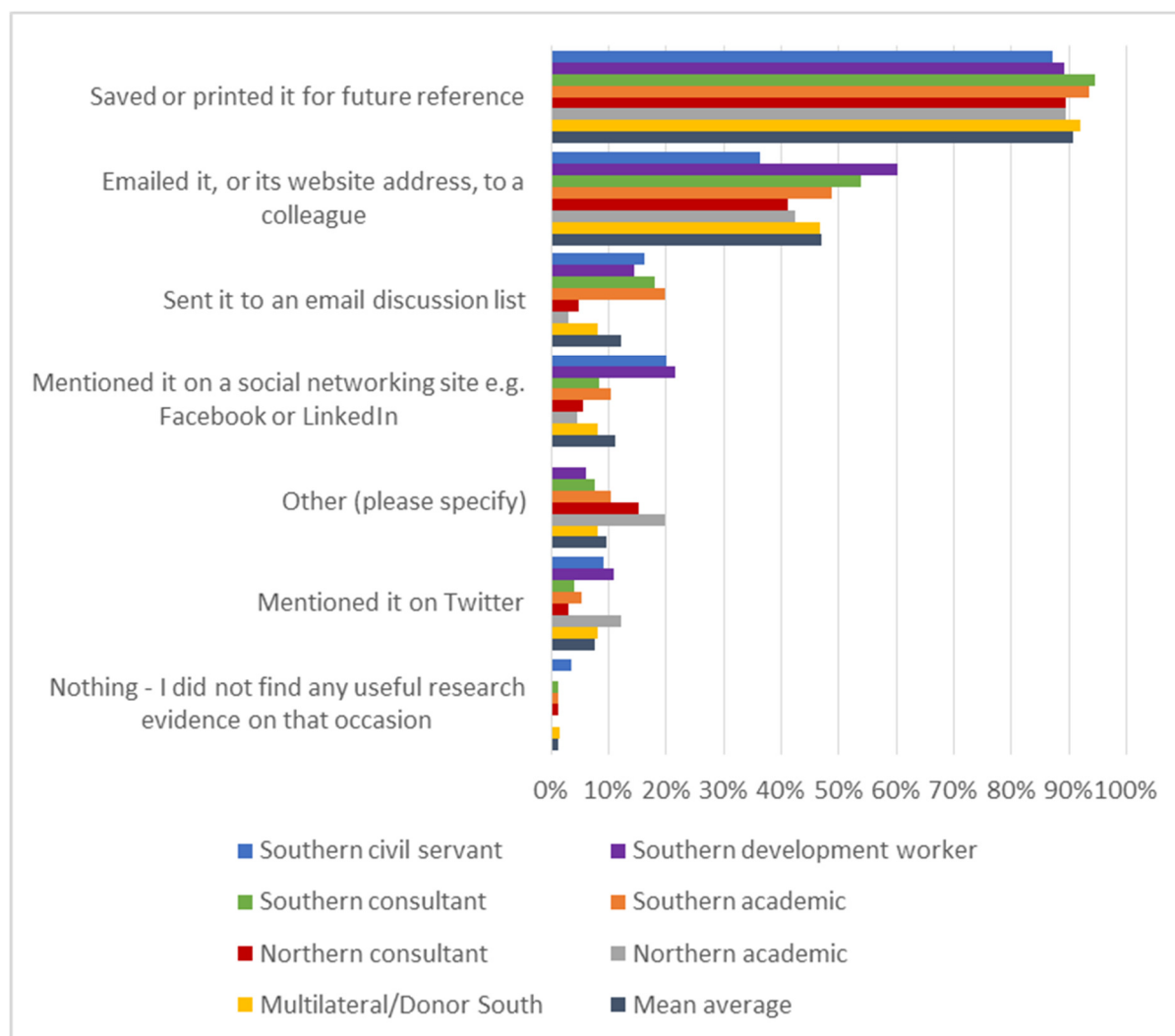
Other methods for judging research evidence that do not require reading of the content or assessing the research design, such as what kind of peer review process it had been through, citation metrics, references within the bibliography, were occasionally mentioned but a lot less frequently.

Since the majority of users (around 90%) saved or printed what they found for future reference, (see chart below) it is likely that this **judging of research evidence found online is a multi-stage process**: credibility is assessed first, during ‘speedy’ searching (*Do I trust the source? Does the material appear trustworthy?*), with validity assessed in longer time (*Do I trust it, having read it?*). This latter process may use more detailed methods: among the market research respondents, 20% of Primary Intended Users (who gave an answer to the question) do not judge research evidence in isolation and made specific reference to triangulating, cross-checking or comparing the research evidence with what they already knew or with other sources.

²⁹ DP is an acronym used by the market research respondent. We imagine it stands for Development Partner but cannot be sure.

³⁰ see user profiles in Appendix B

Figure 17 What Primary Intended Users did with research evidence found as a result of their last search online



In view of the pressurized, 'impatient' nature of searching online, this first 'trustworthy source' filter stage is critical: being a trusted source was the most common reason given by market research respondents for why they relied on particular websites for research evidence (37% of those who gave usable responses to the question). For Primary Intended Users, this was 28%, reflecting the variation between groups from as low as 21% for Multilateral/Donor agency staff in the South, to 38% for Northern Academics. A larger proportion of Southern development workers in civil society (60%) shared what they found by email, compared to 36% of Southern civil servants. Southern development workers were also more likely to have mentioned it on online social networks (Facebook, etc.) - 22% compared to 5% of Northern academics.

From the case study and market research, websites that emerged strongly as trusted sources included international aid agencies and organisations such as World Bank, WHO, UN and DFID; citation databases (especially PubMed) and peer-reviewed journals.

5.1.8 Southern users *per se* are not different in their information behaviour

As directed by the terms of references, we have throughout aimed to identify differences between the North and South among Actual and Intended Users of the portals. Broadly speaking,³¹ however, neither the webmetrics nor the online market research identified striking differences based purely on the North/South divide.³²

Instead, the notable differences are seen when variables are combined (gender, location, occupation) and suggests difference may be driven by what this means for Intended Users in terms of time constraints, purpose in seeking research evidence, information literacy, etc. For example, while there is a gap between Northern and Southern Intended Users who report frequently using email newsletters as a source of research evidence, with 22% (North) and 37% (South), this gap is even bigger when comparing Northern Academics (21%) and Northern Consultants (20%) with Southern Civil Servants (46% of whom said they frequently use email newsletters for this purpose).

Some other examples of how these combinations affect Intended Users include:

- The biggest differences in information behaviour in the market research are seen between (global) **academics/researchers** and **Southern civil servants**
- The market research found that **women (especially Northern) are more likely than men (especially Southern) to use email newsletters/alerts** as a tool for keeping up-to-date on their sector or profession. But there is no distinct difference between gender when respondents were asked about their use of email newsletters as a source of research evidence³³.

Academics are, as might be expected, much more likely to report frequently using specialist journals in print or online to find research evidence however there is no obvious difference between North and South (82% and 83%). There is also no large enough difference between the Southern target groups of Intended User to suggest that any non-academic groups use specialist journals more frequently than others. **People who have had formal training in searching the internet for research evidence are more likely to use the internal site search** and **women are more likely than men to have had this kind of formal training** (38% of women compared to 27% of men).

³¹ The portals' webmetrics suggest that social and mobile traffic between 2014 and 2015 are growing at a higher rate for Southern users than for all users.

³² The case study research focused purely on participants based in the South.

³³ 35% of female respondents reported using email newsletters/alerts frequently as a source of research evidence compared to 30% of male respondents.

5.1.9 Key lessons: Intended Users and their online information-seeking behaviour

- **It is appropriate to put effort into making research evidence available online** given the evidence of demand among DFID’s Intended Users and of the frequency with which they turn to the internet to find it.
- Intended Users often rely on Google to direct them to relevant content and if a website does not appear on the first page of results, it is unlikely to be visited. Therefore, **understanding the search terms people use and how this affects Google searches is critical.**
- **Search engine optimisation is key for online research portals and their content to be found by their Intended Users**
- **Government websites are important sources of research evidence**, particularly data, and particularly for Intended Users in the South.
- **Handheld devices, especially mobiles, are increasingly important ways of reaching Intended Users** with research evidence.
- **Social media can be a useful resource for some Intended Users to encounter or share information.**
- When research evidence is made available online, **it is more useful to Intended Users if it is portable - and easy to scan** for the key points.
- **Understanding what signals reliability and promotes “trust” in the Intended Users of research evidence, is important;** a common influencing factor is association with organisations perceived to be authoritative (especially UN organisations, governments or research institutes).
- **There is evidence of differences between specific groups of Intended Users** (e.g. Global Academic/Researcher compared to Southern Civil Servant) so **an undifferentiated approach to using the internet to reach Intended Users with research evidence is likely to have limited success.**
- **The term “research evidence” is not understood by all Intended Users in the same way** and was completely new to some of the research participants, so should be used with caution; “data” and “statistics” are more commonly used terms.

5.2 Quality and accessibility: How the DFID-funded portals and repositories measure up

In the Inception report, we identified three aspects of portal quality: service quality (discussed in 5.2.1 of this report), system quality (discussed in 5.2.2, 5.2.3, 5.2.4, 5.2.5) and information quality (discussed in 5.2.6). For System Quality and Information Quality we draw primarily on the results of the face to face sessions in the case studies and the heuristics evaluation³⁴, with additional information from the market

³⁴ The Heuristic Evaluation exercise that was conducted at the end of the Inception phase was repeated after the remainder of Stage 2 was completed, and hence was conducted with an understanding of the Intended Users in mind. The exercise identified problems

research where relevant. Overall, of these three, **the DFID-funded portals we reviewed are most highly regarded for their information quality**. Service and system quality are more problematic.

Terminology used to discuss internet portals in general lacks clarity. This is particularly pertinent when discussing an evaluation, which necessarily addresses different elements of a portal and the project supporting it. Not only are there different types of portal, but when discussing evaluation concepts, distinction needs to be made between two key parts: the content accessible through the portal; and the mechanism used to access that information, e.g. smartphone app, email newsletter, social media, website interface etc. In addition, we have noticed that 'portal' is often used as shorthand for the whole endeavour that supports the portal activity including the project team, infrastructure, software platform and content. In the following, we have aimed to distinguish clearly which part is being referred to when.

Table 5.2: Simple Conceptual Framework for assessing portal quality and accessibility

Service Quality	The overall support delivered by the service provider as perceived by the user, including support before and after the product's use. Some service issues such as internet availability may be outside the control of the service provider but nevertheless impact detrimentally on the perceived service quality.
System Quality	The desirable characteristics of the portal which may be defined in several ways, such as through usability and user experience goals, widely-accepted design principles or usefulness which combines utility (it fulfils what the user needs) with user experience (it is a pleasure to use).
Information Quality	The desirable characteristics of the information held by the system, such as accuracy, meaningfulness, timeliness and trustworthiness.

5.2.1 Generally, the internet is increasingly available, although cost can still be a problem

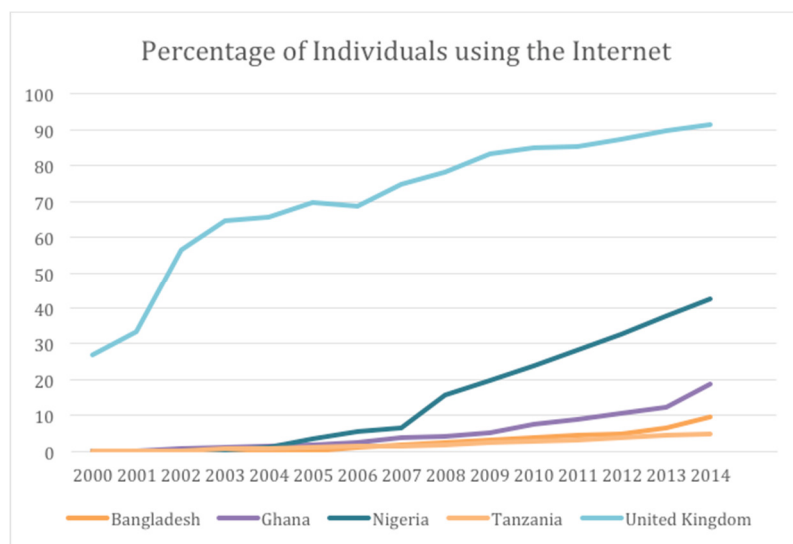
Portal accessibility is predicated on wider internet availability. Availability of information and communications technologies continues to grow worldwide, with mobile-cellular technologies the driver in the developing world (United Nations, 2014).³⁵ There is a similar growth in internet usage in our Case Study countries, with Nigeria leading the way.³⁶

for all three portals, particularly in the areas of navigation, search, content and trust. The full evaluation results are in Appendix B and are referred to here as appropriate.

³⁵ For instance, while the subscription rate in developing countries increased from 22.9% in 2005 to 91.8% in 2015 (a 400% rise), that of developed countries only rose from 82.1% to 120.6% within the same period, representing a 140% rise.

³⁶ See data for each country in Appendix B.

Figure 18 Percentage of Individuals using the Internet in selected countries³⁷



We noticed in all three Case Study countries that **many participants had more than one mobile number**. They told us that this was because they needed access to multiple mobile networks to give greater reliability for making phone calls and to take advantage of different pricing plans.

20%³⁸ of Intended Users based in the South said they commonly experienced internet availability problems, primarily low bandwidth and/or power failure. **73% of Intended Users globally (out of 732 asked) reported commonly experiencing one or more problems with availability** when looking for research evidence. Of those experiencing problems:

- More than 1 in 3 (38%) reported **problems relating to either paywalls or firewalls**
- 1 in 4 (25%) reported **problems with searching** (either their own skills or site functionality)
- 1 in 5 (20%) reported **problems with internet availability generally**

“Despite having Hinari access, some journals are still not freely available online. Internet speeds still poor, unreliable and expensive in Malawi. Power often down when speeds are faster!” [Market Research respondent Southern Academic/Researcher in Health]

There are indications from the case studies that **the situation may be worse in government offices** and where individuals do not subscribe to internet connection themselves.

“For this office I don’t get much journal articles because we don’t subscribe to themI am able to get access to them when I go to the University” ...“I don’t get internet in my office regularly, and even when it is available, it is not always fast”. [GH12, Parliament]

³⁷ extracted from http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2015/Individuals_Internet_2000-2014.xls

³⁸ Based on question asked of 461 respondents classified as Intended Users based in the South.

The *perceived* reliability of internet availability influences information behaviour, for example opening several interesting documents in separate tabs so that they are downloaded before reading in detail or deciding whether to save in case connection is lost; saving all documents before closing the session in case they can't be found again.

Many individual case study participants subscribed to their own mobile connections where they could afford it, e.g.

- GH1 (Elected Official) uses phone and hotspots for internet connection outside Accra.
- NIG 8 (Civil/Public servant) uses the mobile phone for internet connection when there is power cut in Lagos.
- TZ2 (Academic/researcher) uses phone for internet access when the internet in the office is not working.

The cost of internet access is still a problem for a subset of participants. Table 5.3 indicates the relative cost of a 1GB broadband bundle in each of our three case study countries together with the average monthly household income. From this it appears that Nigeria is relatively more expensive than the other case study countries but participants across all three commented on cost.

Table 5.3: Relative cost of 1GB broadband bundle in Ghana, Nigeria and Tanzania

	Average monthly household income (in USD purchasing power parity) ³⁹	Cheapest monthly prepaid mobile 1GB broadband bundle (in USD) ⁴⁰	Cost of cheapest monthly prepaid mobile 1GB broadband bundle as a % of monthly income
Ghana	510.66	3.72	0.73%
Nigeria	404.36	50.99	12.61%
Tanzania	245.01	10.17	4.15%

The cost of articles themselves is still perceived as a barrier, but may be an indicator of quality to some:

“if something is free, it’s a good thing, but sometimes you doubt the information if it’s free” [GH4, Ministry of Education]

A different aspect of cost that affects service quality is where a website links to articles that are hosted on pay-walled sites. If a website claims to offer free access to information but the linked host site has its own paywall, then this can be particularly frustrating and lowers the perceived service quality.

5.2.2 DFID funded portals’ content is valued and considered of high quality....

Several case study participants found useful information and wanted to read more, bookmark the sites and return at a later date:

“that’s very useful ... relevant to my work” [TZ7];

³⁹ Research ICT Africa (2013) *Understanding what is happening in ICT in Tanzania*

⁴⁰ Research ICT Africa (2013) *How do mobile and fixed broadband stack up in SA?*

"I will come back to this website [R4D].... for more information on DFID projects" [NIG10];

"This source is full of credible information for researchers like me" [TZ5 diary on R4D].

The summaries provided by SciDev.Net and Eldis would be valued more if they linked to more in-depth information [GH7, NIG4]. Two of the participants [TZ8, NIG8] signed up for SciDev.Net as we recorded the session. Market research respondents also commented positively on many aspects of the portals' content:

About Eldis: *"very complete information - diverse sources - up-to-date reports"; "... it compiles some information in a way others do not do"; "good judgment in selection of publications and good summaries; sometimes points me to material in other fields than my own"*

About R4D: *"systematic reviews very useful"; "has global information with seemingly little political bias or propaganda"; "it offers an excellent range of information (reports & projects etc.) - it's one of my bookmarked websites to refer to"* [Southern development worker in civil society].

About SciDev.Net: *"I get information regarding the science and development together through original news and analysis"; "Interesting and useful articles in my domain (food security)"; "It is a good source of research evidence that is reliable"; "there are interesting guest articles linked to new research, engaging themes of discussion, summaries at the start of each article, language which isn't too academic, and good social media sharing of these new blogs/articles/reports"*.

In addition, our findings show that DFID is viewed as a trusted source by both market research respondents and case study participants, e.g. *"I used them < SciDev.Net & R4D> because I trusted the information posted in these website"* [TZ5 diary], *"I think the written output of DFID is of good quality and I trust the products they put their name behind"* [Northern academic/researcher]

5.2.3 ...and there is potential to increase the portals' awareness and use

We concluded above that both case study participants and market research respondents emphasized the source (variously defined) as an important criterion for judging whether to trust research evidence found online. Case study participants also show a strong preference for using general search engines to start information searches, and a tendency to focus attention on the first page of results. In this context, **awareness of a website among its Intended Users and what they associate with the website are likely to have a strong influence on use.**

Among case study participants, awareness levels of the DFID funded portals were low in general,⁴¹ with R4D being the least well known. Indeed some participants who had worked on DFID projects for years had not heard of the portals [GH11, NIG01, and NIG09]. The UN and World Bank websites, by contrast are widely known.

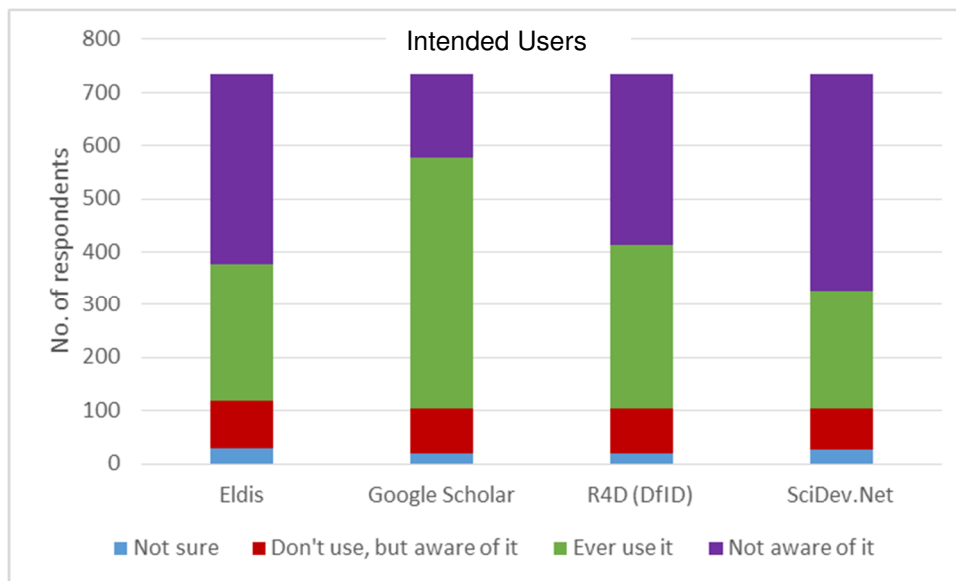
⁴¹ 38 out of 44 case study participants did not know any of the DFID-funded websites; 5 received the associated newsletters but did not know about the underlying website.

Out of 44 case study participants, only 6 had used any of the DFID funded portals at any time, and 5 more were aware of the associated newsletters but not of the portal underlying it. The 37 who did not know about the portals, were surprised to learn of their existence, and in the case of one participant who had worked with DFID for many years, “shameful”:

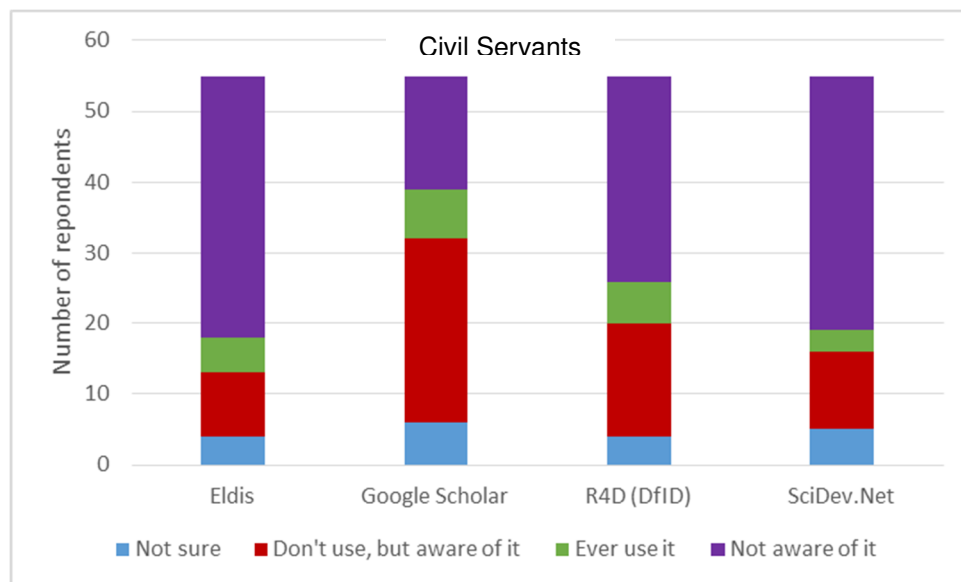
“I’ve never heard of these anywhere. I feel shameful... especially if you are working on a DFID-related project, you want to be efficient” [GH11]

The market research results were more encouraging, finding that among all Intended Users, awareness of the DFID funded portals ranged between 41% (SciDev.Net) to 54% (R4D), with Eldis occupying the middle at 47%.⁴² As a benchmark, awareness of Google Scholar, a web search engine that indexes scholarly literature, among this same group was 76%. See chart below.

Figure 19 Awareness and use of the DFID-funded portals and Google Scholar amongst Market Research respondents (Intended Users and Civil Servants)



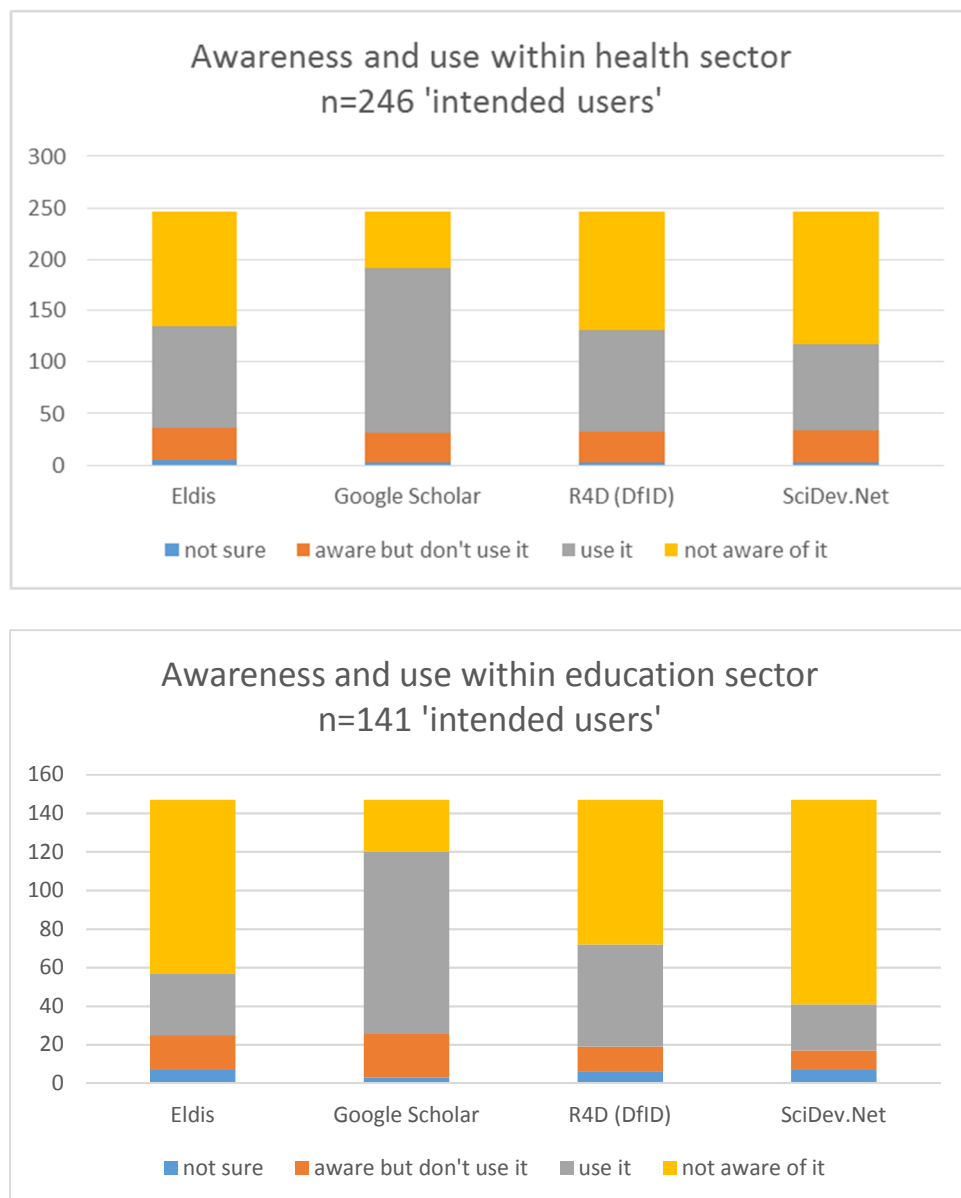
⁴² 119 Intended Users said they use all three portals (Eldis, R4D and SciDev.Net), including six Southern civil servants (in a mix of sectors and countries). 16 Intended Users said they were aware of but did not use any of Eldis, R4D and SciDev.Net. 198 Intended Users are aware of none of the three websites, (about the same number of Intended Users who are aware of all three portals).

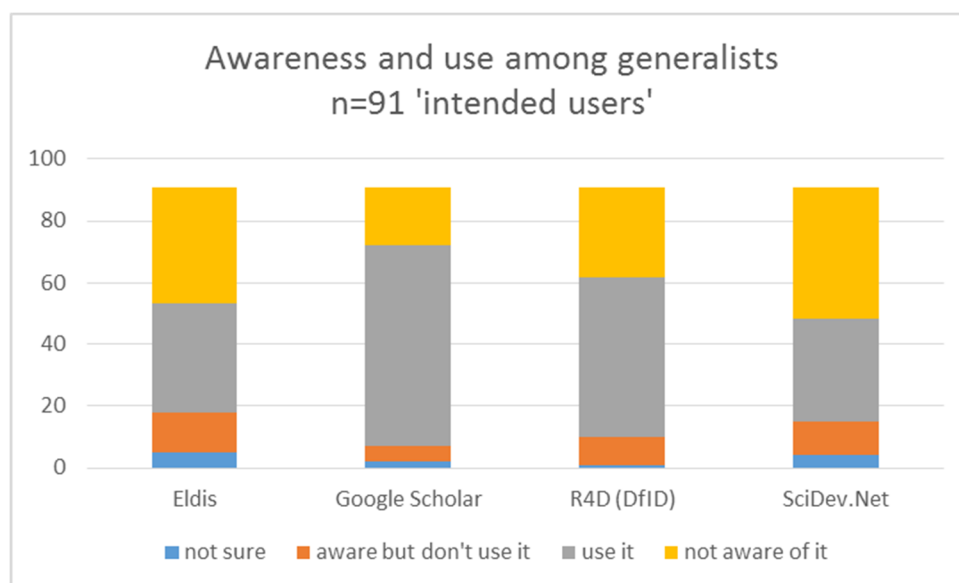


To test whether this conclusion is sensitive to the individual user's sector focus, the same analysis was carried out on three different sectors⁴³: health, education and 'generalist'. Generalists tended to have a somewhat higher level of awareness of each the DFID portals (as befits the portals' generally broad content) and education sector respondents had a somewhat lower level of awareness of them. Overall, however, the broad conclusion that awareness amongst intended users compared reasonably well with Google Scholar, is upheld.

⁴³ Selected on the basis that 50 Intended User respondents to the Market Research identified themselves as specialising in that sector.

Figure 20 Awareness and use of the DFID-funded portals and Google Scholar amongst Market Research respondents by sector





The key conclusion from this is that all the portals have unmet potential to increase their use: between 21% (R4D) and 26% (SciDev.Net and Eldis) of those who were aware of the portals reported that they did not use them. This response cuts across sectors, Intended User categories and countries. By comparison, Google Scholar’s unmet potential for use, measured in this way, was 15%. It is reasonable to conclude that there is the opportunity to both increase awareness and use by understanding what needs the portals are failing to meet for Intended Users.

5.2.4 Eldis, SciDev.Net and R4D have problematic design characteristics

More detail for each portal is presented in the subsequent sections, but all of the DFID-funded portals (R4D, Eldis and SciDev.Net) exhibit certain design characteristics which our participants and respondents found problematic. Some of these are due to the users’ information behaviour as described above.

One overarching conclusion from this set of problems is that the **portals’ web interface features are not designed to encourage first time users⁴⁴ to become regular users**, i.e. these characteristics put off Intended Users from returning. We accept that portal managers may have chosen not to focus on the web interface as the main or only way to access their content, or to increase their audience numbers, e.g. by focusing on social media and newsletters instead, but the impact of this choice on Intended Users coming to the web interface should be recognised.

The portals appear to support browsing rather than an immediate, targeted, need. The information behaviours found in section 5.1 revealed that participants are characterised by their time pressure. On the other hand, the three portals encourage browsing rather than fulfilling an immediate targeted need, either explicitly by providing “browse by” buttons, or implicitly by having a very busy home page that takes time to

⁴⁴ “First time” users relates to people visiting the homepage for the first time

comprehend. Finding information relevant to their needs and finding a specific article was difficult for many case study participants.

The portals' internal search engines do not behave as expected and the display of results is not clear for the users,

"...so what I do is go to page one because what it does is it puts the most relevant up [the top]" [TZ6],

"These are not complete sentences so... <it is hard to see what's there>" [GH11].

Webmetrics show that **only tiny proportions of visitors to Eldis and SciDev.Net use the internal site search function** (3.3% Eldis and 0.7% SciDev.Net). A clear indication from the case study experiences for this is that the search engine and its results are poor:

"I don't know where to start to look for the information", [Northern Development Worker in Civil Society]

"the search function is not particularly user-friendly". [Northern Development Consultant]

Some reactions in the market research to the question why DFID funded portals that were known but not used more included references to their search functions:

"Pay money to sort the search platform. If you want to see good examples of platforms that can handle an infinite number of search sets with unlimited download options, look at Ovid and Ebsco. In fact why don't you just use the OvidIt would have dramatic effect of people using it..." [Northern, Librarian/Information professional]

Navigation of the DFID-funded portals in general is perceived to be complex, with case study participants finding it difficult to find relevant articles through the menu. There was confusion about the menu structure and what material might be categorized under each menu.

"For me the data would have been something like statistics. Maybe the word 'data' has been misused" [TZ1];

"...there is also resource guides. I hope this guides you how to use the site" [TZ3];

"Education is under 'communication' – why? I feel it is hidden. Maybe I don't understand" [GH5]

Participants don't easily perceive what the purpose of the portal is, and hence what they might find there.

"This topic [what is Eldis] should have been at the top here" [NIG2].

In addition to difficulties navigating to find specific articles or information, many participants experienced difficulties in finding the portals' home pages from within the site and would use the back button to return there [GH3, GH4, GH5, NIG7, NIG1, and TZ10]. While finding the home page itself is not a crucial task, this lack of clarity is indicative⁴⁵ of sites that are too busy or are confusing to navigate. A homepage has two main goals: to give users information, and to provide top-level navigation to additional information inside the site (Nielsen, 2013). From our findings it seems that the portals are not meeting these two main goals; for example, banner headlines on SciDev.Net misled participants as to the focus of the portal, (NIG2 and NIG12 thought it is focused on climate change). For Eldis, NIG3 and NIG4 ask whether the portal is an academic portal, GH9 thinks it is an agriculture portal, and TZ4 asks whether it is for development. For R4D, GH01, GH06, NIG12, NIG01, TZ5, and TZ12 were all unsure about what they would be able to find.

5.2.5 Eldis homepage frequently failed to load

During the in-country studies, few problems were experienced with loading the portals or in downloading specific articles, unless the internet connection itself failed. However, Eldis was particularly difficult to load in all three countries.⁴⁶ Participants GH12, TZ5 and NIG10 (and others) waited over 4.5 mins for Eldis to load, and then gave up. In all circumstances the other two portals loaded relatively easily, on the same device, over the same internet connection and at the same time of day. This kind of failure is very off-putting for users:

"I would just go to another portal" [TZ1]

There is a huge amount of information available through Eldis and this was recognised by our participants,

"there's so much information in here" [GH11]

"I would like to spend a whole day reading from this page...this is the core of my work... to make sure my work is informed by evidence" [GH4]

"good repository of grey literature as well as published." [Southern academic/researcher]

"It offers a lot of information on development work as well as manuals or handbooks valuable to our policy work." [Southern civil servant]

"Because it is really useful, and maybe the most efficient - among the ones I know - in terms of "value for time" and relevance of the findings." [Northern development consultant]

The summaries and attempts to provide structure were also appreciated:

"I like the summary provided....it helps you to decide whether to download the article or not" [NIG02]

⁴⁵ The importance of homepage design is underlined in a 2013 article from Jakob Nielsen who states that "Corporate homepages are the most valuable real estate in the world." (Nielsen, 2013)

⁴⁶ Eldis's own routine download time tests contradict this finding.

However, **the wealth of information available makes it particularly important for access mechanisms to be clear and straightforward.** For portals, these rely on two main features: their navigation/structure and their search function. Regarding navigation and structure, the division of topics into sub-topics and filters for the information was welcomed but navigation was a key design problem. This became evident through both the heuristic evaluation exercise and the user interaction sessions. For example, it is easy to become 'lost' within the navigation structure, and through the various levels of filter and specialisation. These options could be very valuable but they are not signposted sufficiently and so users may misunderstand what they are seeing and become confused. This uncertainty was also evident in the user interaction sessions. For example GH1 loses their way when seeking information about microfinance and WASH. GH1 applies the HEALTH filter but there is no feedback (such as a visual cue) that would help the user understand what has happened and so GH1 becomes confused. Having a link to the British Library for Development Studies (BLDS) print collection in the middle of a country profile is also confusing.

Regarding the search function, many of the issues raised in both Heuristic Evaluation exercises (before in-country studies and after them) related to search in one form or another, either because of confusing behaviour or because of confusing results display. These issues were reinforced in sessions with our case study participants, many of whom were not clear how the search function works.

TZ3 shakes head, *"there are 400 pages... you keep looking until you are tired"*.

For example TZ6 enters 'youth policy in africa' into the search box and receives 30804 results, so TZ6 changes the search to 'youth policy in east Africa' which should have refined the search but in fact the number increases to 31978. There is also no option to re-order the results, e.g. by date order or author order. Date of publication is an important criterion for selection used by the case study group of Southern users. The Heuristic Evaluation analysis also identified issues with search such as *"Does search work on full text search whereas article selection through country profiles and topics works on keywords?"* Such inconsistencies can lead to perceptions of unreliability.

The webmetrics data shows that there is very limited use of the internal search function in Eldis: in 2015 3.3% of the sessions registered a site search, down 0.37% compared to previous year; likewise also the number of unique searches has been declining (down 8.9% between 2014 and 2015). There is also a clear difference between new and returning visitors; with the latter using the search more frequently (8.2% of sessions). There is also disparity between the information displayed depending on the route taken by the user, as demonstrated by the Heuristic Evaluation exercise:

"Why do you get so many more hits when you search for terms rather than looking through the topic index or searching within a topic? This devalues the topic and country profiles since you get so many more hits when you search." [Heuristic Evaluation]

This is particularly pertinent because the case study participants were specifically interested in information about their own country, and so **filters based on country or on region, and country-specific profiles are an important aspect** for these users. Disappointment with the performance has a disproportionate impact.

5.2.6 SciDev.Net has a wide appeal, but could be improved

SciDev.Net has seen an increase of 40% in all users and sessions between 2014 and 2015. This growth is even larger when looking at southern traffic only, which has grown 54% in sessions and 47% in users in the year-on-year comparison. This appears to be driven in particular by the increasing number of sessions from countries such as Egypt (+61%), Iraq (+169%), Algeria (+138%), Kenya (+96%). This is linked to (but not wholly explained by⁴⁷) the development of SciDev.Net's regional editions and mobile-friendly development.

Case study participants liked the portal design and colourful presentation. The style of the articles and the topic structure were also appreciated:

"I picked this article because of the title and because of the photo" [TZ3],

"I like the pictures and colourful nature of the portal" [NIG2].

"It is so interesting" ... "the information provided here will be food for everybody" [TZ8],

"Things are categorised... It's more obvious to see than R4D" [GH4],

"SciDev.Netmeets my personal and professional needs" [GH10 diary].

Notably, SciDev.net appealed to the media professionals in our set of participants when we asked them to look at it, although none of the media professionals we talked to in Nigeria had any knowledge of it or its content. Despite these positive reactions, the design was not for everyone:

"Not a bad site but the page designs are too loud and generally distractive with the information in the blocks rolling up and down" [Market Research Southern civil servant respondent]

And features of the site were problematic to our case study participants: the site's categorisation of topics was unexpected, the navigation structure was difficult to follow, participants weren't clear what the portal was about, and the search function was surprising.

Menus aren't structured according to the categories participants expected, and participants were repeatedly surprised. For example: Education is a sub-menu of Communication, Data is a sub-menu of Enterprise and Gender is a sub-menu of Governance

"what is the relationship between the two – education and communication?" [GH5, NIG4];

"for me the data would have been something like statistics. Maybe the word 'data' has been misused" [TZ1];

"I was not expecting this" [after clicking on Gender] [NIG10].

⁴⁷ It is likely that other country and region-specific trends which we have not investigated are also at play.

Other navigation issues were that the location of the home page is unexpected, e.g. search page and logo [GH6]; there were inconsistencies: “Browse type’ in the menu is called ‘content’ in the site map and in the ‘Refine by’ menu block it appears as ‘Type’ [Heuristics Evaluation]; and sub-sections don’t contain what users expect, e.g. after choosing food security,

“I expected it to maybe explain what food security means, but it is a pictorial presentation” [TZ3];

Two participants who subscribed to SciDev.Net’s newsletter did not realise there was a website ‘behind’ it [GH6, GH10]. While the market research shows examples of the opposite situation, with several users of the website not being aware of an email newsletter being available.

Large headlines misled participants as to the focus of the portal: NIG2, NIG12 and TZ12 thought it is focused on climate change, although NIG7 and NIG11 identify the portal (correctly) as science biased.

Users who are short on time will often use internal search to target specific items, and our case study participants found the search function frustrating. Zero results were returned for several of our participants after typing the full title or keywords of a specific article into the search box of the portal [GH5, GH6, GH12, NIG10, TZ3, TZ6]. When searching for articles on agriculture, the first item in the list is titled *Open data underpins equality*. Although not distracted by this, TZ5 agrees it’s not what they expected to see:

“No, I keep on searching... but there may be a word agriculture in the document” [TZ5]

The heuristics evaluation concluded that SciDev.Net’s search doesn’t seem to allow for different spellings: ‘sulphur’ versus ‘sulfur’ for example, but does appear to allow for stemming through wildcards, so ‘sulph*’ works”. Also, searching for ‘behavior’ results in a different set of articles from searching for ‘behaviour’.

Some participants called for more links to further data, longer articles, and extra information related to the article [GH7, NIG4] but positive reactions from the market research from frequent users of SciDev.Net were:

“Collates information on new researches across a variety of themes and areas with links for further information” [Southern civil servant]

“Again it is a good way to keep up with research being conducted that relates to African issues” [Southern development consultant]

“It has good news and timely research” [Southern media professional]

Additionally SciDev.net records the highest percentage of returning users (25%) amongst the portals analysed. This figure is likely to be an underestimation as it will not include users who access content on different devices or browsers, or those who clear their cache and use private browsing.

These observations, together with the growth of social media as a second traffic channel, suggest that SciDev.Net is building a loyal audience.

5.2.7 R4D's link to DFID and wide range of DFID content is not clear

"Ah yes, I know DFID. Research for development.... No I haven't been here before" [Multiple case study participants]

This captures a key thread in our case study findings: **participants frequently recognised DFID but were unaware of R4D and were unsure of the link between the two.** Several participants didn't understand what they might find on the portal, or what the portal is about [GH1, GH6, NIG1, NIG4, NIG12, TZ5, and TZ12].

The portal design itself is relatively simple and indicates clearly that it is intended to be a repository with search capabilities. Frequent users of R4D identified in the market research explained its appeal:

It offers valuable information for policy support work. [Southern civil servant]

Because it offers an excellent range of information (reports & project etc.) - it's one of my bookmarked websites to refer to [Southern development worker in civil society]

This website provides me with most of the information I require in my day to day work. [Southern development worker in civil society]

Government's perspective; guaranteed quality. [Northern academic/researcher]

For the case study participants who did not know R4D, **reactions to the site's navigation were mixed** with some positives and some less encouraging comments:

"it looks organised if you compare it with other websites...the front page can scare you away" [GH4].

The heuristic evaluation concluded that "the menu in the left-hand margin is potentially confusing because it groups browse and search operations – which are active things that a user would want to do with the website every time they visit it, with other, less common activities such as contacting R4D or reading about Open data".

The simple search capabilities were still frustrating to some users, and as the Heuristic Evaluation pointed out there is no way to change the ordering preferences on search findings. There is a comprehensive advanced search but it is difficult to spot. Although the idea of an advanced search is entirely appropriate for this style of portal, the R4D advanced search was a bit too daunting and too complex [GH1, GH10, TZ8]. Several users thought that all the fields needed to be completed and [GH6], for example, became discouraged from using the advanced search after spending 8 minutes filling it in. Others also regarded the advanced search page as being too detailed and requiring too much information and time [GH3, NIG08]. Even the document explaining how to use the advanced search was not welcoming "*maybe this is a waste of time reading this... this is very complicated*" [TZ1].

Several users were confused by the fact that PDFs open automatically in a new tab (and were then not visible if users had many tabs open) [NIG2]. The DFID logo in the top left hand corner (which returns to the DFID home page) was repeatedly confused for the R4D home page. The presentation of search results mixes documents and projects (unless you choose to search only on one or the other). Many participants did not recognise that there were two different types of items, and that there were often many reports with similar titles, e.g. “Using climate information to achieve long-term development objectives in ...”. Because the search results only show a short sentence, finding one amongst several can be quite time-consuming:

“these are not complete sentences so... <it is hard to see what is there>” [GH11]

... and difficult to locate known projects:

“I haven’t found the kinds of projects I know” [GH11].

5.2.8 Key Lessons: Quality and Accessibility

- **Although the DFID portals' content is valued and perceived to be of high quality there is potential to increase their awareness and use.**
- **Service quality relies on external factors such as internet availability.** Although internet is increasingly available in the developing world, access is variable and the cost of the internet can be inhibitive.
- **Where access to content involves linking to an external site that is behind a paywall, this can be a barrier.**
- **System quality for all portals** (including usability and user experience aspects) **can be improved. However, deciding how to do this is complex because there are several ways in which the content could be accessed*.**
- **Design issues** e.g. webpages being too busy, weak search functions and confusing navigation **makes it difficult for users to find content through the portal webpages.**
- **The wealth of information available makes it particularly important for access mechanisms to be clear and straightforward.** For portals, these rely on two main features: their navigation/structure and their search function.
- **Participants from categories of Intended User who are not current regular users of the portals are less likely to browse and more likely to have a targeted information need.** The design issues identified are problematic for these Intended Users, and discourage them from accessing the portals' content.
- **Filters based on country or on region, and country-specific profiles are important aspect** for users searching for context-specific research evidence.

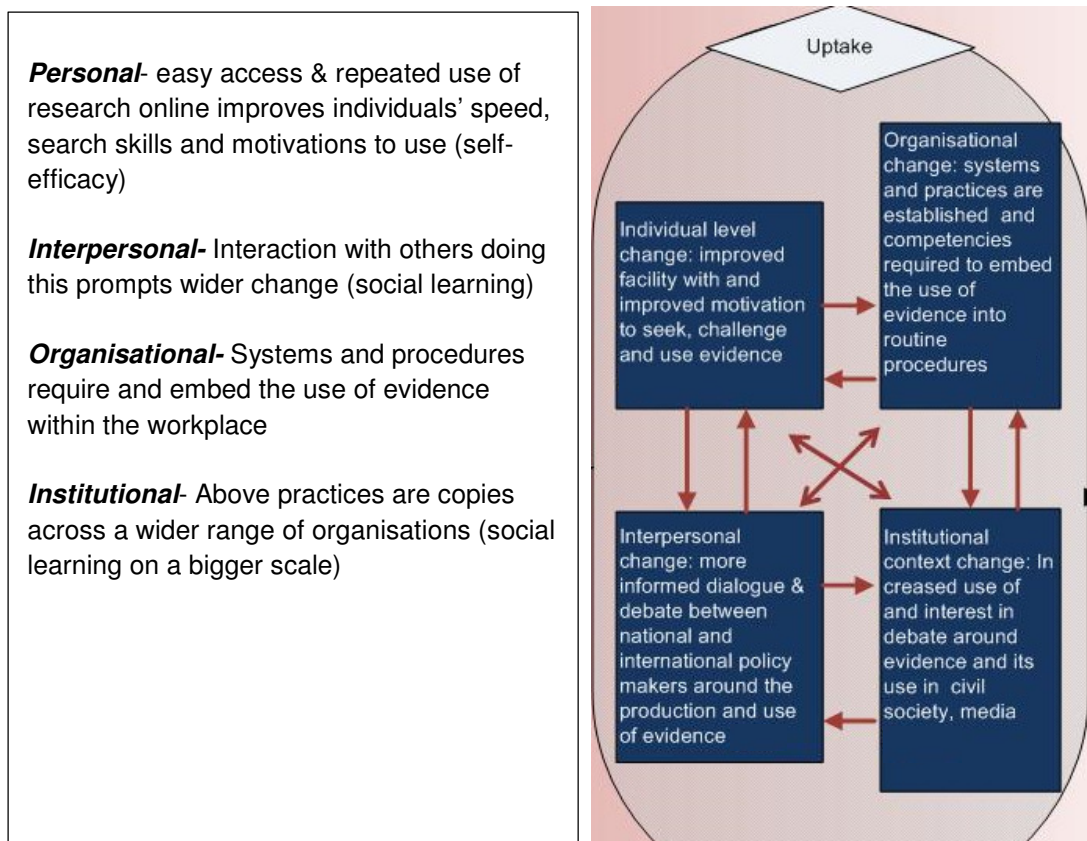
*At the beginning of section 5.2 we drew a distinction between a portal's content and its delivery mechanism, i.e. the mechanism used to access that content. An example of portal content is an audio report describing the advantages of a new battery design that provides five times more battery life than any previously. One delivery mechanism for this content is the portal homepages at eldis.org, r4d.dfid.gov.uk and scidev.net, where a user needs to navigate the menu structures and page layout in order to reach this audio report. Another delivery mechanism would be a direct link to the report in a Facebook recommendation or a newsletter. The problematic characteristics identified here relate mostly to the website, e.g. the webpages accessed through eldis.org, r4d.dfid.gov.uk and scidev.net and associated structures and navigation. If a user links directly from the newsletter associated with scidev.net to the page containing a specific article, the user bypasses the website's homepage and other navigation features. The value of addressing the design issues identified above depends on the strategy adopted by portal managers for increasing their user base (assuming that this is their aim).

6 Plausible pathways between portal use and uptake of evidence in policy and practice

6.1 'Uptake' is defined in terms of *sustained behaviour change* by actors in the policy making process

It was agreed with DFID during the Inception Phase that we would seek to answer evaluation objective 3 by defining uptake of research evidence as '*the application of evidence in the policy-making chain*'. It was also agreed we would follow the approach developed by the current BCURE evaluation team of regarding evidence of uptake to be *not one-off episodes and examples but sustained behaviour change*. This is an explicit attempt to deal with the frequent criticism of attempts to demonstrate the impact of research as anecdotal and having little to say about long-term or systemic changes. We adopted the BCURE evaluation's framework of *four levels* of behaviour change: personal, interpersonal, organisational and institutional. These four levels are defined in Figure 21 below:

Figure 21 BCURE's four levels of Behaviour Change



We used three different sources of evidence to (a) confirm, in the first instance, that these behaviour changes were perceived to be actually occurring, before (b) moving onto the evaluation objective of constructing the pathways. The sources were:

- Market research free text responses to questions 15,18,25a,26,30a,31a,32a,49⁴⁸
- Direct questions in the case study face-to-face sessions about personal experiences of impact and perceptions of behaviour change
- Review of Eldis and SciDev.Net's own 'impact stories' and "Tell us your Story" surveys.

6.2 There is strong evidence of individual level behaviour change occurring, driven mostly by better *availability, accessibility and discoverability* of online research evidence⁴⁹

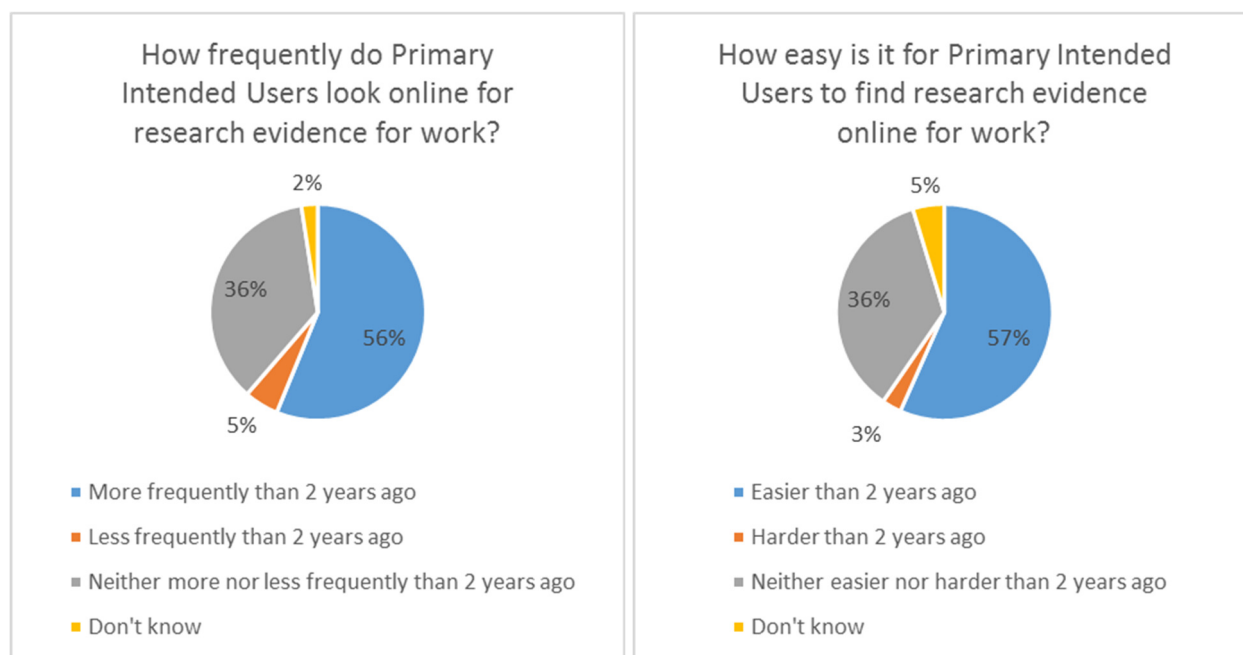
We found that there was indeed strong evidence of *individual level* behaviour change.⁵⁰ When asked in the market research about their experience compared to two years ago, more than half of all respondents said that they look online for research evidence more frequently than before - and find it easier to do so.

⁴⁸ See Appendix A for the text to these questions.

⁴⁹ Note that, throughout, the link is to the use of online evidence generally, not only or *specifically* to portals (or repositories).

⁵⁰ While it is arguable that those electing to respond to a survey about research evidence would be more likely to adapt their behaviour to the frequent use of it, we found that over one third of respondents did not perceive any recent changes in their behaviour. This suggests we avoided significant bias.

Figure 22 Market research results for changes in the frequency and ease of using the internet to find research evidence online



When asked to explain their answers⁵¹, respondents frequently referred to improved ‘supply conditions’ for online research as the drivers: improved *availability* (better and faster internet access), better *accessibility* (cheaper data packages, more sites with more relevant material, free online journals), or greater *discoverability* (search engines such as Google and Google Scholar increasing their scope). There were also many that referred to their own growing skills and confidence:

‘I am more skilled and there is more available’ – [Northern academic researcher]

‘I learn everyday’ – [Southern development consultant]

‘It has become more as a routine part of my work. The internet is more available...Electricity is stabler. Continuous improvement of my proficiency’ [Southern development consultant].

There must be a strong element of self-teaching in these responses, since 66% of all Intended Users in the Market Research stated that they had received no training in how to use or search on the internet.

Increased demand for research evidence from organisations is also noted occasionally as a driver for individual’s behaviour change, though less frequently:

‘There is more demand for research-based quality reports and discussion with colleagues is a necessary activity to improve quality.’ [Southern Development Consultant]

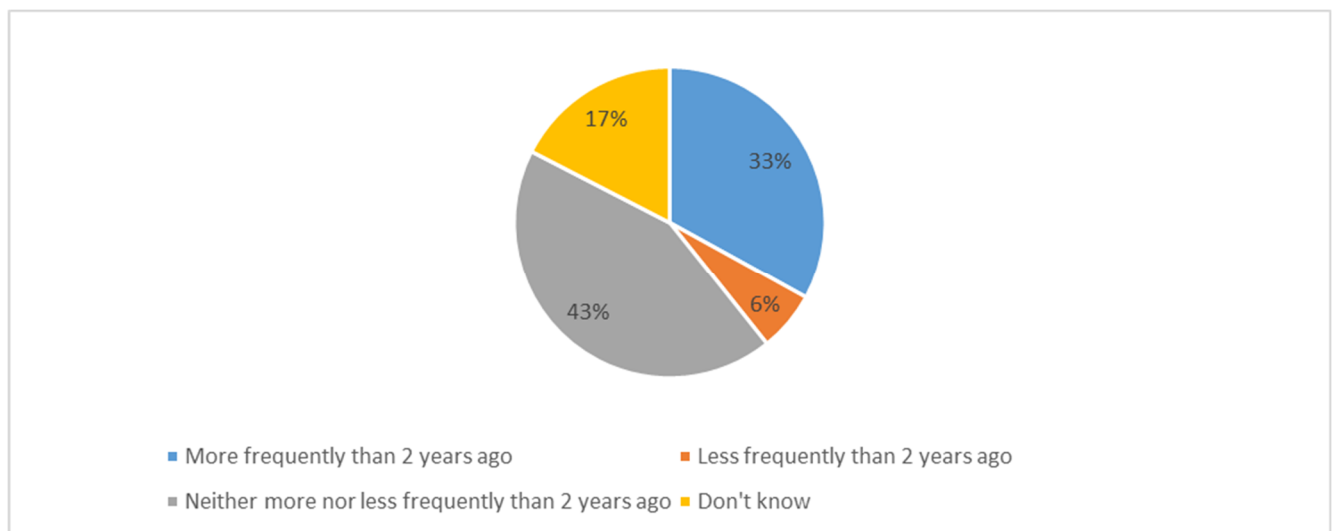
⁵¹ Market Research free text answers 30a and 31a

[...]now we discuss the references and sometimes can triangulate data we have found on the web. [Other, Northern]

6.3 There is also some evidence of interpersonal behaviour change

The Market Research found that the largest proportion (43%) of respondents perceived little or no change in the frequency with which they discussed research evidence online over the last two years (see Figure 23 below), primarily on the grounds that discussing the quality of evidence had always been a core function in their job, unaffected by any changes in the internet over the last few years. However, nearly one-third of respondents did perceive an increase in the frequency with which they discussed research evidence found online with their colleagues.

Figure 23 Market research results for changes in frequency of discussing with colleagues research evidence online



When this group were asked to explain their answers, they tended to cite two quite different reasons:

1. The greater availability and accessibility of evidence online extends the possibilities of testing and validating evidence. Combined with the greater scope for sharing online, this leads to both more frequent and more informed discussions:

‘As there are more materials to use, it easier for me and my colleagues to interrogate the validity of the internet-based research evidence.’ [Southern Development Consultant]

“There are more resources available online now than there were two years ago. Also...quite a few colleagues are switched into online research these days and routinely share useful resources.” [Southern Development Consultant]

“Now we discuss the references and sometimes can triangulate data we have found on the web.”
[Other, Northern]

“...better access, ease of sharing information via devices’ [Southern Development Consultant]

“It’s forcing the credibility issue on us that we must look for the right information if we really want to debate, otherwise you’d better keep your mouth shut” [GH2]

2. On the other hand, however, there was a significant number stating they were prompted to interact with their colleagues more because of doubts about the proliferation of material and sources on the internet and the impact this had on overall quality:

‘There is generally more available but there are also more questionable sources: apparent anomalies are now more frequent’ [Other, Northern]

‘There is more unreliable / poor quality material out there’ [Southern Academic/Researcher]

6.4 There are also indications of both organisational and institutional behaviour changes

As expected, the market research and the case studies were most effective in eliciting voluntary responses that confirmed personal and inter-personal behaviour changes in relation to the uptake of evidence. It is in these personal domains that our respondents naturally had most immediate experience and felt most confident in volunteering their perceptions. There were fewer responses that identified higher level examples of organisational and institutional behaviour change. Of these, by far the most common driver for organisational change identified by both Northern and Southern respondents was the need to demonstrate the use of research evidence when seeking aid funding, as is increasingly required by DFID:

‘Stronger emphasis from clients on research evidence’ [Southern Development Consultant]

‘[B]ecause there is greater need now to understand the quality of the evidence, particularly as donors are pushing harder for proof that the evidence is robust.’ [Northern Development Consultant]

Examples of institutional behaviour changes were yet fewer, and even more speculative. However, there were some responses that reflected briefly on wider societal trends in academic institutions and politics that were either following or driving other changes:

‘more focus on evidence from politicians and universities’ [Other, Southern]

‘It’s become more of a topic across the NGO sector, with more awareness about it and tools for trying to assess quality (i.e. BOND evidence principles)’ [Northern Development Worker in Civil Society]

‘Organizations like WHO are finally appreciating the value of research evidence. My university also mandates that students undertake systematic reviews for their higher degree work.’ [Northern Academic/Researcher]

The foregoing brief summary confirms that behaviour changes in relation to evidence uptake are indeed occurring to some extent at all four levels.⁵²We now proceed (below) to construct three ‘plausible pathways’ by which these behaviour changes may be enabled by use of research on the internet.

6.5 Three ‘plausible pathways’ from portal use to research uptake can be drawn out from our findings

We sifted through the market research free text responses and the case study user profiles to find patterns in, and the most cogent explanations for, perceived behaviour changes linked to the greater availability and accessibility of online research. As a result, we believe that there are three different ‘pathways’ which we can draw out and illustrate, which we set out below:

- the personal pathway;
- the technocratic pathway; and
- the democratic pathway.

We have focussed on defining the pathway **between evidence online and sustained behaviour changes in the application of evidence**, rather than illustrating the contextual detail, the ‘noise’ and multiple feedback loops that may exist around it. This context – the influence of other sources and means of disseminating evidence, the administrative environment, the politics of the moment, the sector characteristics, even the personalities of those involved at the time – will influence to a greater or lesser degree how a particular ‘episode of uptake’ plays out. It does not however affect the essential characteristics of the pathways we have drawn.

These pathways have not been tested independently; there is no objective or consistent baseline (though we did ask the market research respondents to refer back two years) and they are all inferred from individuals’ recall and perceptions as reported to us. There was little scope in the market research, in particular, to ask respondents to pursue extended discussion around any of the questions. As stressed earlier, commitments to anonymity limit our use of real examples. The pathways here are artefacts, constructed from a range of sources in our evaluation to illustrate commonly occurring themes, practices and behaviours. However, we believe they are consistent with the four levels of behaviour change framework in our and the BCURE’s theories of change. They are also congruent with aspects of SciDev.Net’s own pathways analysis (SciDev.Net, 2008) and Eldis’s ‘personae’ (Eldis, 2012).

These pathways describe the links from the ‘increased use of online research’ broadly defined: neither our Market Research respondents nor the Case Study participants made a distinction between portals, repositories or other forms of online dissemination. Specific, named, websites (including the DFID funded

⁵² The fewer responses identifying organisational and institutional behaviour change cannot be used to infer that these types of behaviour change are less common or pervasive than personal and interpersonal changes (though they may be). Rather, the responses we received are more a product of the voluntary and personal perceptions-based nature of the questions posed of a wide audience (via time-constrained evaluation instruments) than of the actual state of affairs they reflect on. A more in-depth exploration of institutional and organisational behaviour changes would require a dedicated survey of personnel selected specifically on the basis of their experience and position to be able to comment in depth on longer term organisations changes.

portals) are not identified. The pathways are not exclusive or necessarily sequential. Different types of policy makers can operate on different pathways.

6.5.1 The Personal pathway: self-efficacy and motivation, credibility and influence

Both the market research and the country case studies confirm that policy actors of all categories are experiencing a significant increase in the scale and scope of research evidence that is available and which they can easily access online. The case studies found a wide range of internet search skills (probably mostly self-taught, according to the market research) and varying degrees of self-confidence in them to navigate around this greatly increased supply of research information⁵³. Nevertheless, there is a clear consensus that greater availability and accessibility of online research evidence is rapidly promoting ease of use at a personal level ('self-efficacy'). This, in turn, is encouraging greater use of the internet to find research and data.

When we asked case study participants to talk about their perceptions of the impact of research evidence online, fourteen out of twenty-eight who responded in detail referred to examples of personal or inter-personal behaviour change. Of those fourteen, six drew an explicit link to becoming more effective policy actors or influencers, with access to more research online enabling them to bring more relevant, testing or illuminating evidence to bear in their particular policy fora.

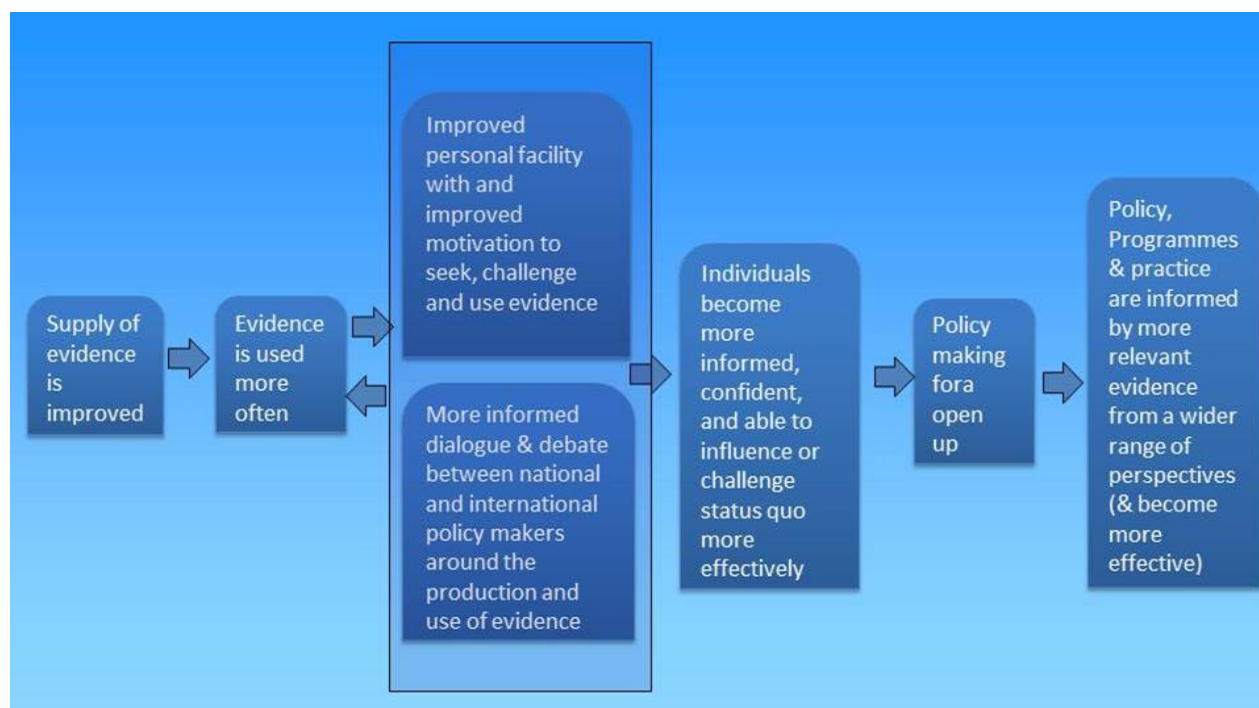
"In the past it was difficult to prove what you were saying, but now in meetings and conference rooms you can access and link to evidence.... It keeps [people] at bay if you have enough evidence." [GH4]

[It has improved my confidence] – "of course!" [and the way I interact with others]. "Especially for the people that I meet who haven't been to the portals, because my argument will be different from theirs". [TZ27]

One especially insightful participant [NIG12] observed wider implications for policy making and public leadership styles, with better informed individuals driving a shift from top-down 'autocratic' relationships to ones based on two-way communication and an opening up of new channels of influence.

⁵³ See Appendix B for the range of internet skills encountered, in particular GH6, TZ9, NIG12, NIG4

Figure 24 The Personal Pathway



1. The Personal Pathway

NIG12 has gained a huge level of respect from other medical colleagues even though NIG12 is not a doctor since they are able to make meaningful contributions to medical issues as a result of availability of online information. NIG12, like others, can challenge stats immediately in meetings on their smart phone: “we can call each other out”. NIG12 has seen the composition of (medical) organisations changing as more socially diverse participants - newly credible due to their internet access to information - are invited onto advisory panels.

6.5.2 The Technocratic pathway: sign-posting solutions for policy makers and practitioners

The second pathway we are able to draw out focuses on the role of the internet in providing practical guides and ‘how to’ manuals distilled from the original research evidence. This ‘technocratic pathway’, tends to be used mostly by senior civil servants, consultants in aid-funded technical assistance (TA) roles, and researchers in respected, ‘in-group’ think-tanks. These policy actors are driven by the need to find solutions to the practical problems of introducing reforms and promoting change in government. They have a remit (in the case of TA, explicitly sponsored by aid donors) to advise senior government officials and

therefore have a rare level of access when compared to other types of policy actors, many of whom expressed to us a sense that government was remote and defensive. This technocratic pathway is not restricted to these individuals and was alluded to by case study participants who were not technocrats themselves (e.g. see TZ1 below).

Actors on the 'technocratic' pathway use the internet to find the 'processed' results of research, digests of research and experience into best practice, and evidence of what works, or to find the original research papers and then translate them into practical help. They need to find evidence to convince sceptical, risk-averse, politicians and government officials of successful policies and reforms in other similar contexts. Like other users, they frequently describe themselves as very short of time. When searching for these digests, they frequently search on terms such as 'Tools' 'How to...', 'Guide' and 'Manual'. They click on PDFs in their search results since they expect these to represent some sort of complete and readable manual and repurpose them into presentations and briefs to their counterparts. They also use local and national statistics found online to make the case that practice developed elsewhere is appropriate.

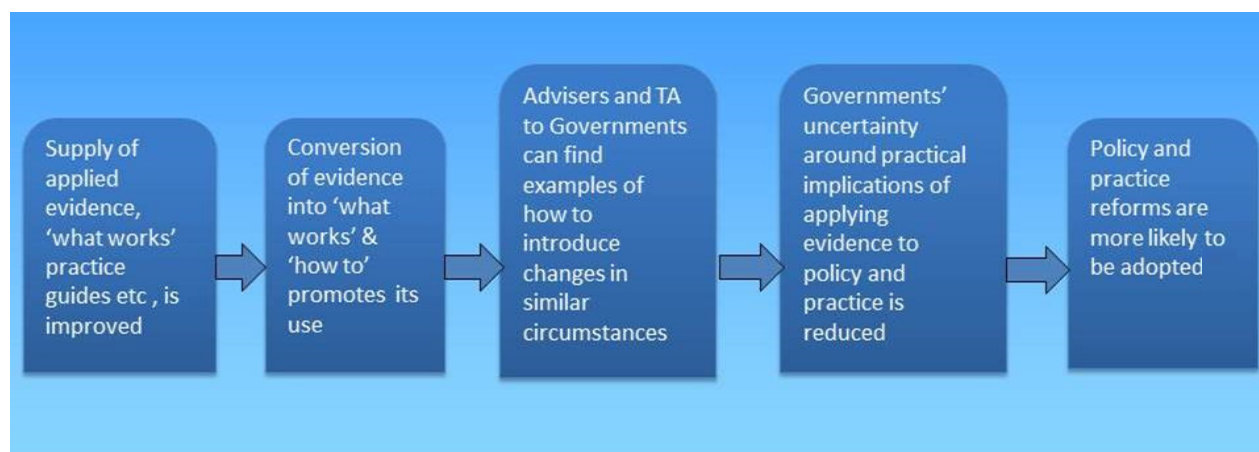
"Politicians don't need the portals to [be able to] change policy, they need the information on their table to make decisions and move forward. The research needs to be more accessible in terms of presentation but also in terms of the steps to take to implement change. Politicians want steps for how to change." [TZ1]

GH10 works with health professionals to influence practice. GH10 conducts primary research as well as using national and international data for comparison and in order to contextualize the messages GH10 wants to disseminate. GH10 produces presentations, reports and videos to communicate with practitioners.

"It's rare to hear that they have been reading to understand the underlying problem... The information has to be pushed out there, to be sold..." [TZ11]

"Politicians are not interested in detailed quantitative information....these have to be re-packaged and reduced.... Re-packaging means including specific results and justification." [TZ5]

Figure 25 The Technocratic Pathway



2. The Technocratic Pathway

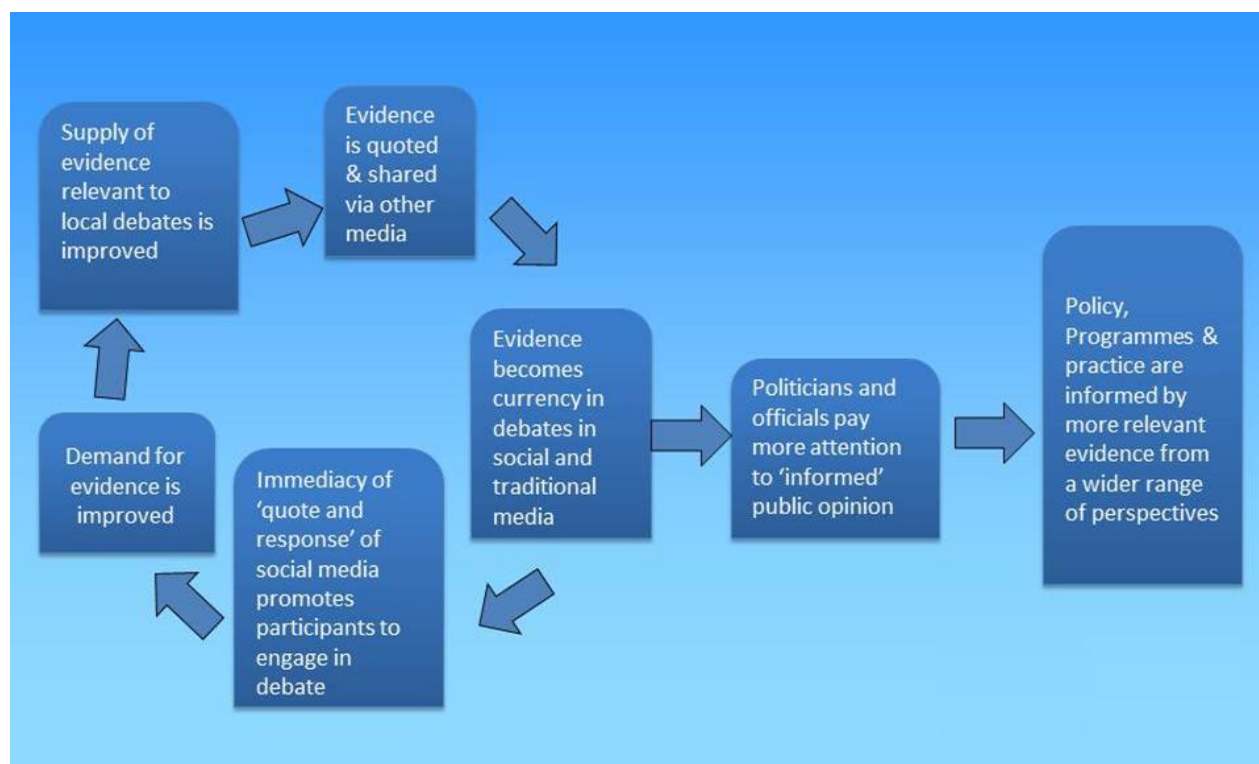
TZ1 spontaneously described the importance of the technocratic pathway in the face-to-face session. TZ1 will look for and use research evidence and data himself, and will spend time investigating anomalies and comparisons across data and findings, but recognises that the role of a technocrat will make it easier to reach decision-makers in government and beyond. TZ1 supports a network of organisations that support localised evidence-based decision-making.

6.5.3 The Democratic pathway: informing opinions, generating engagement

The third pathway which we discerned is much more complex than the previous two, and much more difficult to draw out and illustrate with the limited tools which the evaluation employed. It merits further dedicated research.⁵⁴ This 'democratic' pathway is based only partly on the internet, since other social media (plus traditional media such as radio and TV) are heavily employed. It is also only partially about *research* evidence, since the 'traffic' along the pathway tends towards current and local political affairs, reportage and opinion. Research evidence does have a role in this pathway, but it needs to work hard to find its space.

⁵⁴ See suggested further studies Section 11.3

Figure 26 The Democratic Pathway



Actors on this pathway are not just ‘time-poor’; they are acutely ‘time-conscious’. Their concern with time extends to speed of response, relevance and real-time feedback:

“If you ask people what happened on Monday, they have forgotten.” [NIG 7]

They use the internet (and social media, often via their mobile phones) to check statistics and facts to test and challenge other media’s statistics and facts. They often turn to trusted, local, sources such as CSOs, NGOs and local foundations to corroborate Government statistics and other evidence publicised elsewhere. Reputable international news sites such as the BBC and the Guardian were quoted to us as sources for corroboration of ‘big’ stories and statistics.

“Journalism has become easier, as a result of internet access. One is able to access information easily for publication. It has also made verification of information easier.” [NIG11]

Users on this pathway are rarely interested in the extended rationales of research papers. The democratic pathway is not unidirectional; information is not all directed at policy makers, who are generally believed to be remote but also – indeed more often - at the general public. Uptake is therefore not immediate:

‘Government is a wall we attack’ [NIG6]

“There’s one primary target audience and also some secondary targets who can put pressure on the decision-makers. Communication is primarily to people in ministries, but also to partner organisations.” [TZ3]

‘They [the public] will remember us at election time, and listen’. [NIG7]

The internet not only provides users on this pathway with more information, it enables them to conduct their own personal verification of what they hear – and to share that. With social media, the internet makes information and information seeking enjoyable, almost a leisure activity. Social media is critical because it makes information sharing ‘real’ and real-time: personal views and information can be shared and immediate feedback reinforces the sense of debate and dialogue:

‘..people out there are dealing with your arguments’.

“For example, [my project] was being discussed on myjoyonline and people didn’t understand so our public relations ...put a correction on their website.” [GH4]

That encourages consideration. The impact may not be immediate but engagement is maintained, meaning people are *“ready to go the extra mile when the time comes.”*

When (and if) research evidence can feed into this pathway, it can be shared in the same way and give weight to public opinion which can often be regarded as ill-informed and partisan:

“Wikipedia, I don’t trust – it’s another democratised space” [TZ14]

3. The Democratic Pathway

NIG 3 runs a local radio station, which combines music with current affairs. Most of the listeners of the station listen to the radio and access Facebook and twitter on their mobile phones. The radio station doesn’t have a website. NIG 3, like the listeners of the radio station, mistrusts official data and seeks to verify it via alternative sources. NIG 3 indicates that “in this country, we don’t go looking for information, we just react”. NIG 3 tends to use international online newspapers and local CSOs as credible sources. NIG 3’s question is always “on what authority....?” NIG 3 uses Facebook analytics to track the station’s reach.

6.6 Key Lessons: Plausible pathways between uptake and use

- **‘Use’ and ‘uptake’ are different but both are valid intermediate outcomes that DFID should be measuring.** The new stricter definitional distinction we have proposed between ‘use’ of the online portals and the research they share (the time spent on the website, the employment of the different services e.g. search functions, the downloading and the reading of articles) and ‘uptake’ (the *application* of evidence in the policy-making chain) has aided not only discussion around the process of research dissemination but also the measurement of it.
- Although the extent to which ‘use’ is productive cannot be demonstrated (time on a site could be time spent concluding the website is not helpful; searching could be unfruitful or downloaded articles may never be read - or once read concluded to be irrelevant), nevertheless, **‘use’ is evidence of a service that is being utilised and should be measured as a ‘good’ in its own right:** searching, sifting, selecting, sharing, citing and reading are all ‘use’ activities which are essential and inevitable parts of the process of finding relevant evidence even though the majority of pieces of evidence encountered in any one episode of ‘use’ may be discarded and disregarded. Furthermore, **a ‘use’ activity which may appear unproductive in the first instance may contribute to the efficacy of subsequent searches; ‘uptake’ may be indirect or delayed.**
- **By framing uptake *in terms of behaviour change* we have been able to address the seemingly unavoidable problem of relying on anecdote and recall of one-off examples to demonstrate the value of research.** While our evaluation tools still relied on recall and perception, by limiting the questions around uptake to a small number of defined types of behaviour change (personal, interpersonal, organisational or institutional) we have been able to begin to build up a larger, more coherent and more reliable body of evidence. This, in turn, can be tracked over time and analysed. By giving definition to the different ways in which users interact with online research; by being more specific about how the different services, functions and formats they find on line support different types of policy actor roles DFID will be able to:
 - make the case more strongly for supporting those particular services;
 - begin to define ways in which the particular pathways can be studied further, and better measured and monitored;
 - help identify potential new ‘pathway-specific’ interventions;
 - identify, and articulate, entirely new ways and pathways (e.g. the democratic pathway) in which research evidence could be disseminated.

7 Implications for the Theory of Change

During the Inception phase the evaluation team revisited the DFID theory of change (ToC) for online portals and repositories in the light of our findings from the literature and documentation review and proposed substantial revisions to the original. The aim was to make more explicit what we understand to be the common basic purposes of all DFID-funded online research portals and repositories. We therefore re-organised the ToC to follow broadly the framework of the current Research and Evaluation Department research uptake theory of change, which uses a primary split of portal's functions into:

(i) **improving the supply of evidence** – by making the research content of the portals more easily **available** in a technical or financial sense by directing users only to free and easily downloaded resources; and by making content more **accessible** - understandable, useable, relevant - to the user through a range of portal services and technical design features; and

(ii) **increasing the demand for evidence** – by facilitating the users' capacity to **find and assess** the research that is available with supporting uniquely authored content (policy briefs, précis abstracts, hosting online communities) and curated links and by strengthening the users' **motivation and drivers to seek evidence**. This last element of improving the demand for evidence is more tenuous, since motivation lies primarily in the wider policy-making context. However, it can be argued that by making content more accessible, alerting registered users to new material and generally making the site attractive and user-friendly, the portal aims to improve the probability (of regular users) of finding relevant content, and thus encourage them to initiate enquiries on the site more often.

Each of the DFID-funded portals we evaluated emphasised some functions more than others; for example, R4D focuses primarily on making content more available, with only a few additional functions to make it more accessible; SciDev.Net, with its authoring of articles to be used wholesale in news media, emphasises accessibility, while Eldis's services and supplementary pieces stress the building of users' capacity to find and assess the research content.

In addition to these functions (summarised in the main blue boxes) which we believe capture the *current broad consensus* of what the DFID-funded portals aim to provide, our literature and project documentation review has suggested additional portal characteristics (in the yellow call out boxes of the ToC diagram). which are necessary to reflect new evidence and emerging trends in how target groups use the internet, their information behaviour and their preferences for portal design.

The theory of change also organises the intermediate outcomes into two distinct levels: 'use' and 'uptake':

- **Use** - refers to the next step by the user after accessing the research evidence via the portal/repository. It may involve simply sharing or saving. It is therefore not an ultimate measure of impact on policy, programmes or practice but it is the proximal link in the 'results chain' and set of activities that demonstrate the portal has had the desired effect of driving content to the user. It is the primary purpose of the portals/repositories and can be monitored with new webmetrics methods. It can also be clearly attributed to the portal in question.
- **Uptake** – refers to the application of the research evidence further along decision-making process. This level of intermediate impact is differentiated from use because it is much more dependent on

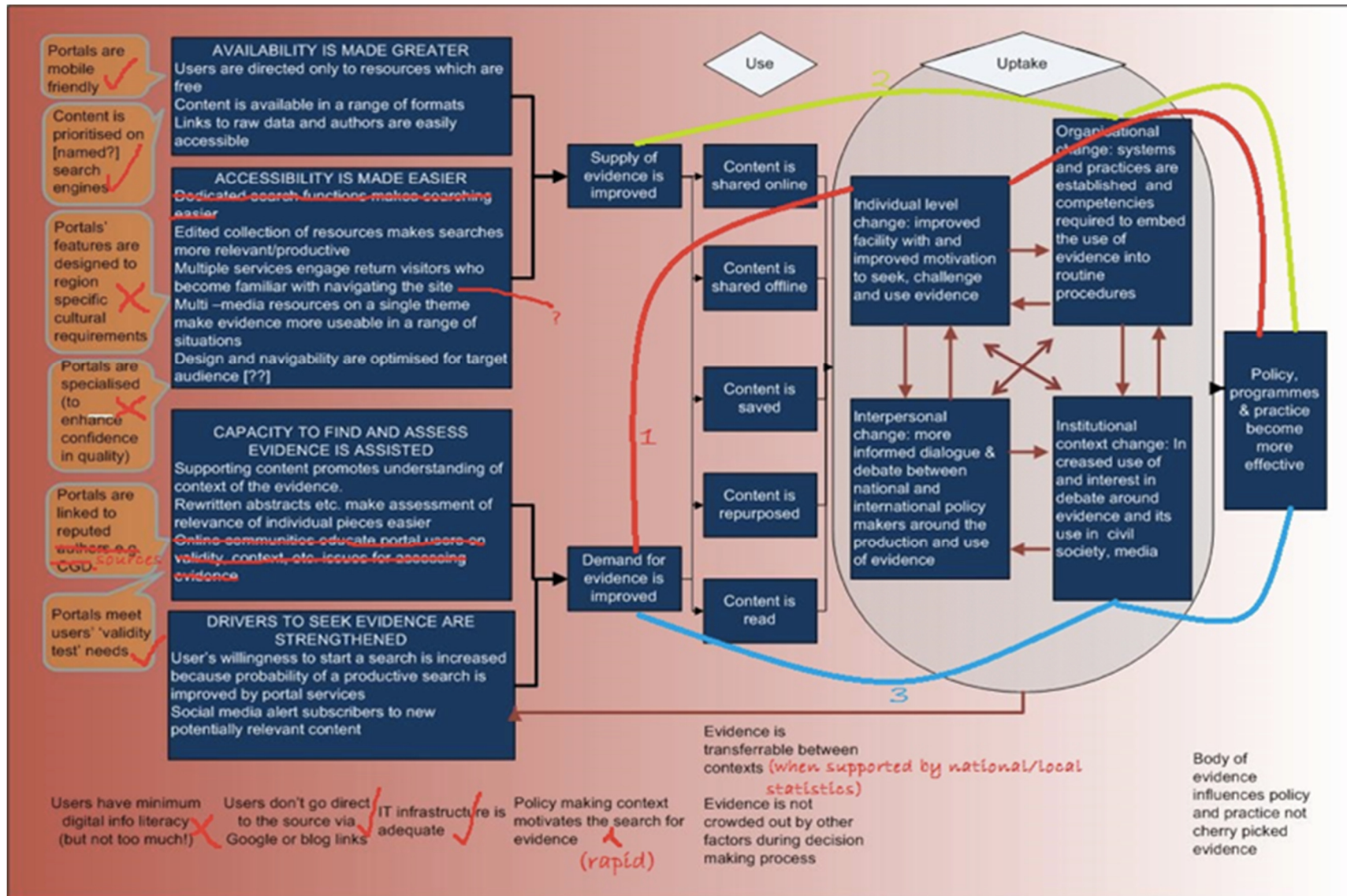
external factors determining the adoption of evidence. It is therefore less easily identified and attributed.

In the light of our findings from Stage 2 of the evaluation, we were able to further revise the Theory of Change (see Figure 27). This was done primarily by challenging or failing to find evidence to support characteristics and assumptions that we had drawn from our rapid literature and project documentation reviews; and also by adding additional plausible 'pathways' from portal use to evidence uptake. They are represented in the diagram by the numbered lines; 1) Personal Pathway, 2) Technocratic Pathway and 3) Democratic Pathway.

We have also been able to confirm certain other assumptions:

- **Assumptions and characteristics confirmed** – We can confirm that to be effective, a portal needs to be: discoverable on general search engines; linked to trusted sources; meet users' validity tests and increasingly be mobile-friendly. We have also found that people do use research material in different formats and value digests and summaries. They also want free access.
- **Assumptions and characteristics modified** –With more internet tools and better search engines, portals no longer need to help users 'make sense of the internet' as much as they once did. However, portals' *own original content* is still valued.
- **Assumptions and characteristics challenged** – We have found no evidence to support the proposition that dedicated internal search functions are *essential* to operating effectively as a portal – most portal content is found from Google.
- **Assumptions and characteristics not demonstrated** – we have found little evidence that portals need to be designed to 'regional cultural requirements'; instead, regional (and local) 'requirements' are manifested primarily as a demand for local and national statistics and an awareness of local and national political debates to which research evidence could contribute.
- **Plausible pathways added** – the pathways between internet (NB, not portals only) use and evidence uptake which we have been able to draw out of our evaluation data have been added to the Theory of Change to show the different routes by which dissemination of research evidence online can promote sustained evidence-use behaviour changes in the policy making process.

Figure 27 Revised Theory of Change



8 Do the DFID-funded portals represent value for money?

As agreed with DFID at inception, the VFM assessment used the now standard DFID '3 Es' approach and was conducted on just two of the DFID funded portals: Eldis and SciDev.Net. Comparator portals were used to provide a 'light touch' comparison.

Overall, we concluded that **the two DFID funded portals assessed show due regard to value for money principles and good practice across the 3 Es**. Before proceeding to set out the detailed findings for portals individually, our findings can be summarised as follows:

- Both show good management for the purposes of pushing down costs (**'Economy'**) the comparator portals (Zunia and Pambazuka) also shared evidence of cost savings, some of which are probably not sustainable.
- Both DFID-funded portals also appear to managing inputs well to produce the agreed outputs (**'Efficiency'**): SciDev.Net is generating very large numbers of visitors making relatively short visits to specific targeted articles. Regional editions are increasing traffic rapidly so the VFM of the regional offices is improving. Eldis is also making public material from southern sources that was previously unavailable and facilitating access to these and a mass of earlier documents via the Global Open Knowledge Hub (GOKH), while also keeping down costs. The comparator portals are not working as intensively on improving efficiency or experimenting with changes to improve user satisfaction.
- Measuring and demonstrating the extent to which the portals is promoting uptake and, ultimately, policy change (**'Effectiveness'**) is more complex. Eldis's effectiveness is bound up in its role in supporting the GOKH but the components of that logframe that relate to Eldis contain fairly uninteresting indicators and unchallenging milestones relating to numbers of visits/session that do not help the management or the monitoring of the portal. SciDev.Net indicators are more relevant, including not only increases in products and numbers of users but also specific measures of influence and connectedness of opinion authors and users who respond to surveys. The rate of growth in budget and reach has meant that their milestones have been met. We have concluded, however, through the evaluation that although portals could be a resource to support behaviour change i.e. promoting uptake, they could be improved.

8.1 Eldis: A Brief Introduction

Eldis has existed for over 20 years and DFID has funded Eldis for 12 years (since 2003/4). It is hosted by the Institute of Development Studies (IDS) at the University of Sussex, where a dispersed staffing model means that 16 staff members charge their time to Eldis activities amounting to 4 to 5 full-time equivalents; none are employed directly by Eldis.

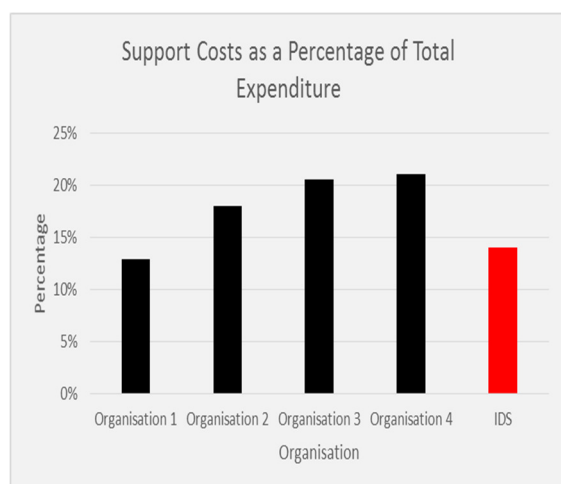
Eldis is a contributing partner in the delivery of the Global Open Knowledge Hub (GOKH), project and provides content to the OKhub - an open data platform for sharing and downloading digital content. They do this alongside other IDS-hosted knowledge services BRIDGE and BLDS and international intermediary partners, some of whom also receive DFID funding (e.g. 3ie and ELLA). Eldis is therefore not a discrete project, either for DFID or IDS. It does not have its own logframe but elements of the GOKH logframe are identified as being managed through Eldis.

8.1.1 Economy: Eldis demonstrates effective cost management mechanisms

There are many examples covering procurement procedures; renting office space; use of lower cost staff in the UK and other countries including the use of freelance workers and other largely administrative functions where care has been used to obtain the lowest costs without damaging the quality of work. Similarly there are examples on decision making on programme issues including: decisions to invest or not invest in new projects; the use of open source software and the processes of development of IT systems and the abandonment of practices that are not useful.

IDS carries out a range of comparisons of costs both in terms of absolute costs and the proportion of costs going, for example, into overheads. Figure 28 shows the support costs as a percentage of total expenditure is lower for IDS than the average of other organisations.

Figure 28 IDS Benchmarking of Support Costs (2014-15)



IDS has received funding from DFID for many decades and finance managers are very familiar with the UK government approach to VFM; they have been managing budgets without core funding for so long that being economical is an everyday element of management.

8.1.2 Efficiency: The role of Eldis within GOKH is changing the way it measures efficiency – and there is evidence that it is improving.

The total budgets and numbers of sessions on Eldis over the last three years show small increases in costs and small increases in overall sessions. The increase in sessions from the South is slightly faster than overall growth so the proportion of Southern users is increasing.

Eldis hosts a vast pool of curated (collected, selected and signposted) content:

- 44,883 document records from over 9,000 organisations;
- 812 GOKH partner records used by Eldis;

- 7,322 records of Eldis content available on okhub.org.

Eldis is increasingly contributing content to the OKhub. This supports and helps smaller developing-country based research producers to make available online their own research, some of which has not previously been available in digital formats. Eldis is not simply adding this content to its database, but adds value by producing edited abstracts and making documents and metadata available as open source on the OKhub.

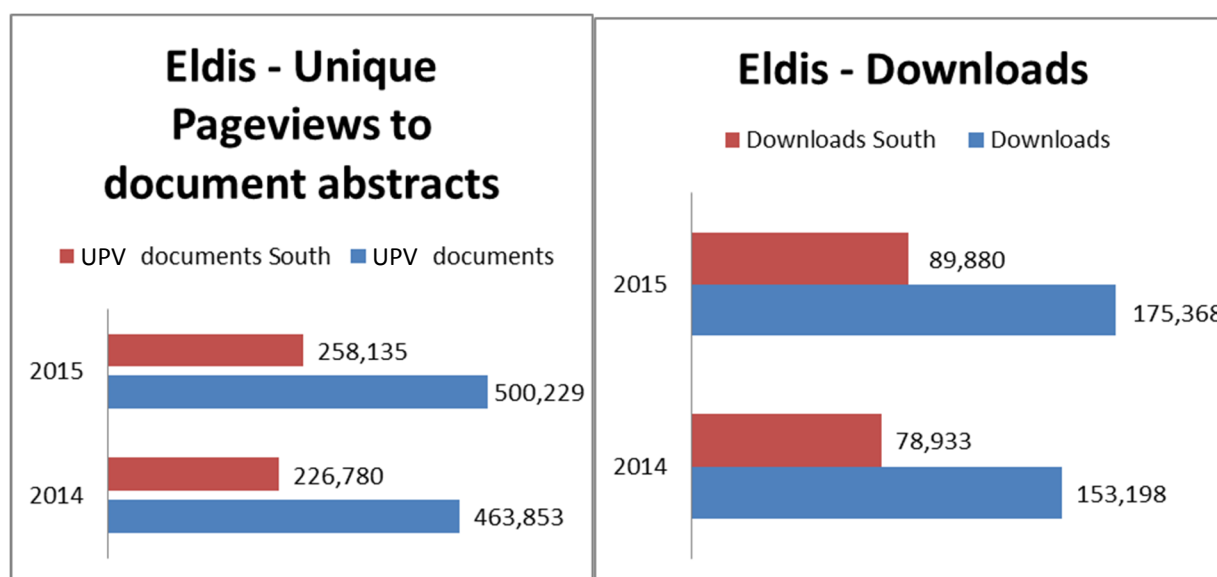
While all 45,000 Eldis records are technically available to the OKhub, at the moment of writing this report 7,322 records are currently included on the platform. The figure has been deliberately limited on the OKhub.org platform at present to prevent the lower volumes of content available from other partners from being swamped.

The webmetrics indicate that this content is increasingly accessed and consumed, recording over 34K unique page views. While this still remains a small percentage of all page views, the year on year growth of 170% indicates a clear, positive trend.

Part of the VFM of Eldis is made up of the results of the investments over the years that have created this huge resource.

The use of the **content published on Eldis** increased between 2014 and 2015: there has been a 7.8% growth in unique page views to document records. This is made up of 410,000 sessions and 500,000 unique page views of document abstracts; over 60,000 pages with document abstracts were looked at by visitors in 2015. Trends are also positive for Southern traffic alone. There has been a 14% growth in document downloads which is made up of 175,000 downloads (up from 153,000 in 2014) of 15,000 different articles.

Figure 29 Eldis Page Views and Downloads 2014 and 2015



Visits to Eldis pages containing document abstracts are in general longer than the average length of visits to all pages. While the average session duration for all Eldis pages is just above 2 minutes, sessions to document abstracts last on average three minutes, with time on page going between 2 and 6 minutes for the top 10 documents in 2015. It seems unarguable that the content is valued.

8.1.3 Efficiency: Management practices are employed to ensure efficiency

A recent staff reorganisation has focused more attention on how teams devote time to different projects which is probably necessary when working in a dispersed staffing approach in which all staff are working on several projects. The current arrangement is said to allow more flexible allocation of staff time to different tasks and therefore may be increasing efficiency.

Individual staff members are responsible for specific resource guides and are provided with filtered versions of webmetrics relating to the numbers of visits being made to pages (especially abstracts) that are listed within their area. They can therefore infer which papers are attracting most interest. The metrics also cover other aspects of usage but the subject specialists do not need to look at the mass of information.

The particular situation of being hosted within another institution confers certain advantages in flexibility and reducing costs that increase efficiency. It may also increase sustainability if the portal were to be maintained, at least minimally, during a break in funding⁵⁶. Eldis staff mentioned another advantage which is the ability to contact and discuss ideas with other members of the Institute at almost any time for no cost⁵⁷. Eldis staff particularly mentioned their work on nutrition where the portal can benefit from advice from world experts who are just down the corridor.

Eldis carried out an experiment in using Google AdWords to see to what extent it would drive more traffic to the site and lead to greater effectiveness. This kind of initiative is interesting in itself regardless of the results. It is the kind of experiment that Portal managers should carry out in order to see what the effects are likely to be and to improve understanding of user behaviour. In fact, the results demonstrated that user numbers can be increased by the use of advertising, though not as much had been expected. The results also show the relative unimportance of increasing the number of hits where the hits do not lead to repeat visits or other activity.

Timeliness of activities

The editorial approach within Eldis seems to lead to a mix of what is topical and has current “vibrancy” and what has value to different parts of the constituency of users. For example, there seems to be greater interest in climate change issues at the present time. The longevity of Eldis means that it continues to make available material that may not have appeal to a lot of current users. Eldis staff members notice (in common with other portal managers) that articles attract a diminishing amount of traffic over time but that the traffic does not stop; this is called the “long tail”. Keeping material available ensures that the visitors in the tail are properly served.

⁵⁶ This seems to have occurred during the life of MK4D project phases.

⁵⁷ Similar comments were made concerning the hosting of GSDRC providing access to expertise in the University of Birmingham.

Innovations and new technologies

The open data approach is innovative and ahead of the thinking of many partners. Eldis has had unexpectedly large tasks in explaining and encouraging the leadership of other institutions to take part and in overcoming shortcomings in capacity of partners.

The technical aspects of the access to knowledge products are important and Eldis staff members are alert to the changing ways in which people access and consume information as well as the large differences between the digital competencies and connectedness of the different constituencies of users. A mobile version of the website is planned but has not been implemented for lack of funds.

8.1.4 Effectiveness: Eldis is meeting its logframe targets and is increasingly effective at guiding users to the Global Open Knowledge Hub

The Open Knowledge Hub is a grand enterprise in open data and open knowledge and aims to make available in a free transparent way data and content that can be used by anyone. The particular focus for IDS is to improve the visibility and availability of research from smaller developing-country based research producers – some of which has not previously been available in digital formats. This is an Equity argument in VFM terms. Eldis has a role partly because its existing mass of information can be made more available through the Hub but also because its reputation and existing functions as a portal can draw in users who would then have easy access to material which originated from a wide range of other institutions. Some of these will be providing access to unique material that has not been available through other means.

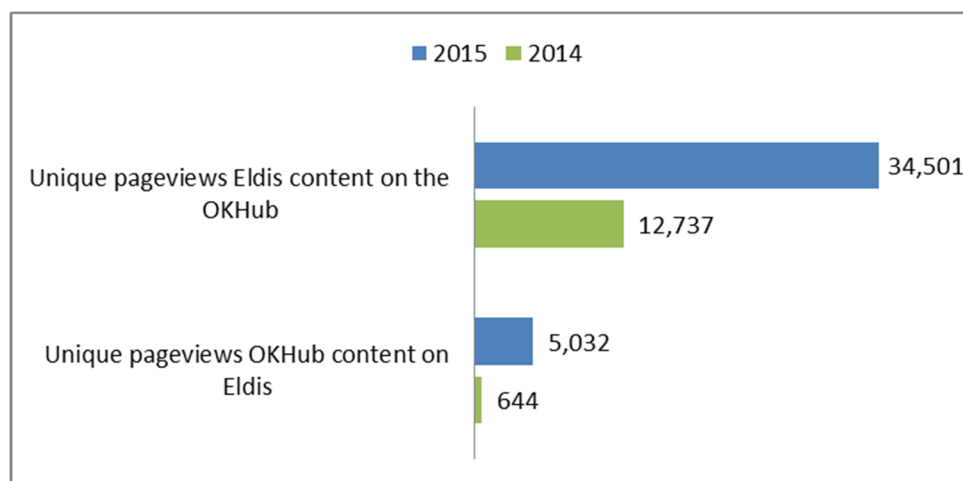
To date the GOKH programme has made metadata on over 11,250 research documents newly available as Open Content (OC) including over 3,000 full text documents which were **previously unavailable** in any digital format. Traffic on Eldis to GOKH partners' content is relatively small but growing rapidly in the years under review, with the number of unique page views growing to over 5000 from 644 in 2014.⁵⁸

There has been some decentralisation of the selection of content to be prepared and posted to the OKhub through the relationship with eight content partners. The partners are not all located in the global South but are promoting content of Southern origin. This is a contribution to the Equity element of VFM. It is not obvious at the moment how sustainable this process will be without support from Eldis.

There has been an increase in traffic in both directions between Eldis and the GOKH. Indeed, Eldis has done the work of abstracting and preparing material for publication of smaller organisations that do not have the skills or resources to make their material available in Open source format to be included in the GOKH. This amounts to 7,322 records among the Eldis content that is available in the GOKH which have generated 34,000 unique page views in 2015: a 170% growth from 2014. The table below summarizes this data and illustrates that, while the overall numbers and the proportions of total traffic transiting Eldis are still small, the increases are important and the process is relatively young.

⁵⁸ The annual reviews are based on different calendars from the data presented here which come directly from Google Analytics and are calculated on the calendar years 2014 and 2015. The annual reviews state that 2,334 new research reports were added during FY 2014 (1030 from the South) and 3,134 in FY 2015 (2018 from the South). In each case the milestones were hugely exceeded.

Figure 30 Eldis and Open Knowledge Hub - Unique Page views of shared content, 2014 and 2015



How is effectiveness monitored?

The first logframe indicator that relates to the effectiveness of Eldis sets milestones of numbers of sessions at 500,000/year; at least 230,000 should be from the South. The milestones have been exceeded both in terms of total numbers and proportions of southern users.

Use of the Eldis portal is monitored using Google Analytics. These show that while total number of sessions to the website increases at about 1% year on year, there is a significant increase of traffic from the South (+22%) and Africa in particular (+31%). This is also confirmed in the increase of users to the site. While the overall site users grow at 1%, users from the South grow 24% between the two years, and almost 37% for Africa. Southern traffic is unevenly distributed. Out of the 157 Southern countries that generate traffic to Eldis, India (20.20%), Kenya (11.4%), Philippines (6.9%), South Africa (6.4%) and Indonesia (3.55%) contribute to almost 50% of total Southern traffic. Of these four, South Africa appears to bring more 'quality traffic', with time on page and session depth in line with site average, while the others report below average values.

Managing the content adds value

First, the intense use of the pages containing abstracts and the average duration of page visits suggests that the abstracts fulfil a useful function. Most of the abstracts are drafted by Eldis staff and may be considered to be better than the abstracts written by the authors themselves⁵⁹. Overall the search function is poor as discussed earlier in this report. Eldis staff members are keenly aware of this and an upgrade is planned.

⁵⁹ A potential Economy measure which is sometimes discussed is the greater use of the authors' own abstracts as this reduces costs in terms of staff time.

Eldis Resource Guides provide structured access to editorially selected and summarised research documents available free to download in full text. They are primarily intended to help users keep up to date with the latest relevant and credible new research. The pages record about 15% of all unique page views and the most popular resource guide received about 9000 visits in 2015. The resource guides are a relatively small proportion of the pages where users land but numbers of visitors go from their landing pages to the resource guides. Portal visitors choose to go to the resource guides at each of the first three interactions on the site. The guides are clearly serving a purpose for some of the users and are probably making the material more accessible.

Users value the services of Eldis

The second element of the Outcome indicator is that GOKH services are valued by the users. The Eldis indicator is that 75% of users rate the quality of Eldis services highly or very highly. This indicator is most completely satisfied by the observations reported above of the heavy and increasing use of abstracts and resource guides. These services guide users to access increasing numbers of documents.

The market research asked participants to give examples of how they used information from Eldis. A large proportion of the respondents chose to answer this open question and the answers are predictably very diverse. There are a few (8-9) answers that relate to advocacy and lobbying work. Larger numbers (15) relate to learning about climate change which is a dominant theme at this time. Gender appears in over a dozen replies. Similar numbers of replies relate to using information in education, training or supporting staff to improve skills. Another 8-9 replies mention design of project work and proposals. Many answers are clearly about individuals increasing their understanding. The numbers of participants in user surveys are only a tiny fraction of the audience and unlikely to be representative. However surveys can be used to explore specific questions and point to areas that need further study.

Change in policy and practice occurs at Impact level

Impact is defined as *Evidence-informed policy making and practice by development actors which will ultimately contribute to improvements in the lives of poor people*⁶⁰. The logframe says that the impact will be achieved if the assumptions hold true that the content is used to inform policy and practice⁶¹. It seems perverse that the main mechanism by which information has an impact on processes that affect poor people is expressed as an assumption. It removes the obligation to manage the portal so that the probability of impact is increased (selecting the best information; making it easy to find; making it easy to understand). The logframe does not represent what staff members think and feel about their work. The mismatch may make it harder to manage for results. The overall logic is clear but there seems to be less immediacy between the work carried out by staff and the effective use of information and change that might affect the lives of poor people. The focus on connecting up and opening up difference sources of information appears to be a step removed from the influence that the information might have. This situation may change as the project matures and building the GOKH requires less attention. These observations lead to recommendations that logframe indicators are more closely aligned with staff understanding and

⁶⁰ See Appendix C for the GOKH Theory of Change and the assumptions mentioned in this paragraph.

⁶¹ It also requires that the users have the skills and the opportunities to make use of the content.

attitudes and that the resources required to monitor the changes that lead to impact of information are made available⁶².

8.2 SciDev.Net: A Brief Introduction

SciDev.Net communicates journalistic articles about development research and has a significantly larger budget than any of the other portals looked at during this evaluation. Reported numbers of “users” have also increased considerably over the same funding period.

8.2.1 Economy: SciDev.Net demonstrates effective cost management mechanisms

SciDev.Net has pursued a range of measures to improve economy which includes negotiating with the landlords of their new offices to obtain a six-month rent holiday and taking over the premises before they were stripped out so that they could make use of existing fixtures and fittings where possible. There are further routine economies in the procurement of travel, accommodation, room hire and office supplies through the use of multiple quotations and bargaining. SciDev.Net has recently converted its phone system to VOIP which they predict will save money in phone calls and conference calls.

Procurement of equipment, software and webhosting is carried out using a graded tendering system. SciDev.Net recently changed its electricity supplier and has moved its contract for office supplies to reduce costs.

SciDev.Net carried out a review of salaries in 2013 in which all job descriptions were reviewed. Job advertisements in both the charity and journalism sectors were monitored for several months and staff members were invited to identify possible comparable posts. Five new pay bands were elaborated which place salaries in the mid-range of comparable jobs in the NGO sector. Performance in recruitment and retention is monitored. Local staff in the regions are trained and supported to take on roles that have previously been done in the London office which tends to reduce costs.

Overall, the wide range of the examples presented allows us to judge that economy is being thoroughly addressed by SciDev.Net. There is evidence of learning from experience to reduce administrative and other costs. Staff are alert to the need to reduce costs and to demonstrate that they are doing so and are showing due regard for VFM principles and good practice.

8.2.2 Efficiency: SciDev.Net’s management practices are efficient, active and agile

SciDev.Net budgets and the number of sessions have increased over the last three years. The rate of increase in Southern users means that the proportion of users in the South has increased significantly.

⁶² The alternative that money and staff time are saved through the use of simplistic indicators is also considered.

Managing for greater efficiency and effectiveness

Efficiency is promoted by different rhythms of work cycles with the daily publication work by the news editorial team being the most urgent. Other teams have regular meetings at their own frequency and the Senior Management Team meets weekly which suggests fairly rapid cycles of decision making. The focus on daily editions may drive the speed to be faster than in other portals that we have looked at.

Internal Learning

There are a number of internal mechanisms for learning and some external inputs, for example, SciDev.Net gets advice from a Gender advisory team which is external to the staff and has license to examine and comment on work. Larger staff reflection events include the use of After Action Reviews which examine more broadly based initiatives or “projects” (e.g. office move, COP21 coverage...). The reviews report on what went well and badly and what might be learned for use at another time.

Validating effectiveness

Effectiveness Projects are mounted as specific initiatives by different teams to address different issues. Download times in Kenya were examined and compared with other sites. One effectiveness project changed the times of day that different editions were published. Posting times were varied throughout the day for the different time zones of the different regions which evened out the flow of work and led to increased user numbers.

Search Engine Optimisation was undertaken in 2015 and a number of measures were taken with immediate effects leading to 30% increases in overall traffic in the first few months. The annual report covering this period says that increases went up to 45% in the last months before the end of the reporting period.

Getting feedback

SciDev.Net have user engagement officers in each regional office and a user engagement coordinator in the London office. These staff members are responsible for increasing use and spread by marketing and advertising initiatives but they also collect ideas and learning from these engagements into what users and would-be users are likely to respond to more strongly. The local teams do not seem to engage with would-be users or carry out audience surveys as in this current evaluation.

Regional Advisory Groups provide support to the regional offices with advice and ideas. The Regional Advisory Group in Latin America and Caribbean region was able to reverse the drive towards shorter and shorter articles. The Middle East and North Africa group said that they wanted more articles from North Africa and the change led to increased readership to the extent that Algeria is now the largest single country audience in the region.

Google Analytics

SciDev.Net makes better use of digital analytics than any of the other portals we have looked at. In particular, SciDev.Net use of the most advanced configuration of Google Analytics to create different reporting views, filter data and tracking goals. Defining goals⁶³ for the website, for example, allows Google Analytics to provide critical information to evaluate the effectiveness of a website. The overall number of goal completions increases 38% between 2014 and 2015 which is in line with the overall growth rate that the site experiences in sessions and users.

Table 8.1: SciDev.Net goals completions. Source: Google Analytics

	2014	2015	% growth
All goals	4,493,695	6,222,221	38.47%
View article	1,557,237	2,272,897	45.96%
Read article	1,184,451	1,627,254	37.38%
Scroll	701,727	909,505	29.61%
Interact	24,474	29,238	19.47%
Share	21,744	17,325	25.51%

Syndication of content increases the reach

Syndication⁶⁴ is promoted by direct search for and engagement with media outlets that would provide good opportunities for reaching a larger and different audience from the website. Syndication of material creates large secondary audiences for material initially published on SciDev.Net. The Meltwater service is used to obtain estimates of circulation of the media outlets that are reproducing SciDev.Net material. A calculation called a “normaliser” is used to provide an estimate of the number of readers based on the circulation. The normaliser is effectively an assumption that an article has a readership equivalent to circulation divided by 2000. Syndication is monitored against Output indicator 1.4 in terms of the number of outlets that are directly syndicating SciDev.Net material. An increasing proportion of these outlets should be in the South for the milestones to be met. The syndication estimates are added to the numbers for the total audience in output 1.2. The numbers of outlets for syndication in the South appear to be below the milestones in the last annual review although total numbers of users are higher than expected. Annual reviews do not contain the estimated numbers of additional users.

Each article also carries a “republish” button which takes the user to a version of the article in html format and sets out guidelines for proper use of the content. The practice conforms to free use with appropriate credit given to the authors and makes it very easy for users to reuse SciDev.Net material and increase the reach. Republish is one of SciDev.Net “goals” that is picked up by Google Analytics.

⁶³ Goals in Google Analytics are actions which the portal wishes the users to take and which it considers as steps towards, and therefore an indicator of, some level of impact. For a commercial website it might be following a link from an email, signing up for a loyalty card or loading items to a ‘purchase cart’. For a research website it might be clicking on a ‘speed read’ or a ‘you might also be interested in...’ link, signing up to a newsletter and so on. Google Analytics then measures these actions automatically.

⁶⁴ Note that the unit costs in Appendix C do not take account of syndication.

8.2.3 Effectiveness: SciDev.Net is also achieving its logframe targets for effectiveness

A key indicator for SciDev.Net depends on the work of opinion authors. The indicator looks at two types of intermediate change: influence on policy processes and increased networking. The indicator is not hugely demanding (half of those involved report positive progress in one or more areas) but they are focused on the intermediate changes that form part of a theory of change for the role of information.

70 opinion pieces were published in 2015 and authors are followed up after 1 week and 1, 3 and 6 months to check on reactions and potential use made of their pieces. Some of the authors are very eminent and some pieces have generated considerable reactions.

SciDev.Net carries out a survey of users every year and usually asks for stories of use that has been made of learning from the website. In 2014 the Tell us Your Story Campaign, was used to ask participants to identify characteristics that helped in the uptake of research findings. There were 153 male respondents and 77 female. They mentioned issues like: links to more resources, objective tone and analysis of what has worked in specific contexts as important characteristics. The editorial teams have been asked to take account of these issues and there will be an assessment of how well they have been at addressing them. This represents a good use of user feedback to guide testing of new ways of working.

The added value of a portal

The main function of the portal is the drafting of new material that presents findings from research and guides users in understanding the socio-economic implications of the findings. The presentation of the material in short articles written in plain style is the basis of the value added by the portal. The articles are covered by succinct summaries and the “speed read” headlines help users understand the content very rapidly. The articles are unique products made available by SciDev.Net.

Website architecture supports selection of material by links to similar material

SciDev.Net site contains an internal search function that is used by only a tiny proportion of visitors to the site. SciDev.Net staff members have expressed the view that using the search function is not a part of the normal user experience. They argue that increasing numbers of visitors arrive at the page containing the article they want to read and do not tend to go on to look at large numbers of other pages; the search function is therefore not an essential feature because the architecture of the website contains other functions that help users to find their way to material that they are interested in. Our case study findings suggest that media professionals⁶⁵ may indeed use websites differently to others: scanning widely rather than searching deeply.

SciDev.Net posts practical guides on a range of skill areas in collecting and sharing information. The most popular cover writing scientific papers and reports, giving presentations and carrying out interviews. The top ten most popular guides record between 15,000 and 3,000 unique page views and the time on page is

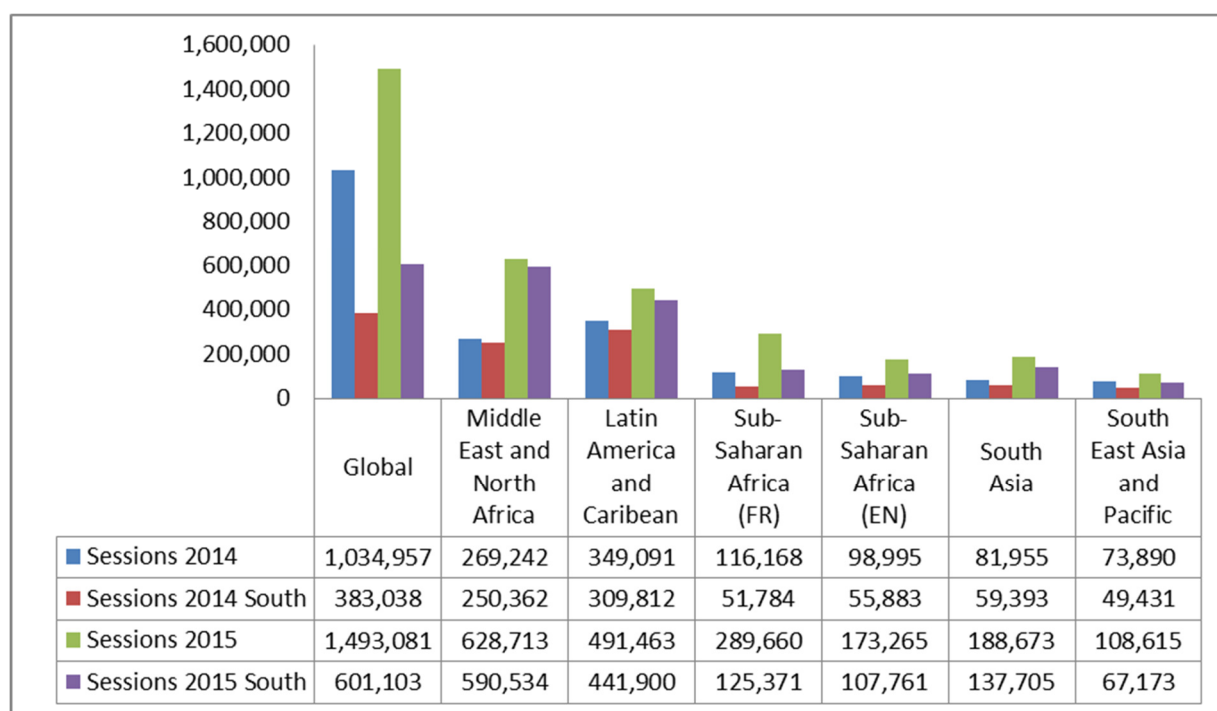
⁶⁵ And possibly elected officials - although note there were only two who finally participated in the case study.

between eight and ten minutes, suggesting that the documents are read online. Three guides in the top ten were republished in other media and shared over a thousand times⁶⁶.

The value of regional offices

Figure 31 below shows how numbers of users have increased considerably for the regional editions. This must be attributed to some extent to the regional offices: increasing autonomy over editorial work is likely to increase the value to users of the regional editions. This is consistent with the ‘democratic pathway’ between portal use and research uptake which we discerned in our case studies and have described in section 6 above.

Figure 31 Sessions by regional SciDev.Net edition



Note that the regional editions are also attracting large proportions of southern traffic. This is highest for MENA which may be due to the language of publication as well as to locally relevant content being highly visible. Francophone Africa has a lower proportion of southern visits which may be due to the value of material of this nature in French to northern readers⁶⁷.

The VFM of the regional offices is also improving because of the learning they contribute to the management of the portal. For example; the different patterns of use of channels to the different regional

⁶⁶ Appendix C looks at some of the difference between portal topic guides, resource guides and practical guides.

⁶⁷ See Appendix C for brief mention of working in different languages and the Equity issue relating to less well served languages.

editions give indications of changes in behaviour and user preferences which should feedback on management decisions.

Table 8.2: SciDev.Net – Traffic channels by regional editions 2015

Traffic Channel ⁶⁸	Global	MENA	LAC	SSA-FR	SSA-EN	S Asia	SEA Pacific
Organic	644,567	93,902	312,980	111,160	68,889	40,912	44,088
Direct	369,424	43,854	80,576	109,300	39,330	62,215	24,289
Social	210,834	443,315	54,772	38,049	26,517	51,864	20,256
Referral	143,549	6,964	13,214	9,504	7,922	5,103	6,005
Email	82,225	535	14,083	7,287	5,281	1,103	1,136

The changes in channel preferences appear to be very recent. The regional breakdown shows up regional differences in preferences of channels. The surprisingly large numbers using social channels in MENA region might have gone unnoticed for a while if the aggregate figures were used. As it is the managers of the MENA edition can address the trend with appropriate marketing and feedback methods.

Managing for VFM

It may be easier to focus management on improving the effectiveness of a portal where there are full time staff with only responsibilities in running the work of the portal as in SciDev.Net and, for example Pambazuka. Dispersed staffing arrangements in IDS and GSDRC may mean that staff members have more responsibilities and looser connections with the achievements of the portal. In SciDev.Net the focus on management seems intense and to be built around quite short cycles of reporting. For example; for some publishing staff the focus on Star Performer articles (those that attract most attention for several days across the three main channels) leads to searching and drafting and editing work that all contribute to short-term success that drives longer-term improvements in VFM.

The logic of the work of the portal remains strong and present and staff members seem to keep in mind the potential for impact. There seem to be mechanisms for sharing learning within and between teams and an appetite for critical reflection.

8.3 Comparison with other portals suggest Eldis and SciDev.net are ahead in actions to ensure efficiency and maintain effectiveness

Other portals show slight decreases in overall traffic and in proportions from the South. This decline is for the moment very slight and numbers may recover quickly year on year. The decline could be due to increasing numbers of competing websites which is part of the rationale for the milestones in the Eldis logframe remaining the same. This was taken to mean that Eldis would be improving its performance if it

⁶⁸ Google Analytics identifies the different routes ('channels') by which users find their way to the site. 'Organic' traffic comes directly from search engines, unassisted by, eg paid advertisements or another site's links; direct traffic comes directly from the user, either via a bookmark or by typing the URL into the address bar of their browser; social traffic comes specifically from social media such as Facebook or Twitter; 'referral' traffic comes from links in other webpages; email traffic comes from the sites own email newsletters or campaigns.

succeeded in attracting the same numbers of users. In fact, numbers have increased slightly for Eldis and massively for SciDev.Net.

All those we looked at show admirable economies and in some cases there are sacrifices being made to keep costs down. Standard approaches to procurement and commissioning keep costs under review.

The overall purposes are different between each of the comparators and between the comparators and the DFID-funded portals being evaluated. GSDRC for example is driven by the need to deliver specific guides to DFID staff and this takes precedence over the repository functions that are also provided. GSDRC seems to have established a clear niche and retains high levels of traffic.

Overall the comparators do not seem to invest as much time into issues of efficiency and checking on performance. This may be due to lack of resources. Fairly standard use is made of Google analytics but some functions are not tracked, e.g. downloads, goals and events. There seem to be opportunities to explore the views of users and test new methods or approaches. Pambazuka has a large body of subscribers to its email notification service but it has not exploited the potential this offers to survey the views of subscribers with a short survey. It might also, for example, be interesting to see if it made a difference if the news were updated on a Monday instead of a Friday. Running an information portal is a difficult project which requires a wide range of skills and it has become more difficult as competition has grown and funding has become harder to come by. The comparators demonstrate that the environment is not easy and that the DFID funded portals are performing well.

8.4 Key Lessons: Value for Money Assessment

- The VFM message has been received and understood and portals are keeping costs down. However, **there may be little to gain by further putting pressure on Economy as this may lead to loss of quality/sustainability.**
- **It is important for portals to be clear about what they are going to do and how they will achieve it with their respective functions.**
- **Greater levels of investment are necessary for the portals to grow in the current context**
- **Topic Guides/Resource Guides/Practical guides all receive high levels of traffic, but portal managers don't currently have a clear defence of the curation value of these products**
- **Handheld devices, especially mobiles, are increasingly important ways of reaching Intended Users** with research evidence as a) increasing numbers and proportion of visits are from mobile devices and b) having a mobile friendly site improves your google rating
- As an increasing number of users are accessing research evidence on the portals via social media channels, **social media represents an important communication platform.**
- **Conventional assumptions that longer, deeper, engagements are of greater value may not apply to a news-based site like SciDev.Net** where visitors may be getting all they want from a short visit to a single page.
- As only a small number of visitors use internal search functions good **search engine optimisation is key to being found.**
- **Uptake of news items is improved by relevant language and locally relevant and topical content.**
- **User surveys may be better placed to explore likes and dislikes rather than to collect approval numbers.**
- **Eldis and SciDev.Net portal managers are highly motivated by equity issues but do not collect enough evidence to demonstrate effectiveness.**
- Both **Eldis and SciDev.Net show good management for the purposes of pushing down costs ('Economy') and appear to be managing inputs well to produce the agreed outputs ('Efficiency'). However, both promoting uptake** (defined as behaviour change on the part of policy actors), **and monitoring it, could be improved.**

9 Summary of Key Findings

9.1 Generally...

- Policy actors of all kinds, in both the North and the South, **want to use research evidence in their work and are increasingly able to use the internet to find it**. Rapidly improving 'supply' conditions – better availability, accessibility and discoverability – have been key in driving this increase.
- **There is little discernible difference between policy actors in the North and the South** in the way they use the internet to find research evidence: generally, their online interactions are characterised by a **perceived lack of time to search extensively or to assess deeply the quality of what they find**.
- **Trusted sources are paramount** in helping 'time-poor' policy actors to assess the credibility of research found on the internet. The 'source' can be the website, the author, the author's affiliation or 'respected referee'.
- **Portals' 'curation' role of collecting, selecting and presenting research information is still valued**.
- **Starting a search with Google is pretty much universal** and generally considered to be highly effective: further 'chaining' to other sites or materials **often does not go beyond the first page of Google**.
- **Use of the DFID funded portals' own internal search function is very low** – on the research sites we assessed, use of the internal search function averaged less than 1% of all sessions in 2015.
- **Searching online for research tends to be frequent, rapid and impatient**: failures such as broken links, paused downloads or unfulfilling searches lead to immediate abandonment.
- **A wide range of different media and products – videos, PowerPoints, content summaries and guides – are used** to orient online searchers when looking for research evidence.
- **PDFs are very popular** – not only as a convenience for later reading on different devices but also as a source for repurposing (e.g. into PowerPoints); a PDF is also sometimes regarded as an indicator of a familiar structure and the readability of the contents, and sometimes of quality - being a PDF raises the perceived probability that it is a peer-reviewed article.
- **Users of all kinds want access to the data**, independently of research articles: national governments' own websites are frequently used to find the former, while the World Bank and UN sites are the 'go-to' for international data.

9.2 And specifically regarding the DFID-funded portals⁶⁹

- **Eldis is increasing the accessibility of information**: it provides access to a very large and increasing repository, some of the content of which is not available elsewhere. More users are downloading more documents.
- **SciDev.Net has rapidly increasing numbers of users and now has a huge reach**: 2.7 million in 2015. This is linked to the creation of region-specific editions and mobile accessibility.
- **Both Eldis and SciDev.Net are increasing the accessibility of Southern material** and access for Southern users.
- **Both Eldis and SciDev.Net are providing value for money**. In the simplest terms, they have exceeded their logframe targets. More importantly there is convincing evidence that they are improving their performance and continuously trying to improve the services they offer both to users and producers of information.

⁶⁹ These recommendations focus on Eldis and SciDev.Net, the two DFID-funded portals which underwent a VFM assessment

- **The role of Eldis is changing** as it provides service and support to the GOKH and promotes two-way traffic between them. This experiment in open data and open knowledge is important and may define the future for portals that are holding large volumes of original material in complete reports.

10 Key Lessons

- **It is appropriate to put effort into making research evidence available online** given the evidence of demand among DFID's Intended Users and of the frequency with which they turn to the internet to find it.
- Intended Users usually rely on Google to direct them to relevant content and if a website does not appear on the first page of results, it is unlikely to be visited. Therefore, **understanding the search terms people use and Search engine optimisation is critical.**
- As Intended Users were found to be information seekers not browsers, **portals should be designed and managed to support information seeking behaviour.**
- **Government websites are important sources of research evidence**, particularly for statistics and particularly Intended Users in the South.
- **Social media can be a useful resource for Intended Users to encounter or share information.**
- When research evidence is made available online, **it is more useful to Intended Users if it is portable - and easy to scan** to quickly locate the key points.
- **Understanding what confers "trust" to the Intended Users of research evidence is important;** how Intended Users judge reliability and develop trust in a source is likely to vary between them although a common influencing factor is association with organisations perceived to be authoritative (especially UN organisations, governments or research institutes).
- **There is evidence of differences between specific groups of Intended Users** (e.g. Global Academic/Researcher compared to Southern Civil Servant) so **an undifferentiated approach to using the internet to reach Intended Users with research evidence is likely to have limited success.**
- **The term "research evidence" is not understood by all Intended Users in the same way** and was completely new to some of the research participants, so should be used with caution; "data" and "statistics" are more commonly used terms.
- **Although the DFID portals' content is valued and perceived to be of high quality there is potential to increase their awareness and use.**
- **Service quality relies on external factors such as internet availability.** Although internet is increasingly available in the developing world, access is variable and the cost of the internet can be inhibitive.
- **Where access to content involves linking to an external site that is behind a paywall, this can be a barrier.**
- **System quality for all portals** (including usability and user experience aspects) **can be improved.** However, **deciding how to do this is complex** because there are several ways in which the content could be accessed.
- **Design issues** e.g. webpages being too busy, weak search functions and confusing navigation **makes it difficult for users to find specific content through the portal webpages** (as opposed to browsing).
- **The wealth of information available makes it particularly important for access mechanisms to be clear and straightforward.**
- Participants from categories of Intended User who are not current regular users of the portals are less likely to browse and more likely to have a targeted information need. **The design issues identified are**

problematic for these Intended Users, and discourage them from accessing the portals' content.

- **Filters based on country or on region, and country-specific profiles are important aspect for users searching for context-specific research evidence.** Uptake of news items is improved by relevant language and locally relevant and topical content.
- **'Use' and 'uptake' are different but both are valid intermediate outcomes that DFID should be measuring.**
- Although the extent to which 'use' is productive cannot be demonstrated (time on a site could be time spent concluding the website is not helpful; searching could be unfruitful or downloaded articles may never be read - or once read concluded to be irrelevant), nevertheless, **'use' is evidence of a service that is being utilised and should be measured as a 'good' in its own right.** Searching, sifting, selecting, sharing, citing and reading are all 'use' activities which are essential and inevitable parts of the process of finding relevant evidence even though the majority of pieces of evidence encountered in any one episode of 'use' may be discarded and disregarded. Furthermore, **a 'use' activity which may appear unproductive in the first instance may contribute to the efficacy of subsequent searches; 'uptake' may be indirect or delayed.**
- **By framing uptake in terms of behaviour change we have been able to address the seemingly unavoidable problem of relying on anecdote and recall of one-off examples to demonstrate the value of research.**
- The VFM message has been received and understood and portals are keeping costs down. However, **there may be little to gain by further putting pressure on Economy as this may lead to loss of quality/sustainability.**
- **Handheld devices, especially mobiles, should be taken seriously as ways of reaching Intended Users** with research evidence as a) increasing numbers and proportion of visits are from mobile devices and b) having a mobile friendly site improves your google rating.
- **Conventional assumptions that longer deeper engagements are of greater value may not apply to a news-based site like SciDev.Net** where visitors may be getting all they want from a short visit to a single page.
- **User surveys may be better placed to explore likes and dislikes rather than to collect approval numbers.**
- **Eldis and SciDev.Net portal managers are highly motivated by equity issues but do not collect enough evidence to demonstrate its contribution to effectiveness.**
- **Both Eldis and SciDev.Net show good management for the purposes of pushing down costs ('Economy') and appear to be managing inputs well to produce the agreed outputs ('Efficiency'). However, both promoting uptake (defined as behaviour change on the part of policy actors), and monitoring it, could be improved.**

11 Recommendations

11.1 For funders of online research portals and repositories

11.1.1 Generally, and particularly for the DFID-funded portals and repositories evaluated

- **Invest in search engine optimisation.** It may be possible to work with Google directly to integrate international development sources better into searches.
- **Publicise links to related websites more clearly.** We found both our Market Research respondents and case study participants were initially unaware of, but interested in following up on, the sites we named to them. An ‘Amazon-style’ recommender system (‘other users looked for... or ‘chosen for you...’) would be the best, although this may be costly.
- **Make internal site searching easier⁷⁰** in order to improve the usability of sites and make the most of the curator function of portal. To do this most successfully, it will be important to employ terms that policy actors actually use, which is not always the same as keywords selected by the originators. The portals should also make the search function more effective by making it clearer how the search function works and making individual search behaviour more transparent. Also, consider making it easier for users to filter by region/country to make it easier for them to access locally relevant content.
- **Make the overall design more user-centred:** menus and sub-categories should be revisited; websites should be built for high and low bandwidth downloading e.g. a mobile version of the site made up of smaller pages that load faster (e.g. with fewer pictures, smaller files; etc.) PDFs should be made available as often as possible to meet users’ format preferences and to avoid problems of broken links. This includes actually hosting the PDF, rather than linking out to it.
- **Make the site mobile friendly.**
- **Consider whether and how they want to attract new users:** whether they want to increase user numbers or focus on existing users; and whether they want to focus on expanding their user base by attracting new users to return to the site, and hence turn them into regular users, or to expand the number of users who reach the portal content via Google, social media or newsletters, or whether they want to nurture existing users. Which choice is made will determine whether the portal website is needed, and if so how the portals might be improved.
- **Utilise social media as a tool to attract users to portal content.**
- **Package/repurpose research evidence into digestible products that can be quickly scanned by users.**
- **Invest in making available locally relevant content e.g. through region/country specific research.**
- **Make the DFID association (rather than ‘UK Aid’) more apparent on DFID-funded sites** – amongst the development policy community we reviewed, DFID is regarded as a trusted source and therefore a prompt to ‘chain’ to the material found on DFID-related sites.

⁷⁰ “Identifying good research studies from online sources is a complex business and very time-consuming. Many of the major organisations that try to collect research evidence and make it available to online users let the side down badly by not spending money on the search software. This has the effect of turning potential heavy users from using these resources which has serious implications for the quality of their studies as they might have missed important evidence. Websites such as this need to employ software writers who understand how research works (commercial software writers are usually hopeless) and who consult research people on a continuing basis to ensure that data can be extracted using complex search strategies and that ALL search results can be downloaded in formats that are compatible with software that researchers.” Market Research respondent, Northern, Other

11.1.2 Specifically for Eldis

Eldis has a lot of valuable content. However it has a 'busy' homepage which can be hard to access by those unfamiliar with it and visitors to Eldis' website sometimes are unable to load the site at all. These two factors are frustrating for loyal users and very off-putting to others. The site could be streamlined and a more user-centred design approach⁷¹ adopted for any further amendments. It particularly needs to be designed for fast loading so that users get some kind of response rather than a blank page when they first go to the site.

Future reporting should include some evidence of the usefulness of making information of southern origin globally available.

11.1.3 Specifically for R4D

R4D's repository function for all DFID-produced and DFID-funded material is not immediately clear. The wide range of content, once it becomes apparent, is appreciated but is initially disconcerting: project documentation and research papers should be separately indicated. The link to DFID – rather than UKAid – should be made clearer: as a well-known and trusted source in the aid policy community, the link is a guide and help.

Use of the "advanced search" page should be made less daunting for the users. This can be achieved relatively simply by adding light-touch tips and hints for how to use it. For example the number of options it offers makes it a powerful search tool but it is not clear that partial completion is possible, i.e. users don't have to complete every field. The current document that explains how to use the search function is just as daunting as the advanced search page itself.

11.1.4 Specifically for SciDev.Net

SciDev.net should consider adding more attachments for readers who want to follow up on the usually brief web article. This should be in PDF format as much as possible.

The current period of rapid growth for SciDev.Net may slow down and it will be important to see how coverage of the target groups and user satisfaction change when budgets are static for several years rather than increasing. The experiment in making science and technology research available through digests and very short summaries (the "speed read") should be pursued and some emphasis placed on demonstration of higher level change.

11.2 Other Recommendations for DFID's online research and evidence strategy

In addition to continuing to support international research sites, **DFID should consider supporting partner Governments' own websites** to improve their accessibility to policy actors seeking reliable national and local statistics. There is a high level of awareness and expectation of Government websites

⁷¹ A user centred design approach means investigated intended users, and looking at their behaviour and what they would like.

as sources of information amongst policy actors of all types (and all sectors). DFID offers substantial support to national statistics offices, key national data series and individual ministries which could be made more effective by linking it to the digital dissemination strategies of the Research and Evidence Division.

The 'democratic pathway' represents a potentially important channel for disseminating research evidence which is currently under-exploited. Southern NGOs have been understood for a long time by DFID to be important local policy actors and programme implementers. However, our research has revealed that internet users also often seek out well-respected NGOs and CSOs as validators of the 'evidence' and statistics used in local political debates. **By supporting these NGOs to disseminate online topical research, DFID could help inform the local debates that represent public opinion and therefore better inform national public policy.**

DFID should consider including in the training/induction package of all new DFID in-country programme managers a module on internet skills and resources: Programme leaders have both privileged access to senior policy makers and a remit to promote change, often most effectively done by showing the latter 'what works'. However, programme managers are busy people who frequently need rapid access to lessons learnt and 'how to' guides. . They also tend to be of a generation that did not grow up with the internet and is therefore less confident in using it. A short, targeted, training session for this group could be a cost-effective contribution to global research uptake, realised not only through their own use but through the subsequent promotion they could do informally of the DFID supported research websites.

Although the portals' own user surveys will be valuable for ongoing monitoring and assessment by the portals themselves, for a more objective evaluation **DFID should consider repeating the market research in the future across all DFID funded portals periodically and at the same time.** The market research should ask a set of standard questions as well as optional extras tailored to the learning needs of the particular services. Benchmarks could thereby be established and comparative analysis done on the results (eg on any common or divergent trends over time) and learning could be shared across portal management teams.

11.3 Suggestions for further study

- **Undertake a case study into elaborating and exploring the 'democratic pathway'.** There is considerable new research (even entire university departments and think tanks) dedicated to the role of the internet and social media in policy making. However, their findings are based almost exclusively on mature, functioning, democracies. The role of the internet in developing countries with nascent democracies is much less researched. We saw in all the country case studies signs of emergent trends in the use of modern media to participate in local and national debates which suggest opportunities for the role of online research evidence dissemination which a more detailed study could elaborate.
- **Undertake a dedicated study specifically into the sources of information *generally* (including, but not limited to the internet; including but not limited to research evidence) of local elected officials and local authority workers.** Despite strenuous efforts on our part, these two groups

remained hard to reach yet their role in the democratic process and in effective public service delivery in the current era of decentralisation is significant.

- **Mine our market research and case study data to extract a more detailed analysis of Southern civil servants.** This could include contacting the Market Research respondents who said they were happy to be contacted for follow-up research. Over half of the respondents who said they were aware of one or more of the DFID-funded portals also said they were happy to do this, including the civil servants.

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