

# Use of scientific and technological evidence within the Parliament of Uganda

A joint report by the UK Parliamentary Office of Science and Technology,<sup>1</sup> the Parliament of Uganda,<sup>2</sup> and the Ugandan National Academy of Sciences.<sup>3</sup>

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<sup>1</sup> [www.parliament.uk/post](http://www.parliament.uk/post)

<sup>2</sup> [www.parliament.go.ug](http://www.parliament.go.ug)

<sup>3</sup> [www.ugandanationalacademy.org](http://www.ugandanationalacademy.org)

<sup>4</sup> [www.inasp.info](http://www.inasp.info)

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# Executive summary

## Background

Science and technology are increasingly recognised as crucial issues for the Parliament of Uganda – as illustrated by the setting up of the Parliament’s first Standing Committee on Science and Technology in 2002.

In 2008, to strengthen its handling of Science, Technology and Innovation (STI), the Ugandan Parliament entered into a collaboration with the UK Parliamentary Office of Science and Technology (POST) and hosted an initial brainstorming session for what has become known as the ‘POST Programme’.

To inform the activities of this Programme, the Parliament of Uganda, POST and the Ugandan National Academy of Sciences (UNAS) conducted research into how parliament currently handles STI. The findings are set out in this report. Its intended audience goes beyond the POST Programme, as our research has brought to light issues that are important to other stakeholders and that extend beyond STI.

## Methodology

The methodology for our research (conducted during the 8<sup>th</sup> Parliament [2006-2011]) consisted of:

- an expert analysis of 17 STI-related policy briefings produced by parliamentary researchers;
- a survey of 121 MPs from across parliament in the first quarter of 2009;
- semi-structured interviews with 7 MPs, 9 staff from the Department of Library and Research and 3 clerks;
- a focus group with the Standing Committee on Science and Technology, including 5 MPs and the Committee Clerk; and
- desktop research: analysis of the number and type of briefings produced by the Department of Library and Research and of selected parliamentary debates on various topical STI issues (namely atomic energy, plastic bags and the use of the pesticide DDT in malaria control).

## This Report

This report provides:

- an overview of how effectively the Ugandan Parliament has handled STI to date;
- suggestions on where there are gaps in Parliament’s handling of STI; and
- possible options for addressing those gaps.

It sets out our findings for:

- overall handling of STI by parliament;
- the Standing Committee on Science and Technology;
- the Parliamentary Research Service within the Department of Library and Research; and
- the Parliamentary Library within the Department of Library and Research.

The findings indicate the ‘state of play’ at the time the data were collected (i.e. the first quarter of 2009, when the POST Programme had just begun). Interviews with 12 library and research staff in early 2011 on the impact of the POST Programme indicate that the majority of staff feel that the programme has had a positive effect on their and their department’s understanding of STI issues. It could, therefore, be beneficial to repeat some

of the elements of this baseline study (such as the policy briefing review) to assess progress since the data were collected. However, due to the long timescales required for capacity building activities to have an impact, the findings presented in this report are still broadly relevant in the 9<sup>th</sup> Parliament. Note that the programme of POST support comes to an end in mid-2012. The Parliament of Uganda therefore needs to identify its own ways of addressing current gaps, building on lessons learned from the POST programme.

## Context for Research

Although there are many barriers to progress, the profile of STI has increased in Uganda in recent years.

- **There has been an increase in spending on research and development:** total spend rose from US\$ 31,870 million in 2003/04 to US\$ 82,249 million (0.24 per cent to 0.45 per cent of GDP), and the number of published articles authored or co-authored by a Ugandan scientist or engineer has increased tenfold from about 30 a year in the early 1990s to more than 300 per year.<sup>5</sup>
- **The Cabinet approved Uganda's first National Policy on STI in 2009.** It sets out strategies to overcome key issues affecting the STI sector in Uganda, such as low levels of coordination and inadequate infrastructure, as well as providing guidance in diverse areas such as intellectual property rights, traditional and emerging technologies, and public awareness of STI.
- **Since 2002, there has been a Standing Committee on Science and Technology,** but there are also a number of other committees whose work has an STI element, for example the Standing Committee on HIV/AIDS and the Sessional Committees on ICT, Physical Infrastructure, Natural Resources, and Agriculture, Animal Industry and Fisheries.
- **Parliament is increasingly required to handle policy relating to STI across a wide range of areas,** from environment and energy through to public health and education. However, of 93 bills passed by the 8<sup>th</sup> Parliament, only 8 had a particular focus on STI, and of 23 bills still pending at the end of the 8<sup>th</sup> Parliament, 7 were for STI. It is possible, therefore, that bills requiring a greater understanding of STI take a longer time to get passed.

## Key Findings

### Parliament-wide Issues

#### *Key observations*

- Our survey of MPs indicates widespread enthusiasm for science and technology, with over 90 per cent saying that they are interested in STI. This finding applies across MPs of both genders and all educational backgrounds.
- There is widespread willingness among surveyed MPs to take action to improve the Ugandan Parliament's handling of STI.
- Two-thirds of surveyed MPs say that there is a need for more parliamentary debates on science issues and that debates should be more evidence-based.
- However, this positive attitude does not always translate into action: STI do not get much attention on the floor of the house, and debates are poorly attended.
- There is a lack of clarity in the coordination of STI within parliament, according to those MPs who were interviewed.

<sup>5</sup> Brar S., Farley S.E., Hawkins R. and Wagner C.S. (2011) *Science, Technology and Innovation in Uganda: Recommendations for Policy and Action*, World Bank, Washington, USA, Annex 1.

### *Underlying factors*

- On the whole, MPs have low levels of scientific literacy, although the majority still consider themselves 'well informed'.
- Most MPs do not think that science and technology are relevant to daily life.
- There are limitations in the availability of information on STI for MPs.
- In some cases, MPs find it difficult to distinguish reliable scientific evidence from unreliable evidence.
- Institutional mechanisms for sharing information within parliament – such as order papers – are weak.
- The Standing Committee on Science and Technology has low visibility.

## **The Standing Committee on Science and Technology**

### *Key observations*

- It is widely acknowledged that parliamentary committees on science and technology have a role to play in national development.
- Since its inception, the Standing Committee on Science and Technology has been active in monitoring, evaluating and assessing activities in public institutions and other bodies engaged in national science and technology development.
- The Committee plays a key role in raising awareness of key STI issues within parliament, through workshops and seminars and, since 2008, the POST/UNAS led scheme to pair scientists and MPs.
- However, in terms of reports produced and debates generated, the Committee's visibility in parliament is in fact fairly low.
- One-third of surveyed MPs think that the Committee does not have enough input into parliamentary debate. However, one-third hold the opposite view, and one-third have no opinion.
- The Committee has an extremely broad mandate compared with committees in other countries, and progress in areas such as the scrutiny of bills with an STI component has been limited. Some would like to see more activity in this area.
- Although the Committee has good links with stakeholders such as UNAS, UNCST and other institutions, there is room for improvement in its visibility outside of parliament, for example in terms of media coverage and information available online.

### *Underlying Factors*

- The Committee functions on limited resources: there are low levels of staffing, funding and space for meetings, for example.
- Committee members have a wide range of other commitments which often take priority over the work of the Science and Technology Committee.
- There is a need to forge stronger links with other parliamentary committees in Uganda.
- A lack of clarity in the handling of STI means that the Committee's role is not fully exploited.
- Unlike many of its international counterparts (for example in the UK House of Commons), Ugandan parliamentary committees do not conduct formal inquiries, which are a good way for committees to raise their profile and increase impact.

## **The Parliamentary Research Service**

### *Key Observations*

- MPs see the Parliamentary Research Service (PRS) as a key resource: over half of our surveyed MPs claimed they visit at least once a month for information on STI. Their preferred method of communication is face to face.
- MPs praise the high levels of motivation and dedication of research staff.
- The main concerns of MPs related to the turnaround time for research requests and the need for more scientific expertise in the Division.
- The quality of reports produced by the PRS varies significantly. Reviewers identified a number of common areas for development, including a need for greater objectivity, better exploitation of available sources of

information (such as online resources) and improved understanding of the basic scientific principles underlying issues being debated.

#### *Underlying Factors*

- Staff have limited access to information on science and technology.
- There are limited resources in the Parliamentary Library, staff have difficulties in accessing in-country information on STI and have poor links with the external STI community.
- There is a need to improve researchers' information literacy skills and to improve their knowledge of current STI.
- At the time of writing, there was no central repository for storing reports.
- There were few members of staff with a background in science and technology or academia.
- Researchers face the challenge of having to address a broad range of topics in their work.
- The high workload and stress levels of staff are exacerbated by low staffing levels and possibly by duplication of efforts and a need for more effective information-sharing practices.
- There is limited time for quality control of reports, such as internal and external peer review.
- There are few mechanisms through which staff can obtain constructive feedback on research from MPs.

### **The Parliamentary Library**

#### *Key Observations*

- Library users praise the motivation and dedication of Library staff.
- MPs regard the Library as a key source of information on STI.
- Although over half of MPs say that they visit the Library for STI information at least once a week, this figure seems high, and it cannot be verified as the Library only holds limited information on usage.
- Users say the Library lacks STI-related materials. In particular, they feel, it should have more up-to-date publications such as newsletters and policy-relevant briefings from key institutions. STI develops quickly, so books are not necessarily the best source of information.
- Users and librarians are not accessing the full range of online resources that are available. It is possible that such resources are largely academic and not directly relevant to the requirements of parliamentarians and staff. However, there may also be a lack of awareness of what resources are available.
- There is some evidence that, owing to developments such as information literacy training, the availability of information on STI has improved since our research started.

#### *Underlying Factors*

- Library staff sometimes have difficulty identifying reliable sources of information on STI.
- MPs often expect answers to their questions to be found in books and are not aware of online resources.
- Staffing levels and high workloads can affect productivity.
- Some interviewees say there is limited space in the Library.
- Some interviewees say internet connections are not adequate for staff to make full use of online resources when needed.

### **Possible Ways Forward**

Below we list some possible ways of addressing current gaps in skills, knowledge & resources, and processes within the Parliament of Uganda, as identified by this study. Rather than see these as a blueprint for the way forward, we suggest the Ugandan Parliament, its staff and donors view it as a prompt for discussion, bearing in mind the ODI's principles for parliamentary strengthening. The conclusions section of the full report gives details of gaps identified, and of where POST, UNAS or other partners have already undertaken some activities to address these gaps. It should be noted that the programme of POST support comes to an end in mid-2012. Parliament therefore needs to identify its own ways of addressing current gaps, building on lessons

learned from the POST programme.

#### **Skills Gaps**

- Conducting training for MPs on oral communication (focusing on STI);
- Conducting training for MPs on information literacy and scientific method;
- Conducting training for clerks in effective report writing;
- Conducting training for staff on information literacy, summarising skills and science communication (already undertaken);

#### **Knowledge and Resource Gaps**

- Conducting science induction sessions for new MPs;
- Producing a briefing paper on "science in the new parliament" for new MPs;
- Conducting further research into quality of scientific evidence used in debate;
- Holding workshops and seminars to boost interest of STI in parliament (already underway);
- Recruitment of short term interns from academic community (under exploration);
- Pairing of MPs and scientists to enhance links between Ugandan staff and external stakeholders in science and technology MP (already underway);
- Improving display of hard copies of STI related newsletters, periodicals and other publications in parliamentary library, as well as investigating options for electronic access;

#### **Process Gaps**

- Increase range of information available online about the activities of the Science and Technology Committee;
- Forge closer links with journalists e.g. through Ugandan Association of Science journalists;
- Seek advice from the secretariats of Science and Technology Committees in other parliaments on best practice and scope of Committee mandate;
- Explore options for a centralised electronic repository to promote more effective sharing of information;
- Investigate demand for an online catalogue for Library;
- Review options for peer review/quality control mechanisms for internal reports.



# 1. Introduction

## 1.1 Background to the Baseline study and Report

In 2008 the UK Parliamentary Office of Science and Technology (POST) and the Parliament of Uganda entered into a collaboration aimed at strengthening the Parliament of Uganda's handling of Science, Technology and Innovation (STI). The Parliament of Uganda hosted an initial brainstorming session to set objectives for the collaboration (named the 'POST Programme'). This session was attended by POST staff, MPs, officials from the Parliament of Uganda and representatives from the Ugandan National Academy of Sciences (UNAS).

Participants had many suggestions about what the programme's priorities should be. These ranged from building MPs' interest in science and technology by screening science documentaries to training staff on how to communicate scientific information to policymakers.

However, participants also decided that the POST programme needed more information on how effectively the Parliament of Uganda currently handles STI. The subsequent baseline study was originally intended as a short research study to help direct POST's funds effectively and to provide indicators against which future progress could be measured. However, as results emerged it became clear that they would be valuable to a wider audience than those directly involved in the POST Programme. It was also felt that many of the issues identified by the study were not unique to science and technology. This report thus seeks to share the findings with a wider audience.

## 1.2 Baseline Study Methodology

The methodology for the baseline study consisted of a mixture of desktop research, interviews, surveys and focus groups, yielding primarily qualitative but also some quantitative data. Key elements are set out below.

### Analysis of STI-related policy briefings

International scientific and policy experts analysed 17 internal briefings produced for MPs by parliamentary staff between 2005 and 2008. Reviewers were asked to assess briefings on their completeness, accuracy, use of evidence, objectivity and clarity. Further details of this study can be found at [Appendix A](#). Originally, the study aimed to conduct a similar review of reports produced by Uganda's Standing Committee on Science and Technology. However only one (draft) report was obtained, so a full review was impossible. Comments on the report we obtained can be found in [Chapter 3](#).

### Survey of MPs

We conducted a survey of 121 MPs from across Parliament in the first quarter of 2009. The speaker encouraged all MPs to participate in the survey. Those who did participate were fairly evenly distributed across parliamentary committees (both sessional and standing), with no more than 15 per cent of participants belonging to any single committee. Further details on the survey sample can be found at [Appendix B](#).

The survey questions aimed to:

- Gauge the level of MPs' interest in science and technology;
- Assess how well MPs thought STI were handled in parliamentary debate; and
- Determine how MPs obtained information on science and technology.

### **Semi-structured interviews**

A member of staff from UNAS conducted semi-structured interviews with 19 individuals, including 7 MPs, 9 staff from the Department of Library and Research and 3 clerks. These interviews focused on people whose duties required them to handle STI. The busy schedules of MPs meant that it was difficult to obtain interviews with more of them. The interviews that were conducted were therefore used to provide *qualitative* insights to supplement the results of the survey.

A member of staff from UNAS also conducted a focus group with the Standing Committee on Science and Technology in spring 2009, and this included 5 MPs and the committee clerk. The discussion focused on finding out more about the Committee's perspective on its role and effectiveness and the challenges it faced.

### **Desktop research**

We conducted desktop research to provide context to the above activities. This included examining records from the Parliamentary Research department within the Department of Library and Research, which listed the parliamentary briefings it had produced, the person for whom the briefing was produced and the purpose of the briefing.

We also conducted an analysis of parliamentary debates on a selection of topical STIs (atomic energy, plastic bags and the use of the pesticide DDT in malaria control). We asked questions such as:

- What is the nature of the 'evidence' cited;
- How factually accurate is this evidence;
- How balanced is the debate;
- Are both sides of the debate represented;
- How comprehensive is the debate; and
- Are any key areas omitted?

Owing to time constraints and difficulties identifying appropriate debates, we were only able to examine a limited number. Although it is not possible to make broad generalisations on such a limited selection, we did use our findings to help interpret the survey results and make some additional observations.

## **1.3 This Report**

This report draws on the data produced by the baseline study and observations made in the course of the POST programme. It provides:

- An overview of how effectively the Ugandan Parliament has handled science and technology to date (i.e. prior to the formation of the 9<sup>th</sup> Parliament);
- Suggestions on where there are gaps in Parliament's handling of science and technology issues; and
- Possible options for addressing these gaps.

The remainder of this chapter sets out the context for the baseline study report. Those that follow set out our findings relating to both overarching STI matters in the Parliament of Uganda and the role of specific parliamentary functions. Each chapter sets out:

- Key observations;
- Underlying factors affecting the understanding and application of STI; and
- Suggestions for ways forward in each area.

Rather than provide specific strategies for future development, our recommendations seek to inspire debate about where there is room for improvement and how best this improvement can be achieved.

- Chapter 2 sets out findings for the broad parliamentary context
- Chapter 3 sets findings for the Standing Committee on Science and Technology
- Chapter 4 sets out findings for the Research Division of the Department of Library and Research
- Chapter 5 sets out findings for the Parliamentary Library within the Department of Library and Research.
- Chapter 6 summarises our conclusions and recommendations and also provides a table that identifies key gaps in skills, knowledge or processes within parliament and suggests possible ways forward.

#### 1.4 Context for the Baseline Study and Report

It is important to note that the profile of science and technology has increased in Uganda over the past decade, although there are still many barriers to progress. Some of the most significant developments, against which the baseline study was conducted and this report produced, are set out below.

##### Increase in spending on research and development

Recent years have seen an increase in spending on research and development (R&D) in Uganda: total spend rose from US\$ 31,870 million in 2003/04 (0.24 per cent of GDP) to US\$ 82,249 million (0.45% of GDP) in 2007/08, as illustrated in Figure 1.1.<sup>6</sup>

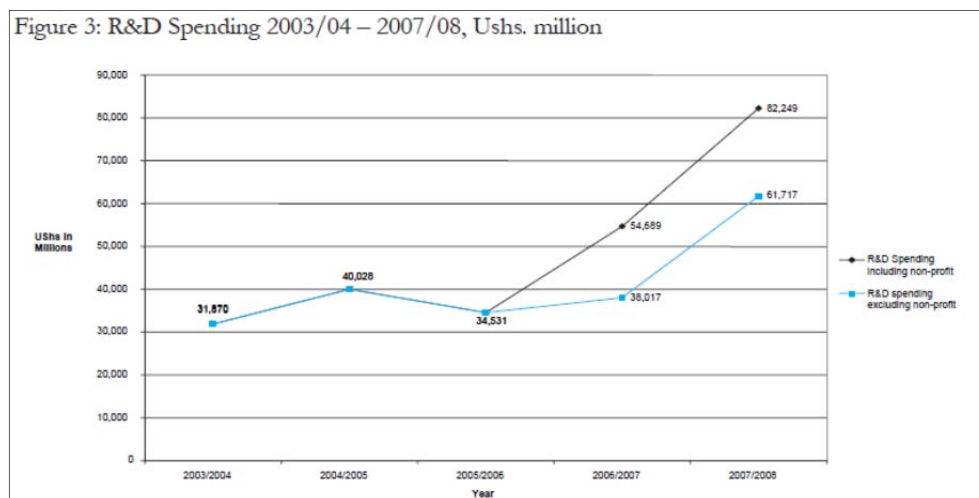


Figure 1.1: R&D spending in Uganda 2003/04–2007/08 (Ushs. million).<sup>6</sup>

A recent World Bank report states that the number of published articles authored or co-authored by a Ugandan scientist or engineer has increased tenfold from about 30 per year in the early 1990s to more than 300 per year.<sup>7</sup> The main academic research centres are Makerere, Mbarara and Kyambogo Universities and the Islamic University in Uganda, Mbale, which specialises in information and computer science. Over two-

<sup>6</sup> Ecuru J., Nawegulo N., Lutalo R.B., Kasule D., Tujunirwe E., and Akampurira I. 2008. *Research in Uganda: Status and Implications for Public Policy*. Ugandan National Council for Science and Technology, Kampala-Uganda. p16, p17

<sup>7</sup> Brar S., Farley S.E., Hawkins R. and Wagner C.S. (2011) *Science, Technology and Innovation in Uganda: Recommendations for Policy and Action*, World Bank, Washington, USA, Annex 1.

thirds of all research projects are in the fields of social sciences and humanities, and medical and health sciences (see Figure 1.2).

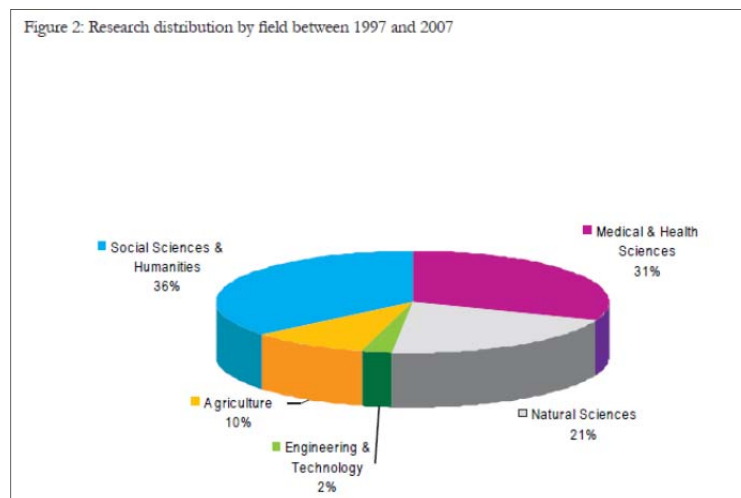


Figure 1.2: Ugandan research distribution by field between 1997 and 2007.<sup>8</sup>

The main sources of funding for R&D in Uganda are government, and foreign and international agencies. There is very little financing from individuals or the private sector. In 2007/08, government funding made up about 42% of estimated total R&D expenditure, whilst 51% was made up of donor contributions.<sup>9</sup> However, since part of Uganda's national budget is financed by donors, in reality the total donor contribution to R&D is higher.<sup>10</sup>

The Millennium Science Initiative (MSI) runs from 2006/07 to 2010/11 and is aimed at strengthening STI in Uganda. It was set up to:

- Allow universities and research institutions to train a greater number of, and better qualified, engineers and scientists;
- Conduct high-quality and relevant research; and
- Improve links between research and industry.

It was funded largely by a loan from the US \$30 million loan from the World Bank, with some additional funds from the Government of Uganda. The MSI is widely seen as having been a major boost to STI in Uganda. Concerns have been raised in the media and the country's scientific community over the Government's decision not to renew the MSI. However, UNCST representatives say that the MSI concept is being "built upon and expanded in the National STI Plan which replaces the MSI project and seeks to implement the Uganda STI Policy (2009) starting from fiscal year 2012/2013". Further exploration of this debate is beyond the scope of this report.

### Creation of a National Policy on STI

The Ugandan National Council for Science and Technology, which reports to the Ministry of Finance, Planning and Economic Development, is responsible for developing and advising the government on STI policies, and on how to integrate STI into national development priorities. It is also responsible for coordinating research

<sup>8</sup> See 6, p12.

<sup>9</sup> See 6, p17.

<sup>10</sup> Kamunyori S., Al-Bader S., Sewankambo N., Singer P.A. and Daar A.S. (2010) *Science-based Health Innovation in Uganda: Creative Strategies for Applying Research to Development*, BMC International Health and Human Rights, p. 2.

and development activities across the country. There has been increasing debate in recent years over whether Uganda should have a ministry for STI, although at the time of writing there are no plans to establish one.

The Cabinet approved Uganda's first National Policy on STI in 2009. The policy sets out strategies to overcome key issues affecting the STI sector in Uganda, such as low levels of coordination and inadequate infrastructure. It also provides guidance in diverse areas such as intellectual property rights, traditional and emerging technologies, and public awareness of STI.<sup>11</sup>

There are also policies for STI research in specific sectors, and these are managed by specific ministries. For example, the 2003 National Agricultural Research Policy informed the 2005 National Agricultural Research Act, which was responsible for reforms within the national agricultural research system. The reforms established the National Agricultural Research Organisation (NARO) as the coordinating body for all agricultural research in Uganda.

### **Committees dealing with STI**

Uganda has had eight parliaments since it gained independence. A multi-party system has been in place since 2005.<sup>12</sup> The 8th Parliament began in May 2006 and ended in May 2011. It comprised 332 MPs, who included representatives of geographical constituencies as well as representatives for women, the army, young people and the disabled.<sup>13</sup> There is no Upper House (i.e. the equivalent of the House of Lords in the UK).

Parliament's key functions are to pass laws, scrutinise the work of government and act as a forum for debate on matters of national interest. This work takes place both through plenary debates as well as committees.

There are various different sorts of committees, all of which have distinct functions. For science, standing committees and sessional committees are the most relevant. Standing committees last the entire term of a parliament, whereas sessional committees are reconstituted every year. Since 2000, there has been a Standing Committee on Science and Technology, but a number of other committees exist whose work has an STI element, for example the Standing Committee on HIV/AIDS and the Sessional Committees on ICT, Physical Infrastructure, Natural Resources, and Agriculture, Animal Industry and Fisheries. Activities vary widely between committees, but their general functions include scrutiny of bills and government activity in their specialist area.<sup>14</sup> The responsibilities of sessional committees include monitoring the performance of specific government departments or ministries; this is not the case for standing committees.

Each committee is supported by a parliamentary clerk, a position which is rotated every few years. The clerks do not generally have a specialist background in their committee's area of expertise (for example, the clerk of the Standing Committee on Science and Technology is not necessarily a scientist). Clerks may support more than one committee as well as perform other administrative functions in the House. MPs do not generally have their own researchers, so a key source of support is the Department of Library and Research, established in 1999. It has 27 staff, and its goal is to provide accurate and timely information to MPs and parliamentary staff. There is no specific section for science and technology: staff working in all areas of the department are required to provide information and research on STI. At the time this research started only one staff member had a qualifications in a scientific or technological disciplines; this number has now increased to three. Further

<sup>11</sup> National Science, Technology and Innovation Policy, Ministry of Finance, Planning and Economic Development, August 2009.

<sup>12</sup> See [www.parliament.go.ug](http://www.parliament.go.ug).

<sup>13</sup> The majority of these MPs (211 MPs) belonged to the governing party, the National Resistance Movement (NRM). The largest opposition party was the Forum for Democratic Change (38 MPs). Of the 332 MPs, 215 represented a constituency, a further 79 were district women representatives, followed by 10 Uganda People's Defence Force Representatives and 5 youth representatives. Further information is available via [www.parliament.go.ug](http://www.parliament.go.ug).

<sup>14</sup> Rules of procedure for the 8<sup>th</sup> Parliament of Uganda are available at: <http://www.parliament.go.ug/files/rules%20of%20procedure%20for%20the%208th%20parliament%20of%20uganda.pdf>.

information on this department is provided in [Chapter 4](#) and [Chapter 5](#).

### **The 8<sup>th</sup> Parliament's handling of STI**

An understanding of science and technology and the use of robust scientific and technological evidence are increasingly important in a wide range of policy areas, from environment and energy through to public health and education. The Parliament of Uganda is frequently required to handle policy relating to STI, the effective scrutiny of which is of vital importance to the country's development.

According to an internal paper on business transacted by the 8<sup>th</sup> Parliament of Uganda, the 8th Parliament passed 93 bills.<sup>15</sup> All bills require the use of robust evidence, which is often of a scientific nature. However, several of the bills passed by the 8<sup>th</sup> Parliament had a specific focus on science and/or technology. Examples include the 2008 Atomic Energy Act and the 2010 'cyber-laws' on computer misuse, electronic signatures and electronic transactions. It is interesting to note that only 8 of the 93 bills that were passed had a particular focus on science and technology (i.e. fewer than 1 in 10). However, 7 out of a total of 23 (i.e. almost 1 in 3) bills still pending at the end of the 8<sup>th</sup> parliament had an STI focus.<sup>16</sup> This raises the question of whether bills requiring a greater understanding of science and technology take longer on average to be passed, as was the perception of some of the MPs we interviewed.

An analysis of other parliamentary business shows that between 10 and 25 per cent of all other business can be considered to be related to science and technology – the situation varies depending on the nature of the business. Examples include:

- Motions: 20 out of 187 motions, covering issues such as the MSI, maternal health, environmental impact of plastic bags, climate change and alternative medicine;
- Ministerial statements: 42 out of 175 statements, covering issues such as epidemic management, use of DDT, flooding and telephone masts ; and
- Questions responded to: only 8 out of 69 questions, covering issues such as public health, water supply, renewable energy policy and policy on climate change adaptation.

<sup>15</sup> Parliamentary Research Service, Department for Library and Research, July 2011, *Business transacted by the 8<sup>th</sup> Parliament of Uganda* (May 2006 to April 2011), internal parliamentary briefing.

<sup>16</sup> The Narcotics & Psychotropic Substances (Control) Bill 2007, The Plant Variety Protection Bill 2010, The Uganda National Meteorological Authority Bill 2010, The HIV/AIDS Prevention & Control Bill 2010, The Uganda Forestry Association Bill 2010, The Plant Protection and Health Bill 2010, The Anti-Counterfeiting Goods Bill 2011.

## 2. Parliament-wide issues

### 2.1 Key Observations

#### Enthusiasm for Science and Technology within the Parliament of Uganda

There are a number of indications that STI are being increasingly recognised as important within the Parliament of Uganda. The creation of the Standing Committee on Science and Technology (the subject of the next chapter) in 2002 is perhaps the strongest.

In addition, the high response rate amongst MPs to our survey on attitudes to science and technology demonstrates their enthusiasm for the subject. Around 37 per cent of all Ugandan MPs (121 of 332) responded. This is a very high response rate compared with similar surveys conducted in the developed world.

Our survey indicates that over 90 per cent of Ugandan MPs say they are either 'interested or 'very interested' in science. Only 3 per cent said they were not interested, and 5 per cent had no opinion (see Figure 2.1). There were no significant variations in MPs' level of interest in science by age, gender or educational level. This is encouraging, although it should be noted that few people who agreed to fill out a survey specifically about science would be likely to say that they were 'not interested' in the issue.

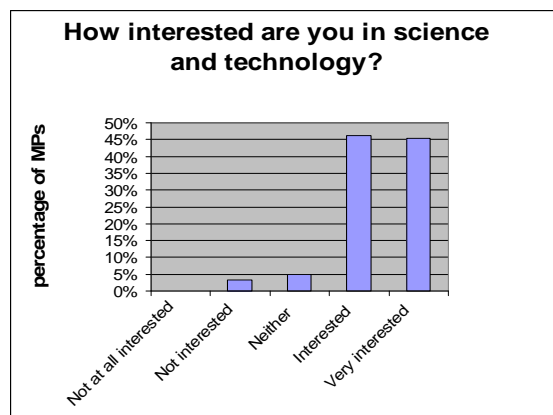


Figure 2.1: Response to

question 'How interested are you

in science and technology?

In addition, MPs acknowledge that there is a need for debates to be more evidence based: only 12 per cent of the surveyed MPs agreed with the statement 'Parliamentary debates on science and technology issues are mainly evidence based'. Around 54 per cent disagreed, and 31 per cent neither disagreed nor agreed.

When presented with a range of different options for building parliament's capacity to handle STI and asked to rank them, MPs rated every option as 'important'. This indicates a widespread desire amongst MPs to build capacity in this area.

This enthusiasm is backed up by many anecdotal reports of interest in STI-related activities, such as the demand for participation in a scheme that pairs MPs with scientists.

"Already those who have participated have benefited and in fact others are very eager to join the scheme." (MP02)

In addition, actions taken by the Department of Library and Research indicate that staff share MPs' enthusiasm for STI. For example, it has recruited two additional staff with scientific training since we collected the data for this report.

However, as discussed in the remainder of this chapter, our data indicate that in spite of this professed enthusiasm, there are still a number of areas where the Parliament of Uganda is falling short in its scrutiny of STI.

### **STI do not receive enough attention on the floor of the House**

Although almost all MPs profess to be interested in science, our data suggest that this interest is not manifested in actual behaviour, except for the minority of MPs for whom science is a particular area of interest. Attendance at debates is low and reports on science and technology excite little comment.

When STI are discussed in plenary, MPs say that turnout is very low. Bills on issues relating to science and technology are passed very quickly, without a thorough debate, and often the scientific component of the debate is overlooked.

"When you compare a report presentation in parliament, for example on finance, everybody will be there. It's the same for agriculture, health, education . . . but when it is science and technology very few MPs are there. It's mainly attributed to lack of interest . . . the Atomic Energy Bill . . . was very boring in the House, because it did not generate heated debate on this floor." (MP06)

"People have too many commitments, and as a result very few people attend science and technology meetings which appear as non priorities." (Focus group, participant 5)

Questionnaire data reveal that 66 per cent of surveyed MPs think that STI do not get discussed often enough in parliament (see Figure 2.2).

"I have not encountered a science and technology debate that I was convinced was a good debate, because most science and technology issues are rarely debated by [the] majority of MPs." (MP03)

"There is no doubt science and technology are central in parliamentary debates, but in our parliament here, this has not taken root." (MP04)

Levels of participation in STI related parliamentary business are likely to be linked to two key factors: how politically relevant MPs consider STI to be and the MPs' educational background. These are discussed in [Section 2.2](#).



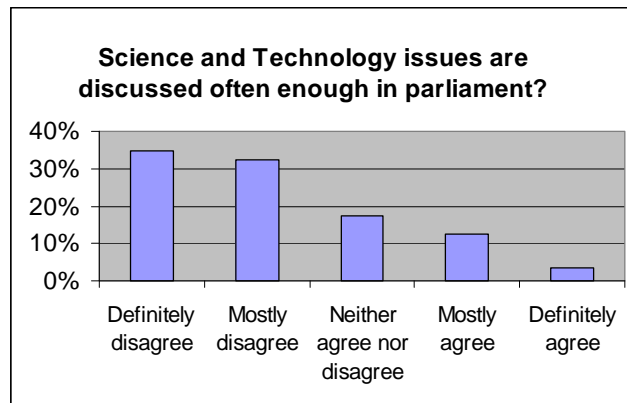


Figure 2.2: MPs' response to the comment 'Science and technology issues are discussed often enough in parliament'.

**Debates on STI are not always 'evidence-informed'**

Only 12 per cent of surveyed MPs agreed with the statement 'Parliamentary debates on science and technology issues are mainly evidence based'. Around 54 per cent disagreed, and 34 per cent neither disagreed nor agreed.

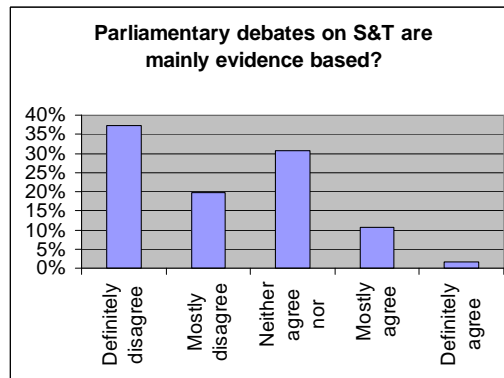


Figure 2.3: MPs' response to the comment 'Parliamentary debates on science and technology are mainly evidence based'.

When asked whether they agreed with the statement 'Parliamentary debates on science and technology issues are overall balanced', over two-thirds of MPs disagreed.

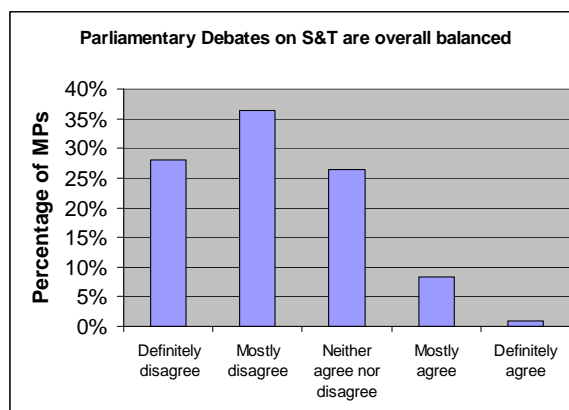


Figure 2.4: MPs' response to the comment 'Parliamentary debates on science and technology are overall balanced'.

As part of this study, we have examined a selection of debates on topical STIs (atomic energy<sup>17</sup>, plastic bags<sup>18</sup> and the use of DDT in malaria control<sup>19</sup>) to determine:

- the nature of 'evidence' cited;
- the accuracy of the evidence;
- how balanced the debate is and whether both sides of the debate are represented;
- whether the debate is comprehensive or key areas are omitted.

The number of debates is limited due to difficulties in identifying debates containing substantial discussion related to STI. Although it is not possible to make broad generalisations on the basis of a limited selection of debates, our findings, set out below, support our survey results as well as enabling us to make some additional observations.

#### *Limited use of reliable evidence and factual inaccuracies*

Usually statements are made without citing any source at all. However, it should be noted that this is common in parliaments across the world and not just in Uganda. Of greater concern is the fact that on closer analysis, the statements made are often discovered to be incorrect, although a substantial body of reliable information is freely available on the internet. For example, in the 2008 debate on atomic energy an MP stated:

“80 per cent of Ugandan women suffer from cervical cancer.”

An internet search indicates that this figure refers to the percentage of women diagnosed with cervical cancer who are found to have an advanced form of the disease.<sup>20</sup>

Other clear examples are found in debates on DDT and malaria control. For example, in the 2004 debate on DDT, one MP arguing in favour of indoor residual spraying stated:

“There is no evidence that DDT causes toxic effects.”

However, there is a wide body of evidence to demonstrate that DDT can in fact have harmful effects on human health.<sup>21</sup>

Often, the 'evidence' cited is simply an anecdote drawn from personal experience, although the point being made may be valid. For example in the second reading of the Atomic Energy Bill, one MP endeavoured to refute a claim that there is a proven link between telephone masts and cancer incidence.

“I am talking from experience. I have men and women who have been stationed at high voltage substations where EM [electromagnetic radiation] is the highest. They do not have cancer.”

Similarly in the June 2008 debate on DDT, one MP used his own experience to argue in favour of indoor residual spraying:

<sup>17</sup> The Atomic Energy Bill, Second Reading, 15<sup>th</sup> May 2008, Parliament of Uganda.

<sup>18</sup> Hansard extract from March 29<sup>th</sup> 2007, on Polythene bags (Buveera): Motion for a resolution of Parliament urging Government as a matter of urgent necessity to table before Parliament a bill banning the importation, manufacture, use and indiscriminate disposal of polythene bags (buveera) in Uganda.

<sup>19</sup> Hansard extracts of debates on DDT and malaria control from 1<sup>st</sup> July 2004 and 19<sup>th</sup> June 2008.

<sup>20</sup> As cited in many newspapers, see for example [allafrica.com](http://allafrica.com), “High Costs Hinder Fight Against Cervical Cancer”, July 21<sup>st</sup> 2008.

<sup>21</sup> Independent report prepared for POST by infectious disease expert Dr Dan Korbelt, now working at the Wellcome Trust (International Activities).

“Every time I travel home, [. . .] I would come back with malaria [. . .] but since the spraying of DDT in my place, I have been there now three times [. . .] but I have not come back with malaria.”

Again, this is purely anecdotal, and the fact that the MP did not suffer any further bouts of malaria may be due to unrelated circumstances.

Sometimes, MPs cite evidence whose reliability is highly questionable. This may be newspaper reports but could also be information from scientific ‘experts’. For example in a 2007 debate on the banning of plastic bags an MP claimed:

“A nutrition expert has found that taking tea in poly[thene] cups can be a cause of ulcers and cancer.”

However, he does not state how reputable the ‘expert’ is or what scientific consensus there is on the findings.

In the debates we reviewed, we found very few instances of MPs substantiating their claims using information from a reliable source.

Lack of evidence-base in parliamentary debate is an issue in many parliaments, not just Uganda. In the UK, where MPs are on average educated to a higher level than in Uganda, and parliament has a relatively high number of staff with scientific expertise, there are still sometimes concerns raised (although to a lesser extent) over evidence cited by MPs.<sup>22</sup>

#### *Lack of balance*

In some debates a variety of points of view are expressed, for example in the 2004 debate on the use of DDT, during which MPs argued both for and against indoor residual spraying of DDT for malaria control.

However, in other cases, debates are dominated by a small number of MPs representing only one perspective. For example in the 2007 debate on plastic bags, the debate was dominated by a small number of proponents of the ban.

As one participant in the focus group discussion conducted as part of this study, with the Standing Committee on Science and Technology, observed:

“We had polythene bags [debate] here but the people who carried the day [122] did not get down to look at the scientific issues. [. . .] They were carried away by the one-sided research.”

#### *Omission of key issues and lack of focus*

Even when a subject generates a lively debate and considerable interest in the House, and there is a variety of points of view expressed, the debates often fail to cover key issues. For example, an independent expert has highlighted that important issues were not addressed in the 2008 parliamentary debates on DDT:

“The debate extracts on DDT spraying analysed here suggest that the debate is far from comprehensive. Many important aspects of a balanced and evidence-based discussion of the issues at hand are not addressed. For example, the affordability, practicability, and local safety and efficacy of different malaria management strategies (including the use of DDT compared to the use of other insecticides) are not discussed in appropriate detail”<sup>21</sup>

<sup>22</sup> See for example <http://www.badsience.net/2008/02/magnificent-torrent-of-canards-in-parliament-from-david-tredinnick-mp/>.

In some debates it is not clear what exactly is under discussion, and the debates lack focus. For example, in the 2008 debate on the atomic energy bill, much of the discussion is about the effects of non-ionising radiation (e.g. mobile phone masts), which has nothing to do with atomic energy.

Similarly, in the debates on DDT mentioned previously the expert reports that:

“[F]requently, Members are not clear about what the debate is about (for example, the use of DDT in general, the use of insecticides for IRS, the use of insecticides in general, IRS versus other malaria control strategies). The debate is not very focussed and Members frequently digress to talking about irrelevant matters.”

As another example, in the 2007 debate on banning polythene bags, it is not always clear whether MPs are talking about polythene bags alone or all polythene products.

#### *'Good' debates*

Interviews with MPs indicate that some debates on STI are evidence-informed and balanced. According to one MP who makes use of the 'e-parliament' resource,<sup>23</sup> the availability of information is a key factor:

“We used e-parliament to address salient issues of global warming and climatic change. You see, it is because fellow MPs have not appreciated the use of e-parliament. [. . .] The moment you become an MP you automatically qualify for membership. We invited different personalities such as the climatic change expert from the concerned Ministry, a professor from America and others from Europe. Because of the evidence we had we had a very successful debate.” (MP01)

Another MP cited parliamentary debate on the degazetting of Mabira forest as a good example. In this instance the success of the debate could be attributed to high levels of popular interest and local relevance:

“This generated a lot of interest, it was popularised, people understood it. There were no jargon. It was not complicated. In all it appealed to local knowledge.” (MP06)

One MP suggested to us that MPs need training in how to communicate science issues.

#### **Lack of clarity in the handling of STI**

A number of MPs argue that there is a lack of clarity over how to handle STI – not just in parliament but across the whole of government.

“You find a total mess in handling science and technology in parliament, because most science and technology debates fail to have a definite source.” (MP04)

The National Biotechnology and Biosafety Bill is an example of a bill which needs to become law before the country's agricultural sector can benefit from technological advances. A press article claims that it took eight years for cabinet to approve the bill.<sup>24</sup> One MP attributes this to confusion in handling of the bill within government:

“Because of lack of coordination this bill failed to find a proper home. You find that the Ministry of Finance is handling it and pushing for it. Agriculture Ministry is also doing something on it.” (MP01)

<sup>23</sup> See [www.e-parl.net](http://www.e-parl.net)

<sup>24</sup> <http://www.scidev.net/en/news/uganda-gives-go-ahead-to-biotechnology-policy.html>.

The possible reasons for this lack of clarity are explored below. Note however, that a lack of clarity in the handling of science issues is not the only reason bills get delayed.<sup>25</sup>

## 2.2 Underlying Factors

### Educational background of MPs

Almost 80 per cent of MPs who participated in the survey considered themselves 'well informed' about science and technology. Interestingly, male MPs think they are better informed than female MPs (85 per cent as opposed to 69 per cent).

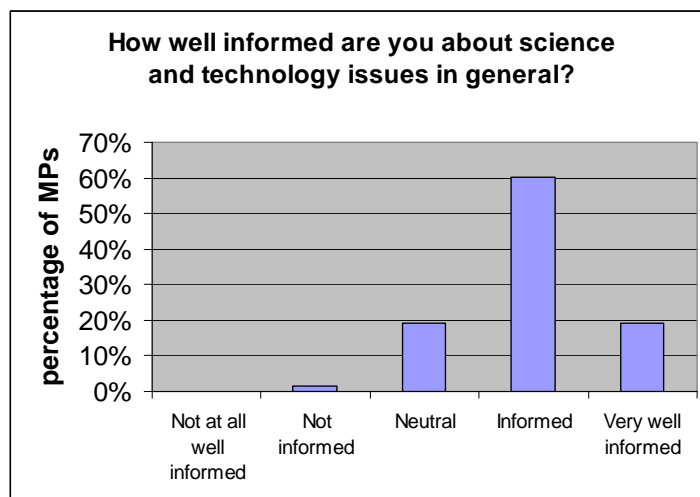


Figure 2.5: MPs' response to the question 'How well informed are you about science and technology issues in general?'

However, in interviews another perception emerges: lack of knowledge about STI is commonly cited as a problem:

"You will find that MPs just passed the bill for the sake of it without debate because of lack of knowledge." (MP01)

MPs often reveal a limited understanding and even a fear of science and technology in the language they use in debate. They often shy away from scientific terminology. For example in the 2008 atomic energy debate one MP asked:

"Why do we retain the word 'atomic energy'? It sounds so scary [ . . . ] It sounds like an instrument of suppression. Can't we get another name?"<sup>26</sup>

Our data suggest that in some debates not all MPs have the basic knowledge necessary make an informed contribution. For example, in the atomic energy bill second reading, there was no indication that MPs appreciated the difference between a radioactive material (one which emits ionizing radiation) and a nuclear material (a material which can undergo a nuclear chain reaction, which is the basis for a nuclear bomb or nuclear reactor).

The language used to talk about scientific issues is often unscientific. For example, the statement below is

<sup>25</sup> Some bills unrelated to science have taken even longer to become law than the biotechnology bill. However, a discussion of this issue is beyond the scope of our study.

<sup>26</sup> The Atomic Energy Bill, Second Reading, 15<sup>th</sup> May 2008, Parliament of Uganda.

taken from the 2007 plastic bag debate:

“It has been found out that when you carry fish and meat in polythene bags, they generate a kind of heat that creates radiation, which ultimately makes the food poisonous.”<sup>27</sup>

One interviewed MP blames the fact that very few MPs come from a science background:

“There are very few Members of Parliament who are from a science background. And any person who has gone to school in Uganda will agree with me that people think that science and technology issues are very difficult. Against this background, when science and technology issues come up, people do not want to delve into them. They are more comfortable talking about the social and economic issues, like the schools and the hospitals.” (MP07)

### **Understanding of relevance of STI**

MPs participating in the focus group discussion and interviews acknowledged that science and technology impacted on a wide range of policy areas, and that they need to be both proactive and reactive in their handling of scientific questions:

“For the last 20 years the president has been talking about science and technology as the way forward for Uganda. Now it has become common knowledge that we need to embrace it. So we need to have public education strategy for training people about the importance of science and technology.” (Focus group participant 4)

“There are those problems of a long term nature and others that emerge by the day, like [the] floods in Teso and Lango recently. What do we need to do to improve the housing of these people? There are science questions that need to be tackled as they come but there are those for which we need to prepare.” (Focus group participant 2)

“People have not yet appreciated its use. [. . .] Most of the issues debated in parliament of recent have a basis in science and technology. If I can give the example of the environment, pollution, water, deforestation – they need a scientific input. Discussing any of those on the floor of parliament would need some scientific guidance to be able to solve the problems.” (MP02)

However, one MP explains that many key issues are not seen as having any link to science:

“It [science] is sometimes seen as abstract, for example, as with the disposal of Buveera [plastic bags], people don’t look at it as a science.” (MP06)

### **Access to reliable information on STI**

In interviews, MPs with expertise in science issues mention a variety of sources for information on STI. As well as the Department of Library and Research, there are personal contacts in research institutions and Ugandan institutions such as UNAS, the Uganda National Council for Science and Technology (UNCST) and the National Agricultural Research Organisation (NARO). International sources such as the e-parliament and POST were also mentioned as well as general web searching.

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<sup>27</sup> Hansard extract from March 29<sup>th</sup> 2007, on Polythene bags (Buveera): Motion for a resolution of Parliament urging Government as a matter of urgent necessity to table before Parliament a bill banning the importation, manufacture, use and indiscriminate disposal of polythene bags (buveera) in Uganda.

However, on the whole, our data indicate that MPs are not making the best use of reliable sources of information on STI in their scrutiny of government. As discussed below, there are various foundations for this claim.

#### *MPs obtain much STI information from the popular media*

The first is that our survey results indicate that MPs' primary source of information on STI is television. The next most popular source of information is the web.<sup>28</sup> Interestingly, there is a marked difference between this survey and a similar survey of 50 UK parliamentarians, whose preferred sources of information on science and technology were the parliamentary library and government reports.<sup>29</sup>

In Uganda, specialised information sources such as the Department of Library and Research or external scientists are not used as much as the popular media. However, the Department of Library and Research is still regarded as a key resource, with the majority of MPs saying they visit at least once a month with a query related to science and technology.

#### *There is a lack of reliable 'evidence' used in parliamentary debates*

As discussed in [Section 2.1](#), there is a lack of reliable evidence cited in Hansard debates. There are a number of instances where debates could have been better informed if MPs had access to appropriate information. For example, in the debate on atomic energy, one MP raised a question about the international implications of Uganda developing a nuclear energy capability. However, the language used indicates that the MP had not heard of the Nuclear Non Proliferation Treaty, which would have been highly relevant to any discussion on nuclear security:

“[T]hose who have acquired the technology can progressively upgrade it to acquire nuclear weapons and there is a treaty which is supposed to limit this.”

Similarly in debates on DDT and malaria control in 2004 and 2008, it seems that not all MPs were aware of the legal framework that underlies this debate (for example the conditions which restrict the use of DDT to indoor residual spraying and which form part of the Stockholm Convention). There also appears to be a knowledge gap and confusion as far as the mechanisms that lead to the burden of malaria are concerned.<sup>21</sup>

MPs list a number of obstacles they face in accessing reliable information on STI:

#### *Time available to obtain information*

MPs say that they do not receive enough advance warning of subjects for debate to allow them to prepare:

“Order papers are posted to MPs' email addresses at about 10am, and the debate is supposed to start at 2pm. There is no ample time for a legislator to research on what is scheduled for discussion on the day. So, you find that a few MPs contribute to a topic of discussion because of lack of what to present.” (MP04)

#### *Ability to assess the quality of information*

Although a small number of MPs with expertise in science and technology are able to spot when they are provided with poorly researched or biased information, our data imply that most MPs do not have the skills to do this. For example, very few of the MPs who were interviewed indicate an awareness of the strengths and

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<sup>28</sup> However, more research is needed into which television programmes and websites are accessed by Ugandan MPs before drawing firm conclusions about the reliability of the science and technology information they receive through such channels.

<sup>29</sup> Parliamentary Office of Science and Technology Evaluation Report (internal report for POST), January 2010

weaknesses of research reports produced by the Parliamentary Research Section within the Department of Library and Research, as highlighted by external experts (see [Chapter 4](#)).

#### *Support from the Department of Library and Research*

A common theme voiced by MPs and staff alike is the need for increased resources in the area of science and technology for the library and research service. This is discussed further in [Chapter 4](#) and [Chapter 5](#).

#### *Internet access*

One problem raised by MPs is a lack of internet access in their constituencies:

“The internet is good, but again, we need to have a modem on laptops so that I can be able to access information even in my village. It is possible to do this for MPs, if it [is] possible [to] buy special phones for chairpersons of committees, so getting a modem for a MP shouldn't be difficult. (Focus group participant 2)

#### **Information sharing**

A number of our observations indicate that there is scope for more efficient internal mechanisms for sharing information (on science and technology as well as other subjects). Some steps are already taken to share information. For example, the library displays information on noticeboards and sends emails to users telling them about new holdings. However, much information that is generated is not widely shared by default. A number of barriers to information sharing are raised by interviewees, ranging from confidentiality requirements to lack of ICT infrastructure.

One example of where information sharing could be improved is the setting up of a centralised repository for reports. Interviewees indicate that such a repository is being planned. Another example is the failure to supply order papers in time for MPs to prepare for debates (discussed below). Another example is that MPs appear to have different sources of information on science and technology. Those MPs who were interviewed gave different sources of information (with the exception of the Department of Library and Research, which was quoted by four of the seven interviewees). This indicates that while staff and MPs might have direct links with favoured information sources (who might be individuals) they are not systematically sharing this information with others.

#### *Dissemination of information for plenary debates*

The lack of advance provision of order papers for debate is cited by many MPs – both in interview and recorded in Hansard – as an obstacle to preparing an informed contribution. However this is not a problem unique to STI, and can be assumed to affect all debates.

“If order papers are sent well in advance this would give the research department and MPs enough time to work together on researchable issues well in time before debate, giving meaningful science and technology debate.” (MP04)

In some debates, MPs say they do not have enough information (whether it be data or the text of draft bills) to make an informed contribution to debate. For example, the statements below are taken from the 2007 debate on plastic bags:<sup>30</sup>

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<sup>30</sup> Hansard extract from March 29<sup>th</sup> 2007, on Polythene bags (Buveera): Motion for a resolution of Parliament urging Government as a matter of urgent necessity to table before Parliament a bill banning the importation, manufacture, use and indiscriminate disposal of polythene bags (buveera) in Uganda.



“[T]he source of this chart is the ministry of water and environment” [. . .] but it is not widely distributed and has not come in time to stop this catastrophe.”

“[L]et me express disappointment that I do not have a copy of the resolution which is being presented.”

“[L]et it be on record that I do not have the draft bill that you are talking about.”

### The role of the Standing Committee on Science and Technology

Many MPs think the role of the Standing Committee on Science and Technology in the scrutiny of STI within the Parliament of Uganda could be improved, although this is not a universally held opinion. Over one-third of surveyed MPs thought that the Committee did not have appropriate input into parliamentary debate (see Figure 2.6).

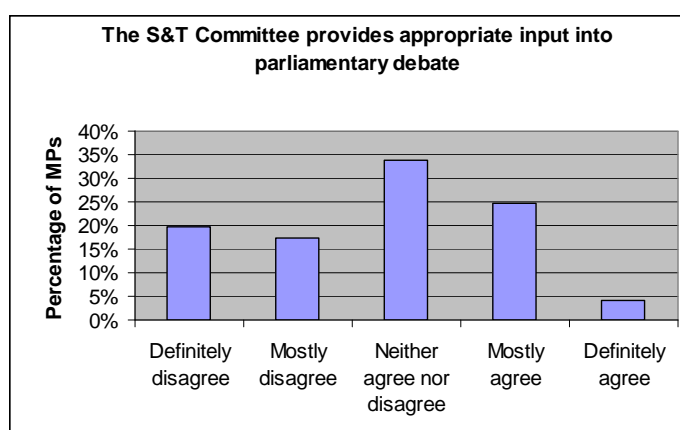


Figure 2.6: MPs' response to the comment 'The Science and Technology Committee provides appropriate input into parliamentary debate'.

Quotes from interviewees provide further insights into what MPs want from the Committee:

“The S&T Committee should be like the umbrella to guide all the other committees.” (MP07)

“I am a scientist and feel that most of the work which the Committee would have been involved in has been left to other committees which just treat only part of problem and do not look at policies and bills holistically.” (MP01)

However, one-third had no opinion, and a further third thought the committee *did* provide appropriate input into debate. Indeed an MP on Committee stated during the focus group conducted as part of this study, that “science and technology is a cross-cutting issue and is not a monopoly of this Committee”.

### 2.3 Possible Ways Forward

Our research has highlighted various areas in which improvements could be made to the handling of STI at a parliamentary level:

- training for MPs on how to communicate science and technology issues, particularly in debate
- training for MPs and staff on the scientific method;
- training for MPs and staff on how to assess the quality of scientific and technological information – i.e. information literacy (on which several courses for staff have already been held).

For further information on how gaps could be filled, please see the Conclusions chapter, where we set out a comprehensive table of gaps in skills, knowledge and resources, and processes within the Ugandan Parliament and suggest more detailed possible ways forward.

## 3. The Standing Committee on Science and Technology

In this chapter we present observations on the achievements of the Standing Committee on Science and Technology, which was established in 2002. Our observations are drawn largely from a focus group discussion with the Standing Committee in 2008 as well as from interviews and survey questions. The membership of the committee has changed since these interviews were conducted, but anecdotal reports indicate that the underlying issues are broadly the same. We examine the factors potentially affecting the performance of the Committee. We discuss some of the opinions of MPs, both on the Committee and outside it, on what its role should ideally be.

The Committee had an extremely ambitious mandate during the 8<sup>th</sup> Parliament. Activities were largely directed towards the monitoring of institutions involved in STI-related work, and the Committee was actively engaged with key institutions such as UNAS and UNCST. Over its lifetime, the Committee has relatively few tangible outputs (such as published reports) and its activities in areas such as the scrutiny of bills with an STI component have been limited.

There is a general feeling amongst MPs and staff that the Committee could achieve more. One-third of all surveyed MPs think it does not have appropriate input into parliamentary debate. MPs and staff put forward many different suggestions as to what the underlying reasons for this might be.

There is clearly a demand for the Committee to be more influential, and the MPs we have spoken to have many suggestions for how to achieve this. However, there is no clear and detailed vision of what the Committee's role should be. Should it, for example, do its own research? Should it commission research from outside parliament? In the focus group, participants said that they needed more funds to travel and network internationally. However, it is not clear whether this would be a solution to the problems identified in this study.

### 3.1 Key Observations

#### What does the Committee do?

Most of our information about the work the Committee engages in comes from its report on its activities during 2006/08 (as set out in the remainder of this Chapter). The Committee does not undertake formal 'inquiries' (as parliamentary committees in Europe or the US do). Key activities appear to include:

- **making official visits and investigating the work of science and technology institutions:** for example, between 2006 and 2008, the Committee visited institutions included the Faculty of Technology, Makerere University, Mbarara University of Science and Technology (MUST), and Kampala International University (KIU);
- **organising and attending workshops:** for example, it organised workshops on biotechnology and on science and politics, and attended workshops including those organised by The Parliamentary Donor Coordination Office (PDCO), UNAS, UNCST, POST and the Ministry of Energy and Mineral Development;
- **liaising with key stakeholders:** the Committee report says it works closely with stakeholders such as UNCST, UNAS, the Biosafety and Biotechnology Forum and the Education Consumer Trust. For example, in July 2007 the Committee actively participated at the UNAS stakeholder consultative meeting on the process of seeking government recognition, which resulted in UNAS being awarded a charter in 2009; and

- **holding meetings:** for example, the Committee report says it held several meetings with the open Forum for Agriculture Biotechnology (OFAB) – a platform designed to enable biotechnology scientists to interact with policymakers, lawmakers, civil society, farmer representatives and other stakeholders.

### How does the Committee perform against its mandate?

The Science and Technology Committee had a very broad mandate in the 8<sup>th</sup> parliament, which comprised the following functions:

1. review, discuss and make recommendations on the scientific and technological content of all bills laid before parliament;
2. initiate bills on strategic issues of science and technology for national development ;
3. continuously monitor, evaluate and assess activities in public institutions and any other bodies engaged in national science and technology development;
4. examine and carry out research on the performance of the National Science and Technology sub-sector; and
5. examine, recommend and oversee adequate national budgetary provisions for the development of science and technology.

The Committee's work plan is determined by its members, at the start of each session. In principle, the speaker may ask a committee to undertake specific pieces of work.

#### *Scrutiny of bills (functions 1 and 2)*

No bills have been initiated by the Committee since its inception. However, in an interview with Clerk 01 we learned that it is extremely rare for bills to be initiated by committees.

In terms of function 1, according to the staff and MPs interviewed for this study, the Committee has not had a substantial amount of formal input into the scientific and technological content of any bills laid before parliament.<sup>31</sup>

Clerk 01 reported that in his time on the Committee, it was not involved in any formal scrutiny of bills. Different interviewees gave different reasons as to why this may be, as discussed below:

Some Committee members imply that many bills on STI *ought* to have been referred to them for investigation – in other words the Committee is sometimes overlooked:

"Science and technology cut across all sectors [ . . . ] We simply attend meetings in the Committee, but our outputs are never given due attention. (Focus group participant 6)

"In the case of DDT, it was incumbent on the speaker to refer it to this Committee for investigation, but this did not happen, even on polythene bags. But under our rules of procedure we are mandated to handle any bill, either as a committee or in collaboration with others, but this is never done."  
(Focus group participant 2)

One MP thought that clerks should take more responsibility for spotting when bills have an STI component:

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<sup>31</sup> Note, however, that some contributions that the Committee makes to bill scrutiny are not officially recognised or recorded. For example, Committee members were present at the second hearing of the atomic energy bill, but they report that parliamentary procedures did not allow them to speak. It is, therefore, possible that our research has missed some key contributions of the Committee to bill scrutiny.

“ The clerks do not go further to look at the ingredients of the bill to see whether they will need an input of other committees to jointly consider those different ingredients and when that is done because, probably, we provide the input, they do not recognise us in their reports. (Focus group participant 2)

Another MP pointed out that STI are sometimes handled by other committees:

“Although the chairman of the ICT Committee is also a member of this Committee, he takes on all the aspects of science and technology in that Committee when they would have been ably handled in this Committee.” (Focus group participant 1)

However, some MPs outside the Committee, and some staff, think that the initiative needs to come from the Committee members themselves:

“I think I can begin from the Atomic Energy Bill. This Bill was written some 11 years ago. The Bill was tabled in parliament and referred to the Committee on Natural Resources, but to my view this Bill should have been scrutinised by the Science and Technology Committee. The S&T Committee showed no interest in handing the Bill.” (MP01)

“ There is a need to build the interest of MPs on the Committee to get involved in reviewing bills with science and technology. For example, the Physical Planning Bill was passed, but the Committee did not have the opportunity to review it, because the bill did not contain any hot issue to interest the members of the Committee.” (Clerk01)

Clerk01 explained to us that all bills which pass through parliament are allocated to a ‘parent’ committee which takes lead responsibility for scrutiny of the bill. However, parent committees tend to be sessional committees rather than standing committees. One would, therefore, not expect the Science and Technology Committee to act as the parent committee for any bills. To be involved in the scrutiny of a bill, the Committee would need to liaise closely with the parent committee for the bill. Relations with other committees are therefore a key factor influencing this area of work. This is discussed in the next section.

It is clearly the case that bills often need scrutiny from a scientific and technological perspective. There seems to be a presumption that the Science and Technology Committee is the obvious place for this scrutiny to take place. This may well be the case, but it is important to note that the Committee needs to have appropriate technical skills to perform this scrutiny. This could be an issue for discussion in the 9<sup>th</sup> Parliament.

#### *Monitoring of public institutions (function 3)*

The majority of the Committee’s activities within the 8<sup>th</sup> Parliament appear to fall under function 3: the Committee was actively engaged in the monitoring of public institutions and has undertaken visits to a number of research institutes, universities and relevant private sector bodies. Monitoring was done on an ad hoc basis, either through visits or representatives being invited to parliament for meetings. Decisions on which bodies to investigate were made by Committee members at the start of each session.

#### *Activities under functions 4 and 5*

In our investigations, we have not obtained much information on Committee activities under these areas. However the report on Committee activities between 2006 and 2008 states that the Committee conducted ‘follow up’ on a number of science and technology policies adopted by government.

Clerk01 was not aware of any activities under function 5 of the mandate. However, he pointed out that this

function is ambiguous and potentially an extremely broad area of activity. Given that there is no Ministry for Science and Technology, it is not clear whether this function refers to scrutiny of money spent on science and technology across government departments or merely to scrutiny of any funds administered by UNCST.

### What reports has the Committee produced?

We have only been able to obtain one report produced during the 8<sup>th</sup> Parliament (which was never tabled). This is the report on the Committee's activities between 2006 and 2008, which has already been discussed. Limited staff resources are one possible reason for the limited number of reports produced, as discussed in the next section.

The report is clearly the result of considerable effort. It contains detailed information on institutions the Committee has investigated, as well as analyses of various topical issues such as the performance of Uganda's biotechnology sector. It also highlights a number of key challenges faced by the STI stakeholders in Uganda. Examples include budgetary constraints faced by UNCST and poorly equipped laboratories in Makerere University.

Although the report contains much useful content, improvements to its style and structure could have improved the way in which its messages are communicated. A review of the report (conducted by the primary author of the report) makes the following points worth noting, particularly if the Committee wishes to make such a report available to the public:

- **There could be improvements in how the report is structured.** For example there should be an executive summary containing key recommendations. There could be individual headings such as 'Visits made' and 'Workshops held', for example.
- **Some important recommendations are mixed up with background information.** For example, the recommendation that "a student loan scheme would go a long way in addressing the issue of drop out at university level for privately sponsored students" is tucked away in section 5.1 of the report and does not stand out. A casual reader may miss some key messages unless recommendations are clearly separated from background information.
- **The basis for the recommendations made in the report is not always clear.** For example, the report contains a number of recommendations relating to the biotechnology sector, but does not explain clearly how it arrived at these. For example, did it receive evidence from stakeholders? Did it undertake visits? Or are the recommendations based solely on the opinions of Committee members?

One Committee member acknowledges the need to improve and shorten the format of the Committee's reports:

"It is almost a year's report, many things keep going into it, and it has to be a big report. But you find people are complaining. So it should be something like a flyer. Something which is precise and with references. And then if one has interest, he should be able to go back and check on the reference. But if it like some 20 pages, then you are not likely to get a big audience." (MP02)

In our opinion, the information contained within this report could have contributed to a lively parliamentary debate.

### What is the Committee's impact?

Since the Committee's inception, MPs on the Committee say that they have made considerable progress in making the outside world aware of the committee's existence, although there is room for more work in this area.

"We have created inroads, and the public has realised that this Committee exists. About the media, we can say that there are several reports about our Committee but there would even have been more. The problem is with the editors of media houses who do not give S&T component priority." (Focus group participant 5)

Committee members also say that they have stimulated public debate in a number of areas, such as the debate on the benefits of having a separate Ministry for Science and Technology.

The Committee plays a role in raising awareness of key STI issues within parliament, through workshops and seminars as well as, since 2008, the pairing scheme for MPs and scientists.

Although there is a feeling that the Committee could have more impact outside parliament, most of the concerns raised relate to its low profile *within* parliament. Interviewed MPs (outside the Committee) say it has a low visibility:

"I could easily see that there were MPs who could not know that there is a Committee on Science and Technology." (MP03)

"For two and a half years they have never presented a report on the floor of parliament." (MP07)

MPs say that one key problem is the lack of interest shown in the work of the Committee.

"Having presented the report to parliament, which we distributed to all members for their comments, but none has commented. [. . .] It becomes very difficult to operate when people do not respond." (MP02)

"There was a time when the S&T Committee produced a report to parliament that did not attract interest amongst the MPs. You see, MPs want to discuss and contribute to political issues. [. . .] To be honest with you, I am one of the MPs who left the House to come back to my office and do other things because I had nothing to contribute. There was a problem of lack of interest on the subject matter, so it was not debated, but according to procedure of parliament it was passed." (MP03)

The Committee does not have much information available online. The only information that was available in the 8<sup>th</sup> parliament related to its mandate and membership.

## 3.2 Underlying Factors

### Lack of 'tangible outcomes' leads to lack of interest in the work of the Committee

One reason cited for the lack of interest in the work of the Science and Technology Committee is that other MPs do not see that it has any tangible outcomes:

"[U]nlike other committees where people have a feeling of direct take home [. . .] like where one is on social services and can advocate for a hospital, school, infrastructure, can advocate for a road in your area to be maintained or whatever, there is no direct take home from the Committee of Science and Technology." (MP02)

One MP outside the Committee suggests that if it presented reports more regularly to the House, they might generate more interest.

"I believe that if we encourage the S&T Committee to report regularly to parliament, this will make the MPs more aware of the activities and importance of S&T." (MP03)

### Limited resources

Lack of access to expertise, low levels of staffing, and even practical factors such as limited space for meetings are stated as factors that hinder the smooth running of the Committee.

#### *Access to expertise*

Some claim that a lack of expertise amongst members is one reason why the Committee lacks authority when dealing with STI issues. One MP is concerned that work is sometimes commissioned from individual scientists rather than established institutions. However, we cannot substantiate this claim, as we have not been able to find out what work (if any) has been commissioned from individual scientists. More research is needed into how Committee members obtain information about STI.

"If we want expertise on a specific matter, it may not be available among members. [. . .] In this country we have so many centres of science power, by this I mean the authorities that can advise government on S&T issues. Ideally, it should have been UNAS to do this whereby when a matter related to science arises, where ministers or governments requires advice, they should be able to go to a specific institutions just like it happens with the American academy or the Royal Society. [. . .] Here an individual scientist can be commissioned to do something, and the outcome of that research may be questionable." (Focus group participant 2)

The Department of Library and Research is clearly a key resource for the Committee, and a member of staff from the Research Division is attached to the Committee to provide assistance and information to the clerk. However, sometimes MPs say that the section is too overstretched to accommodate their requests for information (see [next chapter](#)).

"The research services staff are overwhelmed by the work they have to accomplish. I wanted to table a motion in parliament to thank the Vice President for the Upland Rice Initiative that he had started. I placed a request for information on Upland rice to the Research Services, but it was not finished on time and [I] had to depend on information from the Office of the Vice President to support my motion. I think we need to recruit more researchers." (MP03)

Note that two additional researchers with expertise in science and technology have been recruited since MP03 made this statement.

One of the clerks points out that committees are entitled to get external support from relevant bodies:

"Under the Rules of Procedure, the Committee is allowed to get external support from other relevant bodies, but this has been minimal. A case I can remember when the Committee used external support was when the Committee was investigating distribution of fake seeds and agricultural tools to Northern Uganda. The Committee used Uganda National Bureau of Standards to produce for it a technical report on the agricultural tools distributed." (Clerk03)



### *Institutional memory loss*

The high turnover of clerks has a negative impact on the output of the Committee:

"Being a Standing committee, we don't have enough backup on the part of the Secretariat. In our term of office we have had more than four clerks. As you prepare a report the clerk is changed and the last one goes with our draft, and then you get a new clerk and we start again." (MPo2)

"We have had four clerks since we started, and as a result we suffer from institutional memory loss." (Focus group participant 4)

"There is a funding issue, so even science activities stand alone, and coordinating them is a problem for us as a Committee. Then there is the administrative problem. [. . .] We have seen the high turnover of clerks, the lack of facilities in the library [. . .] even the clerks are not writing reports, we are writing reports and there is no handover." (Focus group participant 5)

### *Practicalities*

Some focus group members felt that a lack of dedicated space for Committee activity was a hindrance to its productivity.

"We have a problem with space. You know committee meetings are supposed to be held in committee rooms, but we are just moving up and down without a permanent place to conduct committee business, which again is a problem." (Focus group participant 2)

### **Demands on Committee members**

The limited availability of Committee members is another key constraint. Often, members belong to other committees which take priority over science and technology. This is usually through necessity, but some comments we received imply that some members are not as interested in science and technology as they are in other issues.

"For example, during the budget period [. . .] activities are suspended while their members sit in sessional committees to consider budgets. And so this is an encumbrance to the activities of the committees, which really in my opinion, needs to be dealt with." (Focus group participant 2)

"There is a feeling of resignation on the part of a number of our colleagues and by the end of the two and half years the turnover on the Committee membership is high and continuity is lost. It is a big problem to get people to understand [. . .] how important science is to economic growth." (Focus group participant 2)

"At times when we call a meeting, the other committees also call for meetings. For the last three weeks we have been calling for a meeting. You find that Infrastructure has also called for a meeting and ICT has called its members and they end up going there first because they have bills that are quickly needed on the floor of parliament. They look at science as a secondary issue." (MPo2)

"I am not sure whether some members joined this Committee out of their free will, or we have been affected by this arrangement where whips assign members to committees. Ideally members should be joining committees out of free will." (Focus group participant 2)

"People have too many commitments and, as a result, very few people attend Science and Technology meetings, which appear as non priorities." (Focus group participant 5)

However the dedication of some members is praised:

“A good number of members come here with interest, and as long that exists then every thing is possible. People have the conviction, they have the capacity to handle and they always feel guilty when they are called for a meeting and they fail to come.” (Focus group participant 4)

### **Relations with other committees**

STI cut across many policy areas. Good links between the Science and Technology Committee and other committees are therefore crucial. Members are selected in such a way that key committees (Natural Resources, Physical Infrastructure, ICT) are represented on the Science and Technology Committee to ensure that there are links between relevant committees. However, comments from members indicate that more could still be done to link with other committees:

“As much as we have had the will to work with other committees, we have not put in the practice, and so linking with other committees without a committed clerk is very difficult. Therefore, without a lot of commitment on the part of the Committee members to work with other committees, we have not been able to put it into practice.” (Focus group participant 5)

“There are formal ways the Science and Technology Committee should interact with other committees. [. . .] It has not happened, not because there are no formal channels, but due to several difficulties.” (Focus group participant 1)

### **Lack of coordination of science and technology in government**

There is a general feeling that science lacks representation at the national level. It cuts across many departments and there is no Ministry for Science and Technology. As a result, the Committee has nothing to respond to.

“The other day, I challenged the Minister of Finance, why is it that whenever there are projects in this country, even those which do not fall under their docket, they bring in the Ministry of Finance? Even those projects that are in science and technology are placed under finance. Why? Why for example, is the Uganda National Council of Science and Technology under the Ministry of Finance?” (MP07)

“Science and technology has no parent ministry, and for that matter nobody fights for it. So I think that as a matter of urgency we should show the Parliament of Uganda that these committees matter, so that ministers see them as organs that can help with planning.” (Focus group participant 1)

### **Weak science journalism**

The limited impact of the Committee in the media is attributed to the fact that science journalism has yet to take off:

“Science and technology can be abstract at times and difficult to conceptualise. [. . .] Science journalism in this country is still weak and needs to be taken seriously.” (Focus group participant 2)

“ The problem is with the editors of media houses, who do not give science and technology priority. Just a few of our activities have been published and very briefly. When they report about them they look for a heading which doesn't bring out the content.” (Focus group participant 5)

However, measures are being taken to strengthen science journalism in Uganda: the country does have an increasingly active association for science journalists and hosted an international meeting of the World Federation of Science Journalists in 2009. Committee members showed limited awareness of this. The impact

of the Committee in the media could perhaps be improved if the Committee forged closer links with Uganda's science journalist community.

### **3.3 Possible Ways Forward**

Our research has highlighted various areas in which improvements could be made to the Standing Committee on Science and Technology :

- increase awareness of STI amongst MPs outside the Committee, to stimulate awareness and interest in the Committee and its work;
- identify ways of producing more frequent reports in a more punchy format that will increase readership;
- review handover procedures for clerks to ensure long-term memory;
- train committee clerks in effective report writing, perhaps through mentoring with a UK counterpart;
- seek advice from secretariats of science and technology committees in other parliaments on the scope of their mandate;
- strengthen links with science journalists through the Ugandan Federation of Science Journalists;
- exploit the external support that is available to the Committee; and
- promote cross-parliamentary discussion on how to ensure effective scrutiny of the scientific and technological aspects of bills.

For further information on how gaps could be filled, please see the Conclusions chapter, where we set out a comprehensive table of gaps in skills, knowledge and resources, and processes within the Ugandan Parliament and suggest more detailed possible ways forward.

## 4. The Parliamentary Research Service

The Department of Library, Research and Information Services was established in 1999 and was renamed the Department of Library & Research in 2004. The goal of the department is to provide accurate and timely information to MPs and parliamentary staff, and its overall objective is to provide efficient and effective library and research services to the same audience.

Specific objectives for FY 2008/09 were to:

- increase the range of reading material available in the library and support the information needs of clientele ;
- enhance access to information through processing and organisation of library materials and networking with relevant information centres ;
- maintain current research services to individual MPs, committees and parliamentary staff;
- conduct analytical studies on new bills and policies and inform relevant committees ;
- assist in monitoring and evaluation of government programmes ;
- assist parliament in ensuring accountability in allocation and utilisation of public funds.

The Department has 23 staff serving a parliament of more than 300 MPs and officials. There is very wide variation in staffing levels in legislatures across the world. Some African parliaments have only one or two librarians, and no researchers at all. In the United States, the Congressional Research Service has around 700 staff to serve 435 Representatives.

The functions of the Research Division, named the Parliamentary Research Service (PRS) are to:

- analyse policies and bills;
- assist parliament in monitoring and evaluation of government programs;
- assist parliament to ensure that government is held accountable for its activities; and
- conduct legislative research.

### 4.1 Key Observations

#### MPs use of the PRS

Surveyed MPs were asked how often they visit the PRS for science and technology related information. The results imply that significant numbers of MPs visit quite frequently for this purpose: 21 per cent of MPs say they visit once a week for science and technology related information, 31 per cent visit once a month and the remainder visit quarterly or less (see Figure 4.1). This corresponds to over one hundred requests a week for information relating to science and technology.

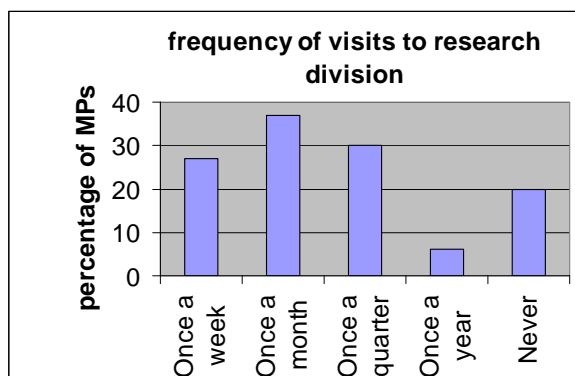


Figure 4.1: Frequency of MPs' visits to the Research Division

This figure seems rather high compared to the actual number of requests for information related to science and technology recorded by the PRS, and perhaps reflects a lack of clarity amongst MPs on what counts as 'science and technology related information'. Nevertheless, it indicates that MPs regard the PRS as a key source of information on science and technology – even though most MPs say television is their primary source (see [Section 2.2](#)).

MPs appreciate the hard work of the researchers and highlight the importance of having a Research Division. Formal acknowledgement of their work was made during a debate in March 2007:

"I thank you, Madam Speaker, that you carried out a reform and we have a Parliamentary Research Department among others as an institution that has helped to prepare this wonderful motion." **Error! Bookmark not defined.**

Out of seven interviewed MPs, four mentioned that they would go to the Department of Library and Research for information on science and technology. Several of the MPs we interviewed specifically praised the work of the Research Division:

"I have used the service especially whenever I have a paper to present. [ . . . ] I always need basic information for such papers, and they have been helpful." (MP01)

"These people do their work diligently and there is no time I have approached them and did not get what I want. However, as I mentioned before, there needs to be a well planned research service supported by all players in parliament." (MP04, referring to both library and research)

One of the interviewed MPs was disabled and commented on the usefulness of the Department:

"Mainly research and library have been very useful, because of my impairment. In case I need to present a paper, or if I want any information, I go to them and they provide it." (MP05)

A survey of MPs' satisfaction with the quality of science and technology information obtained from the PRS indicates that 40 per cent of MPs are satisfied, 33 per cent had no opinion and 21 per cent were not satisfied. It was not possible to question all surveyed MPs about the basis for their responses. However, judging from the interviews, the main issues for MPs are timescales for obtaining responses to requests for information and low numbers of staff with scientific expertise. These are discussed in the following sections.

### What science and technology related work does the Research Division carry out?

It is beyond the scope of this report to conduct a comprehensive assessment of all the science and technology related work of the Research Division. Instead, we use an analysis of selected written reports on STI produced by researchers (largely from the Bills and Policies Division) and insights from the interviews and survey already mentioned to identify the challenges the Division faces when dealing with issues relating to science and technology. Many of the issues we have identified are not specific to science and technology.

A range of different types of report are produced, from short one-page fact sheets to detailed reports of ten to fifteen pages. The majority of work done by the Division is reactive, that is conducted in response to requests for information from MPs. However, the Division is increasingly trying to work proactively to produce reports on topical issues in advance of receiving requests for information.

Reports produced during the 8<sup>th</sup> Parliament cover a wide range of subject areas related to science and technology. Examples include:

- the role of parliaments in environmental management and in combating global degradation of the environment ;
- the impact of polythene bags (buvvera) on the environment ;
- the economic contribution of ICTs to the Economy: experience from other countries;
- how preventive healthcare can contribute to achieving the millennium development goals in Uganda; and
- pastoralism and wildlife in Uganda.

Reports may be produced for individual MPs, specific committees, or a wider parliamentary audience. Often, MPs request reports to present at meetings outside parliament – for example workshops or conferences – in their capacity as legislators. In some instances, several different reports on very similar topics have been produced.<sup>32</sup> This is discussed in [Section 4.2](#) in the context of discussions about the high workload of staff.

#### *Timescales*

MPs, not only in Uganda but in parliaments across the world, often require rapid responses to their questions. Moreover, in the Ugandan Parliament, the delivery of order papers at very short notice (see [Chapter 2](#)) means that MPs may not know what information they will require for debate until a few hours beforehand. However, researchers require time to research, draft and review reports. Time taken to access information from external sources, high workloads, and limited numbers of staff with relevant expertise, all present a challenge in terms of turning requests on science and technology around on short timescales. Many of the comments from MPs and researchers reflect a disparity between what is expected by MPs and what is practical:

“When you ask for information, they take long. They tell you ‘It will take three weeks,’ but the debate is continuing and you need some instant answers. If it is on the floor of parliament, you need someone who can provide quick answers and brief.” (MPo2)

“The biggest challenge we have is time constraints. We have given guidelines to MPs asking them to submit their requests at least two weeks in advance (before the day they need the report), but many of them fail to do this. And then if the speaker comes and says, I want this tomorrow [. . .] you have to put everything aside.” (Library and research interviewee o8)

“Researchers may fail to respond to a request for information from MPs in [a] case when every

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<sup>32</sup> For example, in 2007 at least three reports on climate change produced within six months: *Climate Change and Global Warming* (July 2007), *Climate Change and Global Warming: A Case Study of Policy Issues and Solutions* (August 2007); *Climate Change and Global Warming: Tackling Causes and Managing the Impacts* (November 2007).

[member of] staff is very busy on an assignment and when the request is very urgent and information is not readily available.” (Library and research interviewee 07)

“The Research Services are ok except that the staff is overwhelmed by the work they have to accomplish. [ . . . ] I placed in a request for information on Upland rice to the Research Services but the research was not finished on time and [I] had to depend on information from [the] Office of Vice President to support my motion. However the information was finalised but late for the intended purpose.” (MP03)

### **What is the quality of the research papers?**

POST and UNAS have conducted an expert review of selected reports produced by the PRS. This involved seeking constructive feedback from Ugandan and international experts on selected reports. The reviewers had expertise in either the subject of the paper or science policy (or both). A total of 17 reports on science and technology related subjects were selected, most of which were produced during the 8<sup>th</sup> Parliament. Reviewers were asked to judge the reports on the basis of their completeness, accuracy, use of evidence and objectivity. Here we give a brief overview of the review findings. A more detailed discussion can be found at Appendix A.

The expert review found a wide variation in the standard of the reviewed reports, depending on subject area and author. At one end of the spectrum, several reports received encouraging feedback. For example several reports on HIV/AIDS-related issues were described as “reading well”, “sounding objective and impartial”, “fairly well structured” and “fairly well referenced”. A programme summary report on fisheries was described as “on the whole, well balanced” and “quite well written”. At the other end of the spectrum there are a small number of reports, which seem to fall below an acceptable standard – they are biased, poorly referenced, badly written and contain factual inaccuracies.

The reviews do not show a clear correlation between the educational background of the author (i.e. whether or not they are a scientist) and the quality of the report.

In spite of the wide variation in standard, it is possible to spot some recurring themes and draw some general conclusions about areas for improvement. These are outlined below. However, it should be noted that the PRS is a relatively young Division, and preparing reports is only one component of the work PRS staff are involved in. Many underlying factors determine the quality of reports, and these are discussed further in the next section.

Interviewed MPs have not really commented on the strengths and weaknesses that have been identified by external experts. This could be because MPs need to improve their own skills in assessing whether information is reliable, as mentioned in [Chapter 2](#).

#### *Completeness*

For several of the briefings, feedback from reviewers indicated that certain pieces of key information were missing, and these were necessary for the reader to obtain a complete picture of the situation. **One recurring comment is that the reports could provide more appropriate background information.** Reviewers warned against assuming that the reader had too much prior knowledge of the subject area.

#### *Accuracy*

**Reports which required in-depth discussion of scientific and technological concepts were more likely to get the facts wrong than those on non-technical subjects.** This was particularly the case with reports on climate change. It would also have been helpful for the authors to comment on the reliability and accuracy of the information that they have cited. Authors should also try to check that any data they present in their reports are in agreement with other sources of information in the public domain – or explain any

discrepancies.

#### *Objectivity*

Reviewers identified a **tendency for authors to express their own personal views or opinions in their reports**, and to draw conclusions which are not connected to information presented in the main body of the reports. Reviewers also identified some biased interpretation of available evidence. A couple of reports stood out from the rest as being highly opinionated and making poor use of evidence.

#### *Use of evidence*

Reviewers identified the need to **make better use of the large body of public information available on many subjects**. For example, reports on climate change rarely mentioned internationally recognised bodies such as the International Panel on Climate Change or the UN Commission on Sustainable Development. In addition to missing out such information, reviewers felt, authors would have benefited from accessing in-country expertise to obtain Uganda-specific information. It should be noted, however, that there are various obstacles to accessing both international and in-country expertise, and these are discussed in [Section 4.2](#).

#### *Clarity*

Reviewers identified a number of ways that the clarity of the reports could be improved. For example **statistics should be presented in a way that is accessible to the reader**. Figures were often considered too complex, and data would have been better presented in simple histograms or pie charts. One reviewer commented, "The **copy and pasting of large chunks of text (without understanding their content) and the use of poor bridging sentences between these blocks made it difficult to read.**" Another comment was that **jargon should be clearly explained**. Reviewers recommended that rather than using academic style abstracts, the reports should make more use of executive summaries which act as a 'hook' to interest the reader in reading the document. They also recommended breaking up the text with **more headings and subheadings** that accurately described the paragraphs that followed.

#### **How are reports disseminated and stored?**

At the time of researching this baseline study, dissemination and storage practices varied depending on the nature of the report and other factors such as ICT infrastructure.

While reports that are produced proactively by the Division tend to be widely disseminated – for example by circulating to relevant committees, or making oral presentations – reports produced for individual MPs are treated as confidential and are generally circulated only to the requestor. It is then difficult for staff to know how a report has been used or what impact it has had. One researcher described the policy on dissemination as "unclear".

"Unfortunately, it is very difficult to know how widely the report was used. Requests are confidential. When [an] MP makes a request, he/she is not mandated to disclose the contents of the request and there are no channels for feedback. What I can say is that this report was used for a conference out of the country." (Library research interviewee 07)



At the time the data for this study were collected, there was no centralised repository for storing reports, although a senior researcher pointed out that work was underway to establish one and to make reports available online.

“Right now we are planning to have a central repository, where we shall store all the materials that we produce.” (Library research interviewee o8)

“We are now working out a strategy to have the information online. We have developed a software to manage the research work, to manage works in progress and the completed work.” (Library research interviewee o8)

However, the researcher pointed out that there would need to be further quality control mechanisms in place before mass distribution could take place:

“We shall ensure that the reports that are kept in the central repository are accurate and up to date and well written. We have to do extra checks on reports which we have to distribute. A report at that level must be thoroughly edited. Most reports are done in a hurry and, as such, there are some mistakes. For mass distribution, there must be quality. Most of the reports that we have are in temporary format.” (Library research interviewee o8)

## 4.2 Underlying Factors

### Availability of information

Staff cannot be experts in everything, so it is important that they make use of available sources of information on science and technology to answer MPs' requests for information. The expert review of reports produced by the division highlighted that staff could make more use of available sources of information to produce their reports – for example policy briefings by reputable organisations (such as the International Panel on Climate Change and the World Health Organisation) that available on the internet. A repeat of the expert review would help establish the impact of information literacy training carried out since 2009.

Various factors affect the ability of staff to access information.

#### *Availability of material in the library*

The extent to which researchers use of the library for science and technology information varies. Some researchers (two out of six) said they preferred to search for their own information using Scidev.net or even simple google searches, while others (two out of six) said they sought help from library staff. The need for the library to stock more up-to-date material on STI is a recurring theme. This is discussed further in the next chapter.

#### *Support given to staff to identify information*

Staff gave mixed responses on the level of support offered to them to obtain information on science and technology. Researchers are given advice on sources of information at the beginning of any new undertaking:

“We go through the form with the officer who will be assigned, and discuss the different possibilities, sources of information, time frame and any other thing that may be important for the assignment.” (Library research interviewee o8)

However one staff member says that researchers are often required to identify information themselves:

“Here, as long as it is not a field activity project, you are given nothing. You have to exhaust library information, find out what has been done on the topic of study [. . .] generally you do it to the best of your personal ability.” (Library research interviewee o4)

#### *Lack of Uganda- specific information*

Two staff specifically mentioned problems in obtaining Uganda-specific information. This issue has also been raised in discussion sessions with the POST team.<sup>33</sup>

“The problems I have had in the past while trying to access and use information is that a lot of science information on Uganda technology is not fully documented, and proxy indicators which happen elsewhere are used.” (Library research interviewee o6)

“Time is the main challenge. We do not have enough time to do our work. You can find that an officer has four assignments at the same time. Some information must come from other government ministries or departments and you cannot determine whether they will agree or how soon they can give the information. You are at their mercy.” (Library research interviewee o8)

The importance of links between researchers and legislators in developing countries is widely cited.<sup>34</sup>

However, scientists in the developing world may lack the skills, means and incentives to promote public awareness of their research ; as a result it may currently be easier for a Ugandan parliamentary researcher to identify international research than research in their own country.

Activities to enhance links between Ugandan staff and external stakeholders in science and technology, with the support of POST/UNAS/INASP, are already underway. It may also be useful to identify which institutions have public relations officers who could help staff access information.

#### **Staff skills**

We have already highlighted MPs demands for more staff with science and technology expertise. Two extra staff with expertise in engineering and in environmental science have been recruited since this study started. However, developing the skills of existing staff is also crucial.

The expert review has identified the need for researchers to enhance their own skills in identifying and assessing information on science and technology.

Comments from MPs also back this up:

“The research department needs to be given muscle and training so that they can be able to handle the demand for science and technology information. Otherwise, it will be like a blind man leading a blind man: (Focus group D)

Anecdotal reports (from parliaments across Africa) indicate that staff often require a lot of time to identify appropriate information. Very often, time can be wasted writing briefings on general topics when information

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<sup>33</sup> For example at a feedback session conducted in March 2009 on the results of baseline study with the Department of Library and Research.

<sup>34</sup> See for example Ajoy Datta and Nicola Jones, *Linkages between Researchers and Legislators in Developing Countries*, Overseas Development Institute, Working Paper 332, July 2011.

is already freely available on the internet.

Information literacy training has already been initiated by POST and INASP. Follow-up research to identify the extent to which staff are incorporating their new skills into their day-to-day work would help establish what impact the training has had.

#### *Breadth of topics*

Analysis of reports produced by the Division up to 2008, shows that several different researchers have produced reports on the same subjects (for example climate change). While this enables more than one person to have exposure to a subject, one researcher points out that working on such a broad range of subject areas means that it is difficult to develop exposure to or expertise within any particular field.

“The main problem I encounter is with working on different topics on differing subject matter almost every other day. I am not totally specialised in the type of research I offer in parliament. You get mixed up. For example you find yourself on education, financial and environment issues in addition to information gathering in the field, you are needed to be a master of all trades.” (Library research interviewee 06)

#### **High workload**

Researchers, clerks and MPs all raise the issue of staff being overwhelmed by the tasks they have to accomplish. High workload, exacerbated by low levels of staffing, is a key problem. MPs are demanding customers: our survey shows their preferred method of communication with staff is ‘face to face’ – this can be assumed to impose even more of a burden on staff time. Given the high workloads faced by the division, prioritisation of requests is essential. Interviewees say that priority is given to committees, MPs and senior staff of parliament, in that order.

“The biggest challenge was time. The information requested for was urgently needed and I did not have enough time to gather all the necessary information. [ . . . ] Also, there were not enough materials available on ICT in Parliament.” (Library research interviewee 04)

#### **Low staffing levels**

Several interviewees commented on the low staffing levels in the Research Division and the resultant stresses on individuals and work output.

“A research officer sits on the Science and Technology Committee and takes care of research needs. [ . . . ] Unfortunately, this researcher is shared with the Committee on Agriculture, Animal Industry and Fisheries. You can see how this resource is divided among different roles.” (Clerk01)

“The Research Services are ok, but the staff are overwhelmed.” (MP03)

“We are very few in our section. Imagine only about 10 staff to support over 300 MPs, including committees. You find that a researcher is attached to more than one committee, and he has to carry out other assigned requests from individual MPs. You can see that we are overwhelmed by the workload.” (Library research interviewee 04)

“Then there is the problem of fatigue, burn out among the researchers. Researchers work under constant pressure and with time you notice a person is tired but they have to work.” (Library research interviewee 09)

### Duplication of effort

At least three very similar reports were produced on climate change by different members of staff during 2007. They were all produced for MPs attending conferences which did not link directly to parliamentary business. We do not have information on the extent to which researchers communicated with each other to ensure they did not repeat each others' work. It is possible that there was some duplication of effort, especially given the barriers to widespread dissemination already discussed.

### Quality control mechanisms

The review indicates that while the majority of reports are produced to an acceptable standard, a small minority of reports on STI fall below this standard. This could be picked up by a robust review system.

Some procedures are in place to conduct internal monitoring of the quality of reports produced by the Division. For example, researchers are required to discuss drafts of their reports with supervisors prior to finalising them. However, anecdotal reports suggest that time does not always allow for supervisors to provide detailed review of researchers' work.

"Most reports are done in a hurry and, as such, there are some mistakes." (Library research interviewee 07)

Lack of feedback from MPs (particularly in instances where reports have been produced for one specific MP) means that it is difficult to know what the impact of a report may have been:

"Unfortunately, it is very difficult to know how widely the report was used. Requests are confidential. When MP makes a request, he/she is not mandated to disclose the contents of the request, and there are no channels for feedback. What I can say is that this report was used for a conference out of the country." (Library research interviewee 07)

To address quality control issues, it may be worth carrying out a review of whether internal peer review processes are working, not just for science and technology related information but for all subjects. It would also be valuable to repeat the expert review of research reports periodically to measure progress.

## 4.3 Possible Ways Forward

Our research has highlighted various areas in which improvements could be made within the Research Division of the Department of Library and Research. They are, in order of priority or potential impact:

- Repeat the expert review of reports periodically for quality control ;
- Review effectiveness of existing internal peer review mechanisms for reports;
- Take measures to improve dissemination and storage practices (depending on what progress has been made) – for example by employing INASP training on establishing institutional repositories ;
- Introduce measures to avoid duplication of effort – for example by compiling and regularly updating dossiers of background information on popular science and technology topics, such as climate change;
- Review staff guidance on reputable sources of information on STI ; and
- Review how research requests are prioritised (not just for STI related requests).

It is important to note that since our research was conducted actions have been taken to improve the skills and efficiency of the Research Division. These include:

- Conducting information literacy training and science communication training for staff (although further Evaluation of how staff are integrating the training into their work might be useful);
- Recruiting more staff from scientific and technological backgrounds ;
- Improving links with external experts through internships and networking events.

For further information on how gaps could be filled, please see the Conclusions chapter, where we set out a comprehensive table of gaps in skills, knowledge and resources, and processes within the Ugandan Parliament and suggest more detailed possible ways forward.

## 5. The Parliamentary Library

The role of the Library Division within Department of Library and Research is to:

- Increase reading materials in the Library and provide relevant information required by MPs; and
- Organise and process Library materials and relevant information.

The library has three Divisions: Collection Development, Processing, and Reference and Circulation. It has three librarians and one assistant librarian in addition to support staff and directorial staff. We have not undertaken a systematic review of all library materials on science and technology for this study. Our findings are largely based on:

- interviews with MPs and staff;
- the questionnaire results; and
- some of our own observations from visiting the library.

### 5.1 Key Observations

#### Who uses the library for information on STI?

Our survey of 121 MPs reveals that almost half (48 per cent) say they visit the library for information on STI on a weekly basis. A further 25 per cent visit once a month. As with the Research Division, face to face communication is MPs' preferred way of liaising with staff.

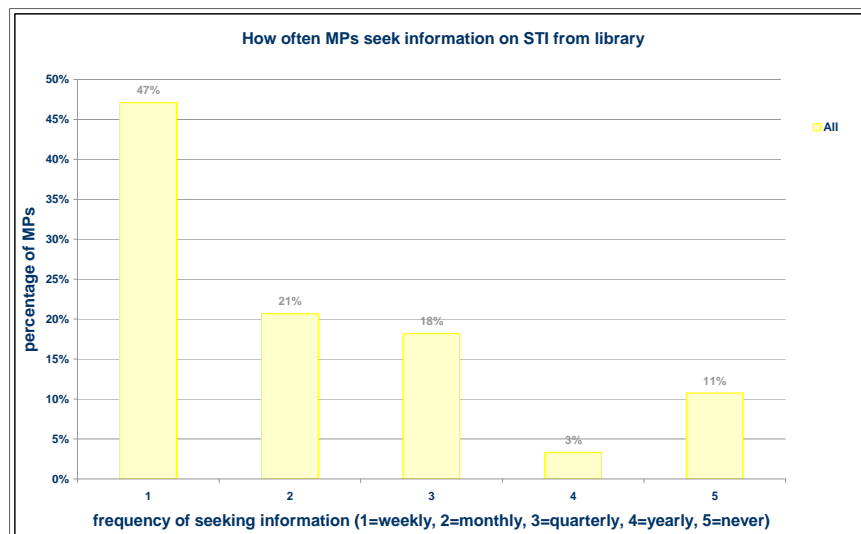


Figure 5.1: How often MPs seek information on STI from the Library

When asked which services they had used during the past year to access STI information, 55 per cent of MPs had used 'online searches', 51 per cent had used the catalogue, 39 per cent reading space and 22 per cent updates on new publications.<sup>35</sup>

Both librarians we interviewed said that due to a lack of documentation it is not possible to draw conclusions

<sup>35</sup> Due to the way the question was phrased, it is not possible to conclude whether 'online searches' refers to library databases or simply refers to internet searches such as those carried out via Google.

on exactly who uses the library for what. Therefore it is not possible to back up the survey with Library statistics. However, the survey data do suggest that MPs see the library as a key resource for information on STI.

As with the Research Division, MPs praise the motivation and hard work of the Library. One MP states:

“Those guys in the library are good. I have never gone there and been frustrated. When they have information, they give it. If they do not have [it], they will let you know that they cannot help.” (MP 07)

“Our library, I could say, is still lacking with science and technology materials, but they offer you with service when you approach them.” (MP04)

MPs’ levels of satisfaction with the quality of STI-related information received from the library were mixed: one-third of surveyed MPs were satisfied, one-third unsatisfied and one-third had no opinion. Although it was not possible to question each surveyed MP on his or her response, the strengths and weaknesses identified in subsequent sections could provide some explanation of the results of the survey.

Researchers and clerks are also key users of the Library. One of the interviewed librarians said that MPs usually use STI materials for academic purposes and that researchers use them for parliamentary duties. Two of the researchers we interviewed mention how they use the library:

“I access them by borrowing text books from the library. I also seek the help of librarians on which links to follow on the specific information I need.” (Library research interviewee 06)

“I use the library staff quite often in the search for S&T materials.” (Library research interviewee 04)

One researcher highlights the fact that the Library is only ten years old and has developed significantly over that period:

“Our library is demand driven. It is only ten years old. Before then there was something called a library with no books and a library assistant.” (Library research interviewee 09)

### **What kinds of materials are available in hard copy?**

The library stocks a range of material on science and technology, including textbooks, reports (for example by government departments), pamphlets and publications in topical areas such as HIV/AIDS, agriculture, engineering, health and education. It updates users about new material via its noticeboard and also via email bulletins. The librarians highlighted mathematics and the applied sciences as areas they felt were conspicuously missing at the time of interview.

In the focus group discussion, an MP commented that the Library’s collection of books on science and technology was limited. However, the Director of Library and Research has indicated to us that the Library’s budget has increased over time; any limitations in the collection are largely a result of lack of requests for science-related information rather than lack of funds.<sup>36</sup>

A comment from one MP implies that searching through the available collection can be difficult:

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<sup>36</sup> Personal communication with Innocent Rugambwa, Director of Library and Research, 12 October 2010.

“During the debate on DDT, I went to the library to see if there was a book on the subject and found out that all the books are huge.” (MP03)

This comment highlights that the MP has a lack of awareness of what the most suitable sources of information are. There are a variety of authoritative and concise reports/policy briefings on DDT available free online. These are likely to be far better sources for a busy MP than a book.

Science and technology as a discipline moves forwards very quickly. The timescales for production of textbooks mean that they may not always contain the most up-to-date information. However, comments from our interviewees indicate a demand for up-to-date information such as periodicals or reports from reputable organisations handling STI matters.

“There is need for an up-to-date library service with recent information on science and technology. The Library lacks up-to-date reports, brochures and newsletters from research institutions, NGOs, CSO, and embassies.” (Clerk01)

There are many organisations in Africa and further afield working on STI and producing highly relevant briefings and reports. Examples include the African Technology Policy Studies Network, the African Centre for Technology Studies and the African National Science Academies. However, information from these organisations appears to be received sporadically:

“We receive other materials through donations from organisations that may send or not send their publications, for example from NARO. This depends on the discretion of the originator of the material. There is no formal arrangement with such organisations to send and receive publications.” (Library research interviewee 02)

Some individual staff members obtain briefings directly, but the responsibility of sharing that information with colleagues rests with the individual staff member.

A number of developments have occurred since this study was conducted. For example, the Library set a specific objective during 2008/09 of increasing the range of reading material available. In addition the UNAS Parliamentary Liaison Officer has started to display copies of UNAS reports in the Library, and staff undertaking information literacy training have shared information identified through the training with their colleagues.

### **What counts as science?**

‘Science and technology’ is a broad term that incorporates a vast array of policy areas. However, comments from some interviewees indicate that they do not consider some subjects (for example ICT and the environment) to fall under this heading. People may therefore mean different things when they say the library is under-resourced in science and technology materials:

“However, I may not know what is there on science, but if I remember for the report we wrote on oil there were three books which we borrowed from there. I can say that when we have wanted books on petroleum, environment and agriculture we have found them in the Library. However, there is no section on science.” (Library research interviewee 09)

“We need journals, newsletters and other S&T materials in the Library, and these should be regular. Unfortunately, these materials are very irregular, and at least the ICT section has some books on e-commerce, e-governance, networking issues, teleconferencing, various books and periodicals.” (Library research interviewee 04)



### Material available online

The Library (at the time the interviews were conducted), subscribed to various online databases, including a number of scientific journals through INASP's Programme for the Enhancement of Research Information (PERii programme). It is worth noting that the PERii resources are largely academic journals. The observed limited uptake of PERii resources perhaps reflects the fact that they may not be appropriate for parliamentary work.

It is not clear from the survey what use MPs make of online resources available to the Library. Although 55 per cent of MPs said they had used 'online searches' in the Library to access information on STI over the past year, this could simply refer to internet search tools such as Google.

Most research staff said they were not fully aware of all the material the library held on science and technology, and one interviewee said an online catalogue would be useful.

"The Library also sends lists of recently received materials. But as a department, we want to see if [a] catalogue can be made available online. This will enable us to check for availability of materials on a given subject when we need to use them." (Library research interviewee o8)

"I do not know the S&T materials currently subscribed to by the Library, and because I have attended a number of conferences I have been using my own searches of information mainly using Google and SciDevNet." (Library research interviewee o5)

"I know of JSTOR and I also of recent have known SciDevNet through the training we had for communicating science. I definitely know how to access such materials and have not had any problem in accessing and using such materials." (Library research interviewee o6)

### Dissemination of information on STI

The Library has various mechanisms in place for sharing information. Information for library users is shared via a noticeboard, and there is an email informing MPs and staff about the materials that are available. There is a catalogue, although it is not available online. Over 50 per cent of surveyed MPs said they had used this catalogue to access information on STI.

The Library could consider disseminating information using other methods. For example, the Parliamentary Library in Namibia is scheduling 15-minute sessions at beginning of committee meetings to demonstrate materials that are relevant to current enquiries.

Lack of space is highlighted as an issue by some interviewees. It is therefore reasonable to assume there are constraints on how much hardcopy information on science and technology can be displayed. Focusing on availability of electronic information might be a more practical way forward.

## 5.2 Underlying Factors

The interviews revealed a variety of underlying factors affecting access to information on STI. Many of these are related primarily to resources, an issue which affects access to knowledge in all areas, not just science and technology. As many of these have been highlighted previously (see, for example, the discussion of resources in the Research Division in [Chapter 4](#)) we do not go into detail here.

Low levels of staffing and funding, and lack of space, are recurring themes. They were raised, for example, by

the three clerks who were interviewed.

“The staffing of the Library is also low, and office space is very small for the operations of the library.” (Clerko1)

“The Library is faced with problems of low funding and inadequate staff. The Committee wanted a researcher and librarian to be stationed in the resource centre, but this could not happen because of inadequacy in staff. The Library Division is constrained by funding. The Library cannot sustain the receipt of current researched information, as in most cases this information has to be paid for.” (Clerko3)

“You can find that there is only one copy of a law or act, which makes its use very difficult, as sharing becomes difficult. All in all, materials are not enough. Also, the library has limited space for operations. Imagine, the Library has less than 20 sitting space[s] for the users.” (Clerko2)

One of the librarians we interviewed said he was not very clear how to do an effective search for information on STI, and he spent a lot of time on searches. He said he also faced challenges accessing information through online sources, because many sources were not free and the internet connection was not fast enough.

### **Lack of reading culture amongst MPs**

Although it has not specifically been mentioned in our interviews, it is widely stated that there is a lack of reading culture amongst Ugandan MPs. There appears to be an appetite for innovative ways of communicating scientific concepts. Parliament has taken the initiative to stage a number of screenings of documentaries – for example Al Gore’s *An Inconvenient Truth*. A desire for more audiovisual resources and for a ‘one stop shop’ to provide MPs with up-to-date information on STI is mentioned in several interviews:<sup>37</sup>

“I think that this Parliament should have a specific collection of science research to help us, as the Committee on Science and Technology, to make informed decisions.” (Focus Group participant 4)

“Extra support is needed in areas of skills development and acquisition of equipment such as DVDs and the equipment to facilitate their use. There is need also for support for introduction of audiovisuals and their use.” (Library research interviewee 02)

Since we began collecting data for this study, the Library has established a collection of DVDs focusing on several key STI issues, including HIV/AIDS and climate change.

### **5.3 Possible Ways Forward**

Our research has highlighted various areas in which improvements could be made to the Parliamentary Library in the Department of Library and Research. They are:

- further information literacy training;
- documentation of Library usage;
- creation of an online catalogue;
- better internal communication on what STI resources the Library has access to;
- the improvement of links with in-country experts who could help supply local sources of information on

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<sup>37</sup> It should be noted, however, that experiences in other contexts show that audiovisuals resource libraries are expensive to set up and maintain and in practice are not always made best use of.

STI; and

- making arrangements for regular supply of hard-copy updates on information from key STI institutions such as ATPS, ACTS and science academies or investigate possibilities for electronic access to such briefings.

For further information on how gaps could be filled, please see the Conclusions chapter, where we set out a comprehensive table of gaps in skills, knowledge and resources, and processes within the Ugandan Parliament and suggest more detailed possible ways forward.

## 6. Conclusions and next steps

### Introduction

In this chapter we conclude our findings from our research and attempt to investigate possible ways for improving the way in which the Ugandan Parliament uses scientific and technological evidence, taking into consideration the needs that have been expressed by our interviewees and survey respondents during our research period. Our aim is to provide suggestions that are useful not only for Parliament but also for the future capacity-building activities of donors such as POST and UNAS.

While parliamentary capacity strengthening in terms of STI is a relatively new area, there is a wide body of work on effective parliamentary strengthening. The Overseas Development Institute (ODI) has established a set of principles for effective parliamentary strengthening, which should be taken into account in any discussion of options to be taken forward.<sup>38</sup> These principles state that parliamentary strengthening should:

1. **respond to demand:** it should be demand-led and responsive to local needs, rather than externally-driven;
2. **address causes:** it should seek to address the causes of poor parliamentary performance, rather than addressing solely the symptoms;
3. **take account of context:** it must take full account of the local context – including the political context – within which parliaments function;
4. **involve recipients:** it should involve a range of local organisations and interest groups, including opposition MPs and parties as well as members of the government;
5. **focus on issues:** it should use particular issues such as budget oversight, anti-corruption, HIV/AIDS and poverty reduction as vehicles to improve parliamentary performance, rather than focusing solely on parliamentary procedures;
6. **coordinate and deliver appropriate activities:** agencies involved in parliamentary strengthening must do more to coordinate their work, and to ensure that their activities are appropriate to the objectives of parliamentary strengthening. They should think twice before setting up or supporting study visits and seminars; and
7. **provide long-term sustainable support.**

The sixth principle is particularly relevant: in the course of the science and technology capacity building programme it has been observed that there are a wide number of donors organising activities (especially training workshops), and these activities sometimes overlap in terms of content. Beneficiaries are not always aware of how the programmes of different donors fit together. All donor initiatives in STI and related areas should be carefully aligned to ensure that the time of staff and MPs is used efficiently, as recommended by the ODI in the publication from which the above principles are taken:

“There are a wide variety of organisations involved in parliamentary strengthening. In any one country there may well be several organisations working in this area. As donors seek to engage in a particular country, they must begin with a clear map of what is already taking place, before then thinking about whether and how they can best add value in a harmonised manner.”

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<sup>38</sup> Alan Hudson, Overseas Development Institute, and Clare Wren, One World Trust, February 2007, “Parliamentary Strengthening in Developing Countries”.

## 6.1 Conclusions

Below we set out our findings for:

- overarching issues relating to the handling of STI by parliament;
- the Standing Committee on Science and Technology;
- the Parliamentary Research Service within the Department of Library and Research; and
- the Parliamentary Library within the Department of Library and Research.

The findings indicate the 'state of play' at the time the data were collected (i.e. the first quarter of 2009, when the POST Programme had just begun). Interviews with 12 library and research staff in early 2011 on the impact of the POST Programme indicate that the majority of staff feel that the programme has had a positive effect on their and their department's understanding of STI issues. It could, therefore, be beneficial to repeat some of the elements of this baseline study (such as the policy briefing review) to assess progress since the data were collected. However, due to the long timescales required for capacity building activities to have an impact, the findings presented in this report are still broadly relevant in the 9<sup>th</sup> Parliament. Note that the programme of POST support comes to an end in mid-2012. Parliament therefore needs to identify its own ways of addressing current gaps, building on lessons learned from the POST programme.

### Parliament-wide issues

#### *Key observations*

- Our survey of MPs indicates widespread enthusiasm for science and technology, with over 90 per cent saying that they are interested in STI. This finding applies across MPs of both genders and all educational backgrounds.
- There is widespread willingness among surveyed MPs to take action to improve the Ugandan Parliament's handling of STI.
- Two-thirds of surveyed MPs say that there is a need for more parliamentary debates on science issues and that debates should be more evidence-based.
- However, this positive attitude does not always translate into action: STI do not get much attention on the floor of the house, and debates are poorly attended.
- There is a lack of clarity in the coordination of STI within parliament, according to those MPS who were interviewed.

#### *Underlying factors*

- On the whole, MPs have low levels of scientific literacy, although the majority still consider themselves 'well informed'.
- Most MPs do not think that science and technology are relevant to daily life.
- There are limitations in the availability of information on STI for MPs.
- In some cases, MPs find it difficult to distinguish reliable scientific evidence from unreliable evidence.
- Institutional mechanisms for sharing information within parliament – such as order papers – are weak.
- The Standing Committee on Science and Technology has low visibility.

### The Standing Committee on Science and Technology

#### *Key observations*

- It is widely acknowledged that parliamentary committees on science and technology have a role to play in national development.
- Since its inception, the Standing Committee on Science and Technology has been active in monitoring, evaluating and assessing activities in public institutions and other bodies engaged in national science and

technology development.

- The Committee plays a key role in raising awareness of key STI issues within parliament, through workshops and seminars and, since 2008, the scheme to pair scientists and MPs.
- However, in terms of reports produced and debates generated, the Committee's visibility in parliament is in fact fairly low.
- One-third of surveyed MPs think that the Committee does not have enough input into parliamentary debate. One-third hold the opposite view, and one-third have no opinion.
- The Committee has an extremely broad mandate compared to committees in other countries, and progress in areas such as the scrutiny of bills with an STI component has been limited. Some would like to see more activity in this area.
- Although the Committee has good links with stakeholders such as UNAS, UNCST and other institutions, there is room for improvement in its visibility outside of parliament, for example in terms of media coverage and information available online.

#### *Underlying factors*

- The Committee functions on limited resources: there are low levels of staffing, funding and space for meetings, for example.
- Committee members have a wide range of other commitments which often take priority over the work of the Science and Technology Committee.
- There is a need to forge stronger links with other parliamentary committees.
- A lack of clarity in the handling of STI means that the Committee's role is not fully exploited.
- Unlike many of its international counterparts (for example in the UK House of Commons), Ugandan parliamentary committees do not conduct formal inquiries, which are a good way for committees to raise their profile and increase impact.

### **The Parliamentary Research Service**

#### *Key observations*

- MPs see the Parliamentary Research Service (PRS) as a key resource: over half of our surveyed MPs claimed they visit at least once a month for information on STI. Their preferred method of communication is face to face.
- MPs praise the high levels of motivation and dedication of research staff.
- The main concerns of MPs related to the turnaround time for research requests and the need for more scientific expertise in the Division.
- The quality of reports produced by the PRS varies significantly. Reviewers identified a number of common areas for development, including a need for greater objectivity, better exploitation of available sources of information (such as online resources) and improved understanding of the basic scientific principles underlying issues being debated.

#### *Underlying factors*

- Staff have limited access to information on science and technology.
- There are limited resources in the Parliamentary Library, staff have difficulties in accessing in-country information on STI and have poor links with the external STI community.
- There is a need to improve researchers' information literacy skills and to improve their knowledge of current STI issues.
- At the time of writing, there was no central repository for storing reports.
- There were few members of staff with a background in science and technology or academia.
- Researchers face the challenge of having to address a broad range of topics in their work.
- The high workload and stress levels of staff are exacerbated by low staffing levels and possibly by duplication of efforts and a need for more effective information-sharing practices.
- There is limited time for quality control of reports, such as internal and external peer review.

- There are few mechanisms through which staff can obtain constructive feedback on research from MPs.

### **The Parliamentary Library**

#### *Key observations*

- Library users praise the motivation and dedication of Library staff.
- MPs regard the Library as a key source of information on STI.
- Although over half of MPs say that they visit the Library for STI information at least once a week, this figure seems high, and it cannot be verified as the Library only holds limited information on usage.
- Users say the Library lacks STI-related materials. In particular, they feel, it should have more up-to-date publications such as newsletters and policy-relevant briefings from key institutions. STI develop quickly, so books are not necessarily the best source of information.
- Users and librarians are not accessing the full range of online resources that are available. It is possible that such resources are largely academic and not directly relevant to the requirements of parliamentarians and staff. However, there may also be a lack of awareness of what resources are available.
- There is some evidence that, owing to developments such as information literacy training, the availability of information on STI has improved since our research started.

#### *Underlying factors*

- Library staff sometimes have difficulty identifying reliable sources of information on STI.
- MPs often expect answers to their questions to be found in books and are not aware of online resources.
- Staffing levels and high workloads can affect productivity.
- Interviewees say there is limited space in the Library.
- Interviewees say internet connections are not adequate for staff to make full use of online resources when needed.

## **6.2 What Improvements do Beneficiaries Want?**

Surveyed MPs were given range of possible options for strengthening parliament's ability to scrutinise STI and asked to rate their importance. The options were:

- an information bureau dedicated to science and technology (for exclusive use by MPs);
- workshops/lectures/documentaries on STI organised within parliament;
- regular written briefings on STI impacting Uganda's economy and society;
- scale up implementation of policy science links (such as piloted MP pairing scheme);
- training parliamentary staff in science communication;
- establishing international networks for MPs who are interested in science and technology; and
- a fellowship scheme, in which scientists can be attached to parliament for a defined period to support MPs.

Figure 6.1 sets out how important these options were considered to be by respondents.

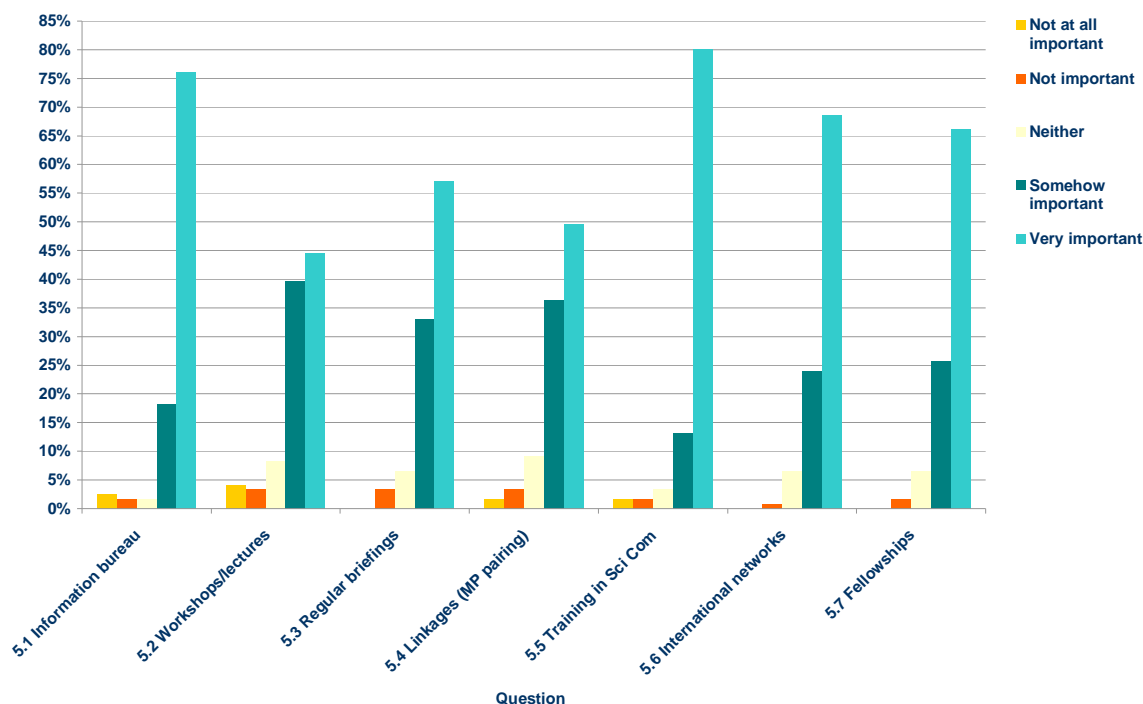


Figure 6.1: MPs' rating of options to strengthen parliament's ability to scrutinise STI.

It is interesting to note that *all* of the possible options were popular, indicating MPs high level of interest in strengthening parliament's capacity to deal with STI. However, the most popular appear to be an information bureau dedicated to science and technology (for exclusive use by MPs) and training parliamentary staff in science communication.

Further reflections on some of these options, from interviewees, are given below, as well as some additional suggestions. Note that there is universal support for activities aimed not only at MPs but also at parliamentary staff. In terms of activities aimed at MPs, regardless of the method, there is a clear feeling that the first step is to sensitise MPs to STI and stimulate interest.

"We have to work very hard to sensitise the MPs on the importance and use of science and technology information." (MPo1)

"We need to demystify what science really is." (MPo2)

### **An information bureau**

The need for a science resource centre acting as a 'one stop shop' to provide MPs with up-to-date information on STI has been raised frequently in informal discussions with POST and UNAS, and was reiterated in the interviews:

"I think that this parliament should have a specific collection of science research to help us as the Committee on Science and Technology to make informed decisions." (Focus group participant 4)

However any discussions on the science resource centre would need to consider issues that have already been raised, most notably the limited availability of space, staffing and funding, which would present challenges in terms of sustainability. One MP highlights that such a project should be demand led:



"If a bureau is to be set, it needs to be studied and see which areas should be covered by the established bureau and progress due to demand. Such a bureau would also help to link with other organisations and turn it into a Knowledge Centre." (MP01)

It is also important to note that researchers are key users of library resources, and it might be counter-productive to have a service exclusively for MPs, as suggested in the survey.

"I see a bureau with exclusive use by MPs and the researchers [as] important." (MP05)

However, many of the comments made related to general improvements in STI resources available to MPs, and have already been discussed earlier in this report:

"I would like to have a one stop centre, if possible, and also the time for research for information if it could be reduced to a week or something like that, so that we can get the information." (MP02)

"I think that this parliament should have a specific collection of science research to help us as the Committee on Science and Technology to make informed decisions. [. . .] Although we have a Research Department, the Research Department needs to be given muscle and training so that they can be able to handle the demand for science and technology information. Otherwise, it will be like a blind man leading a blind man. [. . .] We also lack facilities such as libraries with skilled information scientists." (Focus group participant 2)

#### **Workshops/lectures/documentaries on STI issues organised within parliament**

Oral communication of STI was a popular suggestion. There is a feeling that a lack of a reading culture amongst MPs might limit uptake of written resources, and there is particular interest in looking at forms of communication such as audiovisuals. There are precedents for this.

"I remember when we were debating the climatic change, I organised with the British Council and showed documentaries on environment, and they actually made an impact." (MP01)

In the focus group discussion, MPs also suggested that attending international workshops on scientific issues would enhance their capacity to handle STI. However the ODI warns against focusing on conferences and seminars rather than long-term capacity building, citing a SIDA study from 2005:

"SIDA's review suggests that methods of assistance for parliamentary strengthening are often poorly matched to objectives. That is, parliamentary strengthening often takes the form of conferences, seminars and study visits rather than long-term capacity building."

#### **Regular written briefings**

MPs supported the idea of regular written briefings, but warned that:

- staff needed to be properly equipped to write them;
- they should tie in with parliamentary business; and
- they should not be too long.

Note that Parliamentary Research Services have already started to proactively produce briefings on topical issues.

"Very important. [. . .] Actually, the science and technology bureau would help and see that such

briefings are regularly done.” (MP01)

“Well, I think it will be a good idea provided it is in line with parliamentary business [ . . . ] but if you write on any topic, it will be good as a point of reference, but people might not use it.” (MP02)

“This would be fine, but who will be doing this? We need to coordinate this and need to identify the persons to handle it and give them the technical capacity to handle. These briefs could then be sent on each MP’s email.” (MP03)

“Well, you know we need writings that are not very long. [ . . . ] I can assure you these MPs have a lot of pressures. [ . . . ] That’s why you see the gallery is almost empty, especially when there are no voting on any issue. [ . . . ] MPs have to make priorities, as they are attending workshops where they have been invited and attending to their businesses. [ . . . ] You find that a long document will not attract the attention of MPs.” (MP04)

“Good idea to know what is new in S&T, especially as regards to issues of national development. Discoveries can also be documented especially as far as new medicines that could treat deadly diseases such as HIV/AIDS and malaria.” (MP05)

#### **Scaling up of policy links (such as MP scientist pairing)**

The idea of scaling up the MP pairing scheme was popular, although two of the interviewed MPs said that the scheme required further study before it received a long-term commitment:

“What is important on this is how we can use these policy linkages. We need to give information when it is needed. Otherwise it is a good idea which needs to be studied further to suit the needs of both the parliamentarians and scientists.” (MP05)

“I cannot commit myself to this. [ . . . ] Let us wait and see what comes out of the current science pairing scheme [ . . . ] then we can scale it up or perfect it.”

#### **Training parliamentary staff in science communication**

MPs were highly supportive of staff training in science communication.

“Such training is very vital. You see not all MPs are scientists or understand science and technology. The packaging and communication of science and technology is very important so that it can be understood by many. To give you an example, recently we had a British MP visiting us here in Parliament. [ . . . ] He came with a Clerk of Bills from their parliament. [ . . . ] This Clerk discussed science issues so eloquently, although when I asked him his background it was not in science.” (MP01)

One MP pointed out that MPs also need such training:

“This would be good, but MPs need to be considered as well to eliminate the negative attitude to ensure that they are also brought on board.” (MP03)

#### **International networks**

MPs were very supportive of the idea of forming international networks of MPs interested in STI.

“That one, actually, in my opinion, is long overdue. Even when I had a meeting with the Chairman of the Commonwealth Parliamentary Association, when they came here for CHOGM, that was the issue I was advocating for. We should [have] an inter-parliamentary connection between MPs of common

wealth parliaments, and he was in full support.” (MP02)]

“This is very good in making us learn best practices. Comparing is good and [we] need to encourage this. In this, we can exchange ideas and learn from each other, because there are definitely countries which are more advanced in science and technology than us.” (MP03)

However, many such international networks already exist, for example the e-parliament network mentioned by one MP:

“We used e-parliament to address salient issues of global warming and climatic change. You see, it is because fellow MPs have not appreciated the use of e-parliament. [. . .] How it works is that in case you have an issue, you just put a question on what you want to find out and you are internationally advised on scientifically proved methods of overcoming the problem by various professionals and members worldwide. The moment you become an MP you automatically qualify for membership.”

Further work could be done to investigate what international networks were available to MPs and communicate this to them – perhaps through a workshop or written briefing.

### **Interns**

The idea of taking on interns with training in STI was popular, and one of the clerks pointed out that it had already been done in the past, with success:

“This is a bright idea from you. Normally what I see here being done is that when interns are recruited here, there are very few, if any who are science trained. So, special attention should be placed on this for [establishing a] meaningful science and technology knowledge base in parliamentary debates.” (MP03)

“We have to be very careful on this. Who will fund the remuneration of the scientists? We need to invite them when there is need. We just need to have a pool of scientists from an organization [. . .] but where do you get them? Is there an organisation embracing scientists? These are the questions we need to answer, otherwise it is a good idea if well coordinated.” (MP05)

“Another innovation by the Committee, in addition to the Parliamentary Research Services [. . .] the committee applied to Mulago Hospital which gave the Committee a research fellow for two years to coordinate the activities of the resource centre, monitor and develop a databank and keep on reviewing the information therein. This research fellow from the Institute of Public Health has done a wonderful job in our resource centre.” (HIV Committee member)

One MP mentions that parliament should make more use of scientists who receive government awards:

“Currently when you see Science and Innovation Awards given to people, then one wonders about the criteria used in selecting these people. Parliament needs to know and also recognise them, so that they can eventually be a resource to parliament.”

### **Other suggestions**

#### *Strengthening the committee*

In addition to the above suggestions, MPs emphasize the need to strengthen the Science and Technology Committee, as discussed in [Chapter 3](#).

“We need a vibrant Science and Technology Committee that is dedicated to the cause of uplifting of science and technology debates and contributing to national development.” (MP03)

#### *UNAS’s role*

One MP comments that parliament needs to make more use of Ugandan STI institutions such as UNAS for authoritative advice on STI, rather than relying on individual scientists:

“In this country, we have so many centres of science power, by this I mean the authorities that can advise government on S&T issues. Ideally it should have been UNAS to do this, whereby when a matter related to science arises, where ministers or governments require advice, they should be able to go to a specific institutions just like it happens with the American Academy or the Royal Society.” (Focus group D)

### **6.3 Possible Ways Forward**

The gaps table below builds on what interviewees have said they need for the Ugandan Parliament to improve its handling of STI and STI-related matters effectively. It lists current gaps in skills, knowledge and processes within parliament, states where POST, UNAS or other partners have already undertaken some activities to address the gap, and cites some possible ways forward, many of which have been suggested by interviewees and some of which have already been listed at the end of earlier chapters.

Rather than see the table as a blueprint for the way forward, we suggest the Ugandan Parliament, its staff and donors view it as a prompt for discussion, bearing in mind the ODI’s principles for parliamentary strengthening.

### Gaps table

The gaps table lists current gaps in skills, knowledge and processes within parliament, states where POST, UNAS or other partners have already undertaken some activities to address the gap, and cites some possible ways forward, many of which have been suggested by interviewees. It should be noted that the programme of POST support comes to an end in mid-2012. Parliament therefore needs to identify its own ways of addressing current gaps, building on lessons learned from the POST programme.

1. Skills		
Issue identified	Status of activities to address issue	Possible ways forward
MPs' skills in oral communication of STI in debates	No activities undertaken to date under POST programme.	Training for MPs on oral communication (focusing on STI).
MPs' skills in assessing information and understanding what constitutes 'reliable evidence'	No activities undertaken to date under POST programme.	Training for MPs on information literacy and scientific method – Induction session for new MPs?  Raising awareness amongst MPs of "e-parliament" as a resource.
Committee staff's skills in producing punchy committee reports	No activities undertaken to date under POST programme.	Training for clerks in effective report writing.
Time taken for staff to find STI information from external sources (particularly online)	Information literacy training for staff already undertaken.	Review impact of training undertaken to date & identify future training options beyond period of POST involvement.
Clarity, objectivity and use of available scientific evidence in PRS reports	Training for staff on summarising skills and science communication already undertaken ; remote mentoring scheme underway.	As above.
2. Knowledge and resource gaps		
Issue identified	Status of activities to address issue	Possible ways forward
MPs' general scientific literacy	Events such as seminars, MP pairing and cafe style networking events already	Production of an overview document on 'science in the new parliament'. <sup>39</sup>

<sup>39</sup> See for example "Science in the New Parliament", POST, May 2010 <http://www.parliament.uk/documents/post/science-in-the-new-parliament.pdf>

	being carried out.	
MP access to external expertise from scientific community in Uganda	MP-scientist pairing scheme has helped MPs form new links with Ugandan scientists.	Find ways to sustain existing activities beyond period of POST involvement.
MPs perceive STI as irrelevant to daily life	As above.	As above.
Availability of information on STI for MPs (addressed below)	Addressed in next section.	
Lack of comprehensive data on quality of evidence used in debate	A limited sample of data has been examined for this study.	POST/UNAS could continue analysis of debates on an ongoing basis.
Science and Technology Committee access to external expertise on STI	MP-scientist pairing scheme has helped MPs form new links with Ugandan scientists.	Committee could consider taking on short term interns with expertise in STI.
STI expertise of staff in Department of Library and Research	Two extra staff recruited since study data collected.  Measures to boost STI expertise of existing staff through fellowship schemes, training courses and seminars already underway.	Review impact of new measures ; pilot internship scheme.
Staff links with Ugandan science and technology community	Activities to enhance links between Ugandan staff and external stakeholders in science and technology with the support of POST/UNAS/INASP already underway.	It may also be useful to identify which institutes have public relations officers who could help staff access information
Availability of STI material in Library	Has not been a central focus of POST programme to date.	Display more hard copies of newsletters, periodicals and other publications.  Set up arrangements with key STI institutions (for example ATPS, ACTS and science academies) to send their reports, and keep updating display  Alternatively investigate

		<p>possibilities for electronic access to such briefings due to limited space.</p> <p>Review staff awareness of what STI resources are available already through library.</p> <p>Investigate demand for audio visual resources.</p>
<b>3. Procedures</b>		
<b>Issue identified</b>	<b>Status of activities to address issue</b>	<b>Possible ways forward</b>
Lack of clarity over coordination of science issues within parliament	Beyond scope of POST programme.	n/a
High turnover of clerks on Science and Technology Committee	Beyond scope of POST programme.	n/a
Frequency of reports produced by Science and Technology Committee	Beyond scope of POST programme.	n/a
Need for more communication of Science and Technology Committee activities to outside world	Not covered by POST programme to date.	Increase range of information available online about activities of Committee.
Need to boost coverage of Science and Technology Committee activities in media	Not covered by POST programme to date.	<p>Forge closer links with key Ugandan Association of Science journalists</p> <p>Make reports available online accompanied by press releases</p>
Need for strengthening Science and Technology Committee links with other committees in Parliament of Uganda	Involvement of committees beyond Science and Technology in MP pairing scheme and other capacity building activities already underway.	
Lack of clear vision for role of Science and Technology	Beyond scope of POST programme.	Seek advice from secretariats of Science and Technology Committees in other parliaments

Committee		on best practice and scope of mandate.
More effective sharing of information on STI within parliament	<p>Parliamentary colleagues to advise on what is already underway.</p> <p>Note there are some limitations on sharing of some information such as PRS reports due to confidentiality.</p> <p>Parliamentary colleagues to advise on scope for activities in this area.</p>	<p>Centralised electronic repository.</p> <p>Investigate demand for online catalogue for Library.</p> <p>Training on establishing repositories.</p>
Staff awareness of Library resources on science and technology	Not covered by POST programme to date.	Review whether all staff are fully aware of what science and technology resources the library have access to.
Duplication of effort – multiple PRS reports on same subject.	Beyond scope of POST programme.	Scope to address this may be limited due to confidentiality ; Parliamentary colleagues to advise on scope for action in this area
Quality control of reports (for example within PRS and the Science and Technology Committee.	Expert review conducted as part of this study (see Appendix A).	Review options for peer review/quality control mechanisms within Department.
MPs expect STI information on shorter timescales than the PRS can accommodate	Information literacy (already underway) will help staff identify information more quickly.	<p>To some extent, beyond scope of this study to address</p> <p>Future commonwealth fellows to learn how the House of Commons Library prepares standard notes (which involve copying and pasting from different sources rather than writing original text, and therefore save time)</p>
Processes for providing information available to MPs	Beyond scope of POST programme.	n/a



prior to debate – order papers		
Processes for providing information available to MPs prior to debate – on science and technology	Not covered by POST programme to date.	Look at UK practice of preparing 'debate packs', possibly during future commonwealth fellowship at POST.

# Appendix A

## Expert review of selected research papers produced by the PRS

### Overview

As part of the baseline study, POST and UNAS conducted an 'expert review' of reports produced by the PRS. This involved asking international experts with expertise in the subject of the paper, science policy (or both). A total of 17 reports on science and technology related subjects were selected, most of which were produced during the 8<sup>th</sup> Parliament. As there were a limited number of reports on science and technology, we also examined a few reports that were prepared prior to that period, so that a range of subject areas could be covered.

Most of the reviewed reports were research reports, prepared for individual MPs attending conferences, but we also reviewed some fact sheets/issue briefs and one programme summary. The reviewers were largely from academia, but a small number had a background in government or parliament, as indicated in the table of reviewers at the end of this chapter.<sup>40</sup> The logistics of finding appropriate reviewers, obtaining their feedback and avoiding a situation where the reports were disseminated to too many different reviewers limited how many reports could be reviewed in total. Reviewers were asked to judge the reports according to the criteria shown in the box below. Most reviewers followed the criteria and gave additional comments.

#### Review criteria for PRS reports

##### Completeness

How comprehensive is the briefing? Does it cover most issues that are relevant to the issue in question? Is any key information missing? Please mark the briefing on a scale of 1 (not at all comprehensive) to 5 (very comprehensive) along with written comments.

##### Accuracy

How technically accurate is the briefing? Are there any obvious technical inaccuracies? If so, please elaborate (written comments and answers on a scale of 1 (very low technical accuracy) to 5 (very high technical accuracy)).

##### Use of evidence

How would you rate this briefing's use of evidence? For example, has the author made it clear where any key information comes from? Have they drawn on appropriate source material? Are there any key sources that have not been used? (Written response and answers on a scale of 1 (very bad use of evidence) to 5 (very good use of evidence)).

##### Objectivity

Please rate this briefing for objectivity/impartiality on a scale of 1 (very partial/biased) to 5 (very objective) plus written comments).

##### Clarity

How easy was this briefing to read, both in terms of language (explanation of any jargon, acronyms, etc) on a scale of 1 (very difficult to understand) to 5 (very easy to understand) and the way it was structured on a scale of 1 (not at all well structured) to 5 (very well structured) plus written comments.

<sup>40</sup> POST and UNAS approached selected reviewers directly rather than recruited them through advertising. The reviewers were asked to sign a confidentiality agreement.

## Summary of Findings

There was a wide variation of standard in the reviewed reports, depending on subject area and author. At one end of the spectrum, many reports received encouraging feedback, and were described as “reading well”, “sounding objective and impartial”, “fairly well structured” and “fairly well referenced”. At the other end of the spectrum a small number of reports seem to fall well below an acceptable standard – they are biased, poorly referenced, badly written and contain factual inaccuracies.

The reviews do not show a clear correlation between the educational background of the author (whether or not they are a scientist) and the quality of the report.

In spite of the wide spread in standards, it is possible to spot some recurring themes and draw some general conclusions about key areas for improvement. These are outlined below. Some key issues for attention are:

- the need to avoid reflecting personal opinions in the reports and to avoid drawing conclusions which are not backed up by evidence;
- the need to make more use of the large body of public information available on many subjects; and
- the need to spot and correct factual inaccuracies.

It should be noted that the PRS is a relatively young section and its achievements to date have been considerable. Many interviewed MPs expressed their appreciation for the PRS, as outlined in [Chapter 4](#). Moreover, preparing reports is only one component of the work PRS staff are involved in, and it takes time to develop a capacity to produce informative reports on such a wide range of issues. Thus, the comments of the reviewers are intended more as guidance on the ‘way forward’ as the PRS moves towards providing a more proactive information service for MPs, rather than as a criticism.

### Completeness

Although a short report, such as those produced by the PRS, can never cover every single aspect of a subject, it should provide enough information for the reader to understand it without having to refer to any other literature. Also, the reader should not be left with gaps in their knowledge of the subject area, which can lead them to form incorrect conclusions. In a number of the briefings, feedback from reviewers indicated that certain pieces of key information were missing, which were necessary for the reader to obtain a complete picture of the situation.

One recurring comment is that **the reports could provide more appropriate background information**. For example in a report on HIV/AIDS and Gender:

“I was expecting to read a short summary on drug treatments for HIV/AIDS – what the drugs are, and how well they work. Anti-retrovirals were mentioned in passing and only in the context of access to healthcare resources.”

In the case of one report on malaria and DDT reviewers felt the report focused heavily on providing theoretical background on concepts such as the precautionary principle, but should instead have provided more background information on technical issues, for example:

“The brief is understandable but there is a lack of technical information (e.g description of indoor residual spraying or IRS) fundamental for the reader to understand the context.”

Reviewers also warned against **assuming too much prior knowledge of the subject area**. For example, in the case of a report on Lake Victoria, a reviewer commented that the brief was “inappropriate for the target readership”, because many technical terms were not explained:

“There are references from the outset to technical and institutional [terms] such as ‘the agreed curve’ (only explained on p6); the International Agreement over the flow of the Nile (with which countries? – surely a matter of key interest to Parliamentarians); the El Nino phenomenon; the accumulated tariff stabilization fund; and so on.”

In a number of reports – particularly those on climate change – reviewers felt that the background sections could steer the reader in the wrong direction. Reviewers found them too long and, in general, thought they focused too much on climate theory, which was peripheral to the subject under discussion. For example, a reviewer of report 5 commented:

“[T]he discussion of climate change (I emphasise the ‘change’) bit spent too much time discussing how we have any climate at all, which could lead a browser to conclude that these drivers (which are out of our hands) are having as much affect on the climate as anthropogenic (man-made) mechanisms.”

Reviewers also felt that in many cases **the reports could be improved by the inclusion of more policy analysis**. For example, a reviewer commented that a report on the electricity crisis could “offer some own independent insights and alternative views on the subject as well as the government plans”.

### Accuracy

**Some reports contained factual inaccuracies.** These were mainly seen with reports relating to climate change and renewable energy. For example, atmospheric pollution was often confused with global warming. Also, ozone was incorrectly called a greenhouse gas in some reports. Some technical errors were also found in reports on malaria and DDT.

The trend seems to be that reports which required in-depth discussion of scientific and technological concepts were more likely to get the facts wrong. This could be addressed by making more use of external reviewers, as well as providing staff with training in key areas such as climate change, where PRS seems to receive a high number of requests.

It would have been helpful for the reports to comment on the reliability and accuracy of the information that they have cited. For example, for a report on HIV/AIDS and gender a reviewer commented:

“There was a lack of reference to the **quality** of the data quoted – the author did not give an idea as to how much confidence parliamentarians should have in facts and figures.”

Authors should also try to check that any data they present in their reports are in agreement with other sources of information in the public domain – or explain any discrepancies. For example, in the case of a report on Lake Victoria’s falling water levels, one reviewer said the data presented contradicted other published data.

“The graph presented as Figure 8, purporting to show actual outflows and those which should have taken place according to the agreed curve, does not correspond well with other published information from the Water Resources Department of DWD (the poster presentation about Falling Water Levels of Lake Victoria, published in October 2005).”

### Evidence base

Some reviewers gave good feedback on the way the reports handled the available evidence. For example for the report on Lake Victoria:

“Overall the briefing makes fairly good use of the available published and grey literature. [. . .] The briefing is clear and transparent about the data sources used, and these are fully referenced”

However, most reviewers said that the reports could be clearer about the source of any key facts, figures or statements. One reviewer commented:

“[I]t is not always clear to see which sources had been used for which point. As a result the list of references at the end does not help the reader.”

Many reviewers felt that **the reports missed out key sources of evidence** – particularly from authoritative international sources. For example with the reports on climate change:

“Use of more evidence from internationally recognised bodies such as the IPCC and the UN Commission on Sustainable Development (CSD) would be welcome.”

In some cases, reviewers felt that authors would have benefited from accessing in-country expertise. There are various obstacles to accessing in-country expertise, discussed in [Section 4.2](#) of the main report.

One reviewer commented on report 2, which was on HIV/AIDS:

“I would expect to see World Health Organisation referenced data in such a briefing, or some other respected authoritative source.”

Note that some reviewers’ comments on use of available evidence did not take into account the date when the reports were produced and therefore had to be disregarded.

One reviewer commented that **use of Wikipedia as a primary source should be avoided**. Wikipedia can be used to obtain an overview of a subject area but it can be unreliable and misleading. However Wikipedia often points to further references which are more reliable.

One reviewer commented that the omission of key evidence (on rainfall data) skewed the conclusions of the briefing on Lake Victoria:

“There is no significant analysis of the contribution which reduced lake basin rainfall may have had to the falling lake levels. This is acknowledged in the briefing (section 4.3.3 (a)), and attributed to the inability of the writer to acquire the necessary data. Since subsequent analyses have suggested that the falling lake levels were probably due to both over-abstraction and reduced rainfall (in more or less equal proportions), this is a very important omission”.

A minority of reports were very poorly referenced:

“This brief seems to be based on a single report produced by a ... lobby group, that has not been peer reviewed...or peer reviewed papers would have provided a more reliable source of information.”

## Objectivity

A number of issues connected with objectivity have been identified. Firstly, there appears to be **a tendency for authors to express their own personal views or opinions in their reports**. For example in a report on Gender and HIV/AIDS:

“There were several statements in the briefing that were highly subjective and seemed to be an expression of the authors’ own opinions. For example: “it is important that men in Uganda change their sexual attitude” “women should become more faithful” “too many [women] are abused by family members”. Other language used was emotive and did not persuade the reader that the author was writing from a neutral perspective.”

In some cases **conclusions are drawn which are not backed up by evidence**. In the case of a report on the Fisheries Development Programme:

“The briefing seemed to comprehensively measure the outcomes of the Fisheries Development Program against its aims. However, points 2, 3 and 4 in the conclusions did not seem to be covered in the main body of the note. Bringing points out in the conclusion that have not been previously mentioned is confusing for the reader – the conclusion should simply sum up the briefing.”

Reviewers also warned against biased interpretation of the available evidence (particularly statistics):

“On the whole, the briefing seemed well-balanced. However, there was some use of statistics that could appear prejudiced towards one conclusion. For example: “Sanitation facilities at fish landing sites are still inadequate with over 67% calling them poor or fair”. This could equally well have been presented as: “Sanitation facilities at fish landing sites are adequate with over 67% calling them good or fair.”

As has already been mentioned, there were one or two reports that stood out from the rest as they were highly subjective and biased.

### Clarity

As with other criteria, there were wide spread comments in regard to clarity. Several reports received positive feedback:

“It did not make assumptions about the readers’ knowledge of the subject and so would be very accessible to lay readers.”

“The briefing was easy to read with clarity in the topics addressed and range of issues to be considered.”

Reviewers have suggested a number of ways to improve clarity of the reports. Firstly there is a recurring theme that **statistics should be presented in a way that is accessible to the reader**. Figures used were often considered too complex and data would have been better presented in simple histograms or pie charts.

One reviewer felt that:

“The **copy and pasting** of large chunks of text (without understanding their content) and the use of poor bridging sentences between these blocks made it difficult to read.”

Copying and pasting from other documents is sometimes useful. For example, it can avoid a situation where the author introduces factual inaccuracies into the report. However, it needs to be done with care: if text is being copied and pasted from other documents, it is good practice to put it in quotation marks and clearly state the source. Another comment was that **jargon should be clearly explained**. For example one reviewer commented:

“On the whole the briefing was quite well written, but there was a tendency to use complicated language when simpler language would be more effective. For example: ‘an emergent group of farmers is venturing in aquaculture as an income-generating activity’ could be written more simply as ‘more farmers are taking up fish-farming for profit’.”

Reviewers recommended that rather than using academic style abstracts, **the reports should make more use of executive summaries which act as a ‘hook’ to interest the reader in reading the document.** They also recommended **breaking up the text with headings and subheadings that accurately described the paragraphs that followed.**

For example one reviewer commented:

“The abstract was too academic-sounding. An executive summary style overview would have been more helpful and would act as a better hook to persuade parliamentarians to read on. [...] It would have been easier for the reader to have headings that were more descriptive of the paragraphs that followed. In some cases they didn’t do justice to the text. Readers skimming through using headings as signposts for sections of interest may miss out because of this.”

Anecdotal reports from MPs researchers in the UK indicate that MPs will spend only a few seconds reading a document before deciding whether to discard it – so they need something to grab their attention straight away.

### List of Reviewers

Name	Background	Number of papers reviewed
Dr Jonathan Wentworth	Environment Adviser, POST	2
Professor Richard Taylor	Expert on water resources and Director of DFID Dewpoint	1
Dr Sarah Bunn	Biological Sciences and Health Adviser, POST	2
Dr Helen Munn	Executive Director, Academy of Medical Sciences	1
Professor Ruth Oniango	Former MP, currently working as agricultural researcher, Kenya.	3
Professor F. Mirembe	Health Researcher, Makerere (more details to be included)	2
Professor Ralph Simms	Senior Analyst in Renewable Energy and Climate Change at	1

	the International Energy Agency, Paris	
Dr Michael O'Brien	Energy Adviser, POST	2
Dr Chandy Nath	Physical Sciences adviser, POST	2
Dr Chris Tyler	Committee Specialist, Science and Technology Committee, House of Commons	1
Chris Jones, POST fellow	MSc in the Biology & Control of Disease Vectors at the London School of Hygiene & Tropical Medicine	1
Peter Border	Biological Sciences and Health Adviser, POST	1
Jo lines	Entomologist London School of Hygiene and Tropical Medicine	1
Dr. Albert Rugumayo	Ministry of Trade and Industry, Uganda	2
Dr Tooraj Jamasb	Senior Research Associate, Clare Hall, University of Cambridge	1



# Appendix B

## Questionnaire sample

There were 121 MP responses to the questionnaire survey, of which 79 (65 per cent) were from men and 42 (35 per cent) from women. The highest proportion of informants were between 40 and 54 years of age: 48 men (60 per cent) and 25 women (60 per cent) were in this age group.

	20–39 years	%	40–54 years	%	55+ years	%	Unknown	%	Total
Male	16	20%	48	61%	15	19%	0	0%	79
Female	9	21%	25	60%	7	17%	1	2%	42
<b>Total</b>	<b>25</b>	<b>21%</b>	<b>73</b>	<b>60%</b>	<b>22</b>	<b>18%</b>	<b>1</b>	<b>1%</b>	<b>121</b>

Figure 1: Respondents to MP survey by age and gender.

The most frequent education level achieved was BA, Diploma or an equivalent qualification. The majority of the respondents were educated to BA level (58 per cent). A greater percentage of men were educated to post-graduate level: 38 per cent of men had obtained a Masters Degree (MA) or equivalent, compared to 26 per cent women.

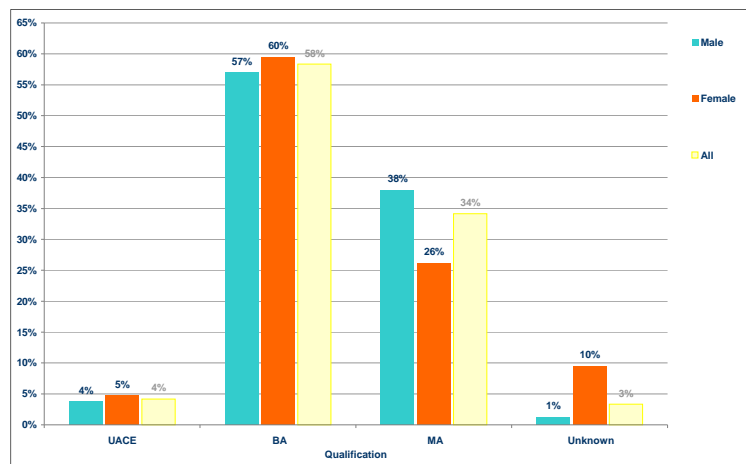


Figure 2: Education levels of MP survey respondents

Over half of the respondents (64, or 53 per cent) had been an MP for 4 years or less. However, this figure was made up largely of men. The greater proportion of men (46, 56 per cent) had been an MP for this length of time. For women, the picture is different. The majority of women (20, 48 per cent) had been an MP for 4 to 10 years.

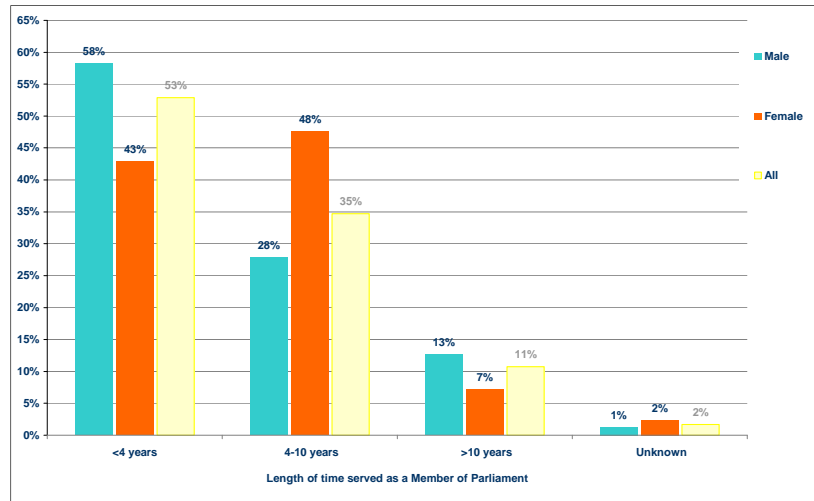


Figure 3: Period of time served as MP by survey respondents

Informants were spread evenly across parliamentary standing committees and parliamentary sessional committees (see the list at the end of this Appendix for full names).<sup>41</sup>

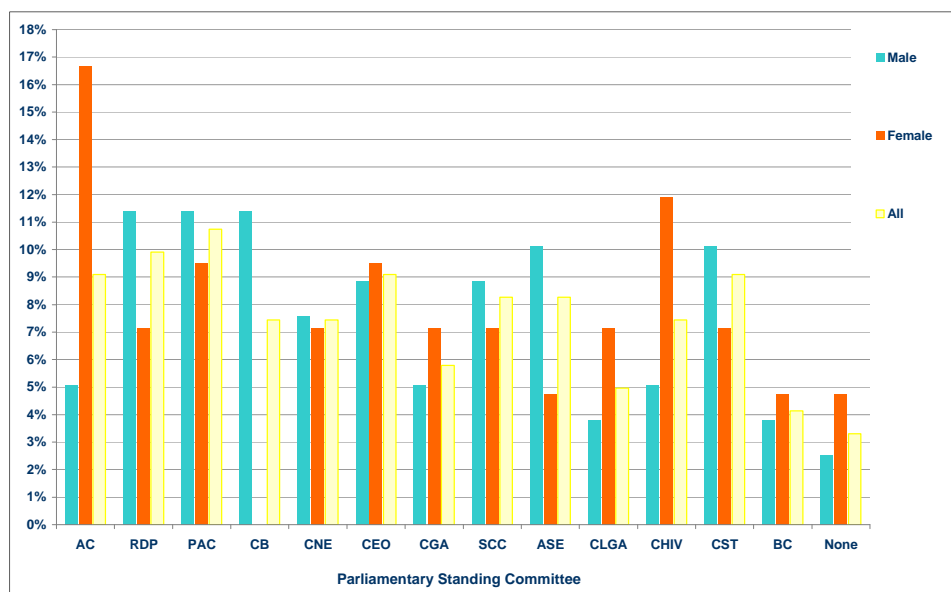


Figure 4: Respondents' membership of standing committees

### Abbreviations for parliamentary standing committees (Figure 4)

- AC            Appointments Committee
- RDP         Rules, Discipline and Privileges
- PAC         Public Accounts Committee
- CB            Committee on Budget

<sup>41</sup> Informants could have membership of one or more committee, although this was not common.

CNE	Committee on the National Economy
CEO	Committee on Equal Opportunities
CGA	Committee on Government Assurances
SCC	Statutory Committee on Commissions
ASE	Authorities and State Enterprises
CLGA	Committee on Local Government Accounts
CHIV	Committee on HIV/AIDS and Related Matters
CST	Committee on Science and Technology
BC	Business Committee

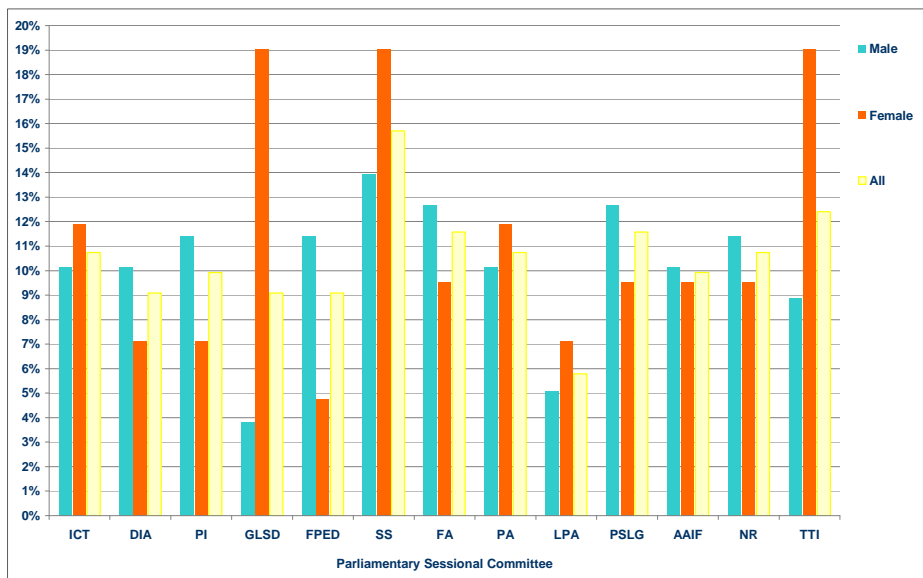


Figure 5: Respondents' membership of sessional committees

**Abbreviations for parliamentary sessional committees (Figure 5)**

ICT	Information and Communication Technology
DIA	Defence and Internal Affairs
PI	Physical Infrastructure
GLSD	Gender, Labour and Social Development
FPED	Finance, Planning and Economic Development
SS	Social Services
FA	Foreign Affairs
PA	Presidential Affairs
LPA	Legal and Parliamentary Affairs

PSLG	Public Service and Local Government
AAIF	Agriculture, Animal Industry and Fisheries
NR	Natural Resources
TTI	Tourism, Trade and Industry