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A Review of Strategic Foresight in International Development

Kate Bingley

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Foreword

This piece of work was commissioned as part of the Department for International Development's (DFID) Accountable Grant to IDS to complement the forward-looking studies conducted under the Tomorrow Today programme.

List of Abbreviations

| | |
|--------|---|
| AFI | African Futures Institute |
| APEC | Asia-Pacific Economic Cooperation |
| CAP | Country Assistance Planning |
| CIRAD | Agricultural Research Centre for International Development |
| CSO | Civil Society Organisation |
| DEFRA | Department for Environment, Food & Rural Affairs |
| DFID | Department for International Development |
| EEA | European Environment Agency |
| EFMN | European Foresight Monitoring Network |
| EPA | Environment Protection Agency (US) |
| EU | European Union |
| FAO | Food and Agriculture Organization |
| FAR | field anomaly relaxation |
| FCO | Foreign & Commonwealth Office |
| GEF | Global Environment Facility |
| GEO | Global Environment Outlook |
| HSC | Horizon Scanning Centre |
| IAASTD | International Assessment of Agricultural Knowledge, Science and Technology for Development |
| IAF | Institute for Alternative Futures |
| ICT | information and communication technology |
| IDS | Institute of Development Studies |
| IEA | Institute of Economic Affairs |
| IFTF | Institute for the Future |
| INRA | National Institute for Agricultural Research |
| IPCC | Intergovernmental Panel on Climate Change |
| ISS | Institute for Security Studies |
| LMICs | low- and middle-income countries |
| MDG | Millennium Development Goal |
| MIoIR | Manchester Institute of Innovation Research |
| MoD | Ministry of Defence |
| NGO | non-governmental organisation |
| NSTDA | National Science and Technology Development Agency |
| OECD | Organisation for Economic Co-operation and Development |
| SID | Society for International Development |
| SOFI | State of the Future Index |
| SOIF | School of International Futures |
| SWAC | Sahel and West Africa Club |
| TFLAC | Technology Foresight Programme for Latin America and the Caribbean |
| UKCDS | UK Collaborative on Development Sciences |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNHCR | United Nations High Commissioner for Refugees |
| UNICEF | United Nations Children's Fund |
| UNIDO | United Nations Industrial Development Organization |
| WHO | World Health Organization |

Executive summary

The purpose of this review is to provide an overview of the published and grey literatures relating to the use of foresight-type approaches and techniques in policy-related work in international development. The review is guided by questions around who has used foresight approaches, the kinds of issues foresight approaches have been used to address, which techniques have been most commonly used, what evidence there is that the results of foresight initiatives have been used and/or have been useful, and the level of resources devoted to foresight exercises. As outlined in the introductory section, the methodology applied to this review included identification of grey and published literature (in English) through a systematic search strategy using Web of Knowledge and Google Scholar, follow-up on articles cited, and interviews with key actors in the field. The author acknowledges limitations of the review exercise, and notably the gap between practice and documentation of practice.

In general terms, foresight is about understanding the future systematically, usually considering a horizon of at least ten years into the future (Kuosa 2011: 9). This review focuses on initiatives that explicitly adopt a foresight/futures approach, applying processes, tools and techniques selected from the foresight toolkit. Foresight thinking and futures analysis can serve a variety of purposes in relation to policy and decision-making, and whilst there is a basic process applicable to any foresight initiative, the approach and tools must be tailored to the project in question. One principal distinction is made between quantitative studies that rely heavily on modelling methods, and qualitative approaches that provide a narrative description of futures issues, paths and uncertainties; in practice, these methods are increasingly used in combination (EEA 2011a). Another principal distinction is made between horizon scanning (aka environment scanning), model-based projections, and broader scenario-planning approaches. One aspect which has particular relevance to international development is the nature of stakeholder participation in the foresight process.

A review of the literature indicates that foresight initiatives have been undertaken around the world by a wide range of international development actors including international intergovernmental organisations, governments in the global North, philanthropic foundations, as well as academia and civil society organisations (CSOs) in the North and South. Examples of foresight initiatives can be found at the national, regional or global level in sectors such as health, agriculture and food, governance, conflict and security, climate change and the environment, technology and innovation. However, documentation on foresight initiatives undertaken in least developed countries is relatively sparse. The level of resources invested in foresight initiatives ranges from minimal cost to US\$24m spent on a large-scale international project such as the Millennium Ecosystem Assessment in 2005.

The OECD Secretariat, EU Commission, United Nations Development Programme (UNDP) and UNESCO all have dedicated futures research units. United Nations (UN) agencies have sponsored many high-profile foresight exercises to explore concerns and problems that transcend national boundaries, such as the Global Environment Outlook (GEO5) and the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). The UN supported an extensive online participatory policymaking foresight exercise in Latin America (Hilbert, Miles and Othmer 2009), and in the early 1990s UNDP provided technical support to 25 national studies of long-term perspectives, such as Burundi Vision 2025. The UK Foresight Programme has in recent years generated a significant number of evidence reviews on thematic areas of relevance to international development, such as food and farming, disasters, migration, and infectious diseases. The UK's Foresight Horizon Scanning Centre has supported horizon scanning activities in a wide range of UK government

departments, including the Department for International Development (DFID). The Rockefeller Foundation has its own horizon scanning programme with partners across Asia, Africa and the Americas, with a view to informing philanthropic decision-making.

There is evidence of scenarios being developed as part of foresight initiatives by international development actors. Scenarios are used in a number of ways – to stimulate the development of new policies, as the basis for a strategic vision, or to review or test a range of plans and policy options. Gordon (2011) classifies scenarios in two ways: those that are developed by organisations and institutions in order to ensure the organisations are fit for purpose (adaptive), and scenarios that serve to influence and shape the future (normative). Section 4 provides examples of ways in which narrative scenarios, both adaptive and normative, have been developed and applied by various development actors on a more modest scale than the large foresight studies associated with intergovernmental organisations. They include examples of DFID's application of scenarios in strategic planning, and broader national scenario processes facilitated by the Society for International Development in East Africa.

Whilst the foresight literature provides plenty of examples of the challenges of embedding foresight studies in policy decision-making, few attempts at external evaluation of futures and foresight work have been identified worldwide, and there is scant literature on evaluation frameworks for foresight initiatives. Different approaches to evaluation include the development of typologies of policy impact (Johnston 2010), and the evaluation of intangible as well as tangible outcomes (Kuosa 2011), including changes in networking and information flows. The literature on the impact of scenarios is interesting in that it tends to focus on transformational processes and changes to individuals' mental models. Evidence of impact is compelling but largely anecdotal. The author of this review suggests in Section 5 that given the complexity of the policy environment and the non-linearity of policymaking processes, it makes sense to focus on assessing the extent to which the level of futures literacy has changed among key stakeholders and decision-makers as a result of the foresight process, by considering indicators at individual, organisational/institutional levels.

The author concludes in Section 6 that the body of evidence on foresight initiatives in international development is highly fragmented. This paper represents the first attempt to review the evidence of the application of foresight approaches and techniques to policy-related work in international development. Futures thinking has not entered mainstream discourse or practice in international development, and literature on foresight in the international humanitarian field is scant. Nevertheless, foresight has an important role to play in international development. Futures thinking could be more effectively integrated into strategy planning cycles of international development institutions across the board; this would require greater futures literacy among international development actors. National-level policy thinktanks in Africa and elsewhere in the developing world have a particular role to play in supporting foresight studies, and promoting methodological adaptation and innovation in their various contexts. There is also a great opportunity to harness rapid advancements in the field of information and communication technology (ICT) for crowd-sourcing and collective intelligence as part of foresight exercises, countering the more traditional top-down, expert-led approaches.

1 Introduction

The purpose of this review is to provide an overview of the published and grey literatures relating to the use of foresight-type approaches and techniques in policy-related work in international development. The review is guided by questions around who has used foresight approaches, the kinds of issues foresight approaches have been used to address, which techniques have been most commonly used, what evidence there is that the results of foresight initiatives have been used and/or have been useful, and the level of resources devoted to foresight exercises.

Foresight is evolving as an independent discipline (Kuosa 2011: 3). In general terms, foresight is about understanding the future systematically, usually considering a horizon of at least ten years into the future (*ibid.*: 9). Whilst there are multiple and contested definitions of foresight, it is the definition provided by Slaughter (1995: 48, in Kuosa 2011) that is adopted for the purposes of this review. Slaughter defines foresight as a process that attempts to broaden the boundaries of perception in four ways: by assessing the implications of present actions and decisions; by detecting and avoiding problems before they occur; by considering the present implications of possible future events; and by envisioning aspects of desired futures.

Loveridge, Keenan and Saritas (2010: 151) describe foresight processes as being method-bound. There is a plethora of tools and techniques, and these are applied, singly or in combination, by foresight practitioners working in different domains. In reality, broader research studies may be future-oriented, but they do not necessarily apply methods associated with the field of foresight (Nisbett, interview 7 May 2014). This paper focuses on initiatives that explicitly adopt a foresight/futures approach, with processes, tools and techniques selected from the foresight toolkit.

For the purposes of this review, international development initiatives are characterised by a common objective, that of reduction of poverty and/or inequality in low- and middle-income countries (LMICs); whilst governments and citizens of the LMICs play a critical role in this development, 'international' development in this context signifies the involvement of one or more actors or institutions with a regional or global remit beyond any one LMIC, such as a government agency, intergovernmental organisation, non-governmental organisation (NGO) or philanthropic foundation. Policy-related work is interpreted as relating broadly to decision-making processes in respect of organisational and institutional policies, strategies and funding priorities.

The methodology applied to this review included identification of grey and published literature (in English) through a systematic search strategy using Web of Knowledge and Google Scholar, follow-up on articles cited, and interviews with key actors in the field. The author acknowledges various limitations of the review exercise, namely that whilst the literature offers a window on to actual practice in terms of application of foresight techniques within international development, it is not comprehensive for a number of reasons: there is likely to be much more in the way of organisational (grey) literature which is not publicly available; the original scoping paper for a given initiative is rarely accessible, and peer-reviewed journal articles may only present a particular aspect of a foresight initiative rather than a holistic and detailed overview; and finally, practitioners who specialise in foresight may not necessarily be resourced or incentivised to write about their work.

In this review, Section 2 provides an overview of the foresight toolkit, the tools, techniques and approaches most commonly associated with foresight. Section 3 presents a broad mapping of the foresight landscape, as relevant to international development. In Section 4, the author shares examples of scenario processes used in a variety of international development contexts. The author then reflects on the evidence of use and impact of foresight initiatives in Section 5, before concluding and suggesting future directions for foresight in international development in Section 6.

2 The Foresight toolkit

Foresight thinking and futures analysis can serve a variety of purposes in relation to policy and decision-making, including the exploratory identification of long-term issues; setting agendas for research, action or investment; building visions and mobilising key actors. Kuosa (2011: 22) outlines the basic process that is broadly applicable to any foresight initiative, from research-type inputs through stages of analysis, interpretation and prospection to production of outputs; though as emphasised by Rhydderch (2013), the selection of approach and tools must be tailored to the project in question. Numerous foresight techniques are available for very different, specific purposes (EEA 2011b: 16). One principal distinction is made between quantitative studies, that rely heavily on modelling methods, and are commonly used in fields of study such as macroeconomics, energy and climate change; and qualitative approaches, that provide a narrative description of futures issues, paths and uncertainties, and that have been applied in many sectors ranging from technology foresight to environment and politics (EEA 2011a: 9). Each approach has its advantages and limitations, and in practice, quantitative modelling and qualitative methods are increasingly used in combination.

Another principal distinction is made between horizon scanning (or environment scanning) approaches, which may involve scanning various sources (including non-traditional literature such as newspapers and blogs) for information on emerging trends; model-based projections that can provide an understanding of causal relationships; and broader scenario-planning approaches.¹ In their course on foresight, Loveridge *et al.* (2010) foreground methods such as Delphi (a large-scale survey tool) and technology road-mapping, in addition to scenarios and horizon-scanning approaches. The international development sector is multi-sectoral, and foresight tools and techniques such as those listed are selected and applied from the general field of foresight. Typically, certain disciplines favour particular approaches according to their epistemological biases.

Valuable sources of information on specific foresight techniques and tools include UK Horizon Scanning Programme Team's Futures Toolkit (Cabinet Office and Government Office for Science 2014), and the Futures Research Methodology compendium produced by the Millennium Project,² the latest edition comprising 39 chapters with detailed information on a wide range of foresight methods (Glenn and Gordon n.d.). Both sources detail techniques and tools most commonly associated with the general field of foresight. Loveridge and Cox (2013), of the Manchester Institute of Innovation Research (MIoIR), have produced a guide entitled *Innovation for Development: Knowledge and Research Application to Address International Development Goals – A Toolkit*. Published by UNESCO, it is intended for use by planners, policymakers, decision-makers and other relevant bodies in government, NGOs and the private sector. The notion of 'toolkit' is slightly misleading, as the publication does not focus on methods or tools; however, it recognises technology and innovation as a major force on human development and vice versa, and does provide readers with a good introduction to technology foresight more broadly.

Foresight methods are evolving, and being adapted to different contexts. The Millennium Project has developed various tools, including the Real-Time Delphi (an adaptation of the

¹ The authors note that technical models used to *predict* the future are increasingly viewed with scepticism, because of the data and assumptions employed and the opacity of the calculations undertaken (EEA 2011a: 7). Whilst forecasting is still an important element of foresight, its limitations are recognised in relation to complex social and human issues, and the high levels of uncertainty associated with long-term futures.

² The Millennium Project, funded by the UN University, UNDP, UNESCO and the US Environment Protection Agency (EPA), describes itself as an independent, non-profit, global participatory futures research thinktank that connects futurists, scholars, business planners and policymakers around the world to explore prospects for humanity as a whole.

Delphi which originated in Japan), and the State of the Future Index (SOFI). The SOFI is a quantitative time series that indicates the changing state of the future and shows whether conditions promise to get better or worse. The Millennium Project regularly publishes global and regional studies such as the *2013–14 State of the Future*, a global report based on the SOFI, a Real-Time Delphi to collect expert judgements, and a trend impact analysis (Glenn, Gordon and Florescu 2014). National-level *State of the Future* reports have also been produced, but the SOFI is currently only applied in a selection of developed countries. Martin (2011: 1), in his case study on Australian overseas development programming in Timor-Leste, argues for the applicability of utilising the SOFI to forecast the future of small developing nations across a range of areas 'that are considered important determinants of the type of future a developing country is likely to experience'. In a collaboration initiated by a member of the Central European Node of the Millennium Project, Nováček *et al.* (2007) propose a new tool, the Quality of Life and Sustainability Index, for use by government agencies and development NGOs to support the formulation of future-oriented development in Haiti, the poorest country in the Western hemisphere.

In terms of overall approach, one aspect of foresight initiatives which has particular relevance to international development is the nature of stakeholder participation in the process. In their catalogue of environmental scenarios, the European Environment Agency (EEA 2011a) makes a useful distinction between initiatives that are analytic (defined as desk-based research and analysis by an individual or a group) and those that are participative. In the broader literature, the rationale for participatory processes varies widely, and is often implicit rather than explicit. Many government foresight units recognise the importance of involving key policy stakeholders in the foresight initiative from the start, in order to inform the process and findings, and to secure buy-in and enhance the likelihood of the findings ultimately informing decision-making; this mirrors practice in research uptake more broadly. Havas, Schartinger and Weber (2010) describe some of the process benefits associated with developing context-specific scenarios. However, in describing processes as 'participative', documentation of foresight initiatives often fails to distinguish between expert participation and ordinary citizen participation; this likely reflects implicit assumptions regarding how policy change is achieved,³ and also regarding whose voices count in the policymaking process. A separate strand of the foresight literature does, however, focus on the opportunities for anticipatory democracy (see, for example, Bezold 2010), and ways in which network-based, participatory foresight efforts, enabled by innovations in information and communication technology (ICT), can and should be harnessed to make futures thinking a popular process, and to allow futures thinking 'to reflect the needs of the vast majority of people, rather than the interests of the few' (Ramos, Mansfield and Priday 2012: 86).

³ See Stachowiak (2007) on the theories around policy change, notably power elites theory versus community organising theory.

3 Mapping the Foresight landscape

3.1 A global overview

A review of the literature indicates that foresight initiatives have been undertaken around the world by a wide range of international development actors including international intergovernmental organisations (multilateral agencies), governments in the global North (or bilateral agencies), philanthropic foundations, as well as academia (universities, research institutes, policy thinktanks) and NGOs/CSOs in the North and South. Examples of foresight initiatives can be found at the national, regional or global level in sectors such as health, agriculture and food, governance, conflict and security, climate change and the environment, technology and innovation. However, documentation on foresight initiatives undertaken in least developed countries is relatively sparse. The level of resources invested in foresight initiatives varies enormously, from a modest local exercise conducted involving a few staff members at minimal cost, to a large-scale international project costing US\$24 million (the total cost of the Millennium Ecosystem Assessment in 2005) at the upper end of the scale.⁴

There are varying degrees of foresight activity in different regions. In Latin America and the Caribbean, the United Nations Industrial Development Organization (UNIDO) has played a pivotal role in the development of a foresight culture (Popper and Medina 2008: 259). UNIDO's Technology Foresight Programme for Latin America and the Caribbean (TFLAC) was launched in 1999; this led Argentina, Brazil, Colombia, Mexico, Uruguay and Venezuela to initiate preparatory activities for setting up national programmes, but only some of these countries managed to institutionalise a technology foresight programme (*ibid.*). According to the most recent mapping exercise undertaken by the European Foresight Monitoring Network (EFMN), foresight initiatives in Latin America tend to be national in scope and feed into national policymaking processes, but they are more often sponsored by non-state actors such as international organisations or NGOs than by their own government (EFMN 2009: 36).

The main focus of the EFMN mapping exercise is on technology foresight, as reflected by the choice of research categories. No information is presented around the cost of the initiatives mapped by the EFMN, but it is assumed that in general they represent the larger-scale foresight activities. Africa is excluded from the data altogether; the authors acknowledge that Africa remains underrepresented in the report, and attribute this in part to the fact that foresight is commonly understood as technology foresight, and 'Africa's roles in technological innovation remain rather limited (and perhaps in some respects invisible)', and that work undertaken by forecasters, modellers or scenario-builders in other topics unrelated to technology are not properly represented (EFMN 2009: Foreword). In the same vein, the Global Foresight Outlook 2007 data indicates that only 11 of 846 initiatives mapped globally are African; in comparing foresight 'style' in six world regions, Keenan and Popper (2008: 34) note that 'the data for Oceania and Africa have been deemed inadequate for inclusion in our analysis'. It is clear then that African foresight initiatives are largely excluded from these global mapping exercises.

Under the umbrella of Asia-Pacific Economic Cooperation (APEC), a Center for Technology Foresight was established under the aegis of the Thai National Science and Technology Development Agency (NSTDA). This Center has conducted a number of multi-economy

⁴ Loveridge *et al.* (2010: 150) comment on a 'growing number of foresight exercises being carried out around the world'. They note, however, that much of the more recent growth in foresight activity is outside the traditional large-scale programmes, and observe a growing interest in organisational, sectoral and regional foresight, much of which is more modest in scope and scale.

foresight projects, including on mega-cities, water supply and management, smart transport, education and nanotechnology, and is developing networks across the highly disparate APEC countries (Johnston 2002).

3.2 International institutional programmes

The OECD Secretariat and the EU Commission created dedicated futures research units in the late 1980s, and UNDP and UNESCO followed suit in the early 1990s (Sagasti 2004). The OECD's International Futures Programme promotes forums, projects and networks. A cursory analysis of OECD's recent foresight studies indicates that their primary policy focus is on OECD member countries, although one recent foresight study of the 'bioeconomy to 2030' explicitly states the relevance of its findings to developing countries (OECD 2009). The Sahel and West Africa Club (SWAC), a member of the OECD Development Cluster, is a group of West African regional organisations, countries and international organisations that exchange experiences and perspectives to help build more effective regional policies. The SWAC Secretariat plays a role in foresight, by providing independent and forward-looking analysis which aims to enrich the debate and better inform decision-makers about future challenges.

In 1992, UNDP set up the African Futures project to support African countries to undertake forward-looking studies and develop a long-term vision of their development. Between 1992 and 1995, the African Futures project provided technical support to the planning and implementation of 25 national studies of long-term perspectives, processes which mobilised development actors in Africa and led them to reflect on visions and alternative strategies for the future; one example of such a process is Burundi Vision 2025. Publications of the African Futures project include a set of four scenarios for Africa in the year 2025 (Sall and Mbeki 2003). In early 2004, UNDP established the African Futures Institute (AFI) in order to harness the gains made under the African Futures project, and to sustain futures analysis in the region. Registered in South Africa, the AFI positions itself as a pan-African organisation, with a vision to facilitate Africa's formulation of its own path to development, developing its own methods and approaches.

UNESCO's Foresight Programme is located in its Bureau of Strategic Planning, and it convenes a futures forum, as well as organising lectures and seminars. The stated purpose of the programme is to sensitise members of the global UNESCO Secretariat as well as member states to future trends in education, the natural sciences, the social and human sciences, culture and information and communication, and to support member states in developing their own capacities and approaches in the field of foresight. In May 2014, a three-day forum was organised by UNESCO's Imagining Africa's Futures project, in collaboration with the University of the Witwatersrand, Johannesburg, and the Southern African Node of the Millennium Project. This symposium, 'All Africa Futures Forum: Transforming Africa's Future', brought together African futures thinkers and practitioners with the aim of exploring 'how the "discipline of anticipation" has been shaped and applied in Africa and how it can be deliberately leveraged towards transforming Africa's future onto more positive trajectories.'⁵ One of the stated objectives was to enable the establishment of an African Network of Foresight Practitioners.

Hilbert *et al.* (2009) describe an initiative supported by the UN that they believe to be the 'most extensive online participatory policy-making foresight exercise in the history of intergovernmental processes in the developing world to date'. The process comprised a five-round Delphi exercise, and secured 1,454 contributions, which were then fed into intergovernmental decision-making as part of the Regional Action Plan for the Information Society in Latin America and the Caribbean (eLAC2010). The authors highlight the

⁵ <http://en.unesco.org/events/all-africa-futures-forum-transforming-africa%E2%80%99s-future> (accessed 1 August 2014).

governments' acknowledgement of the value of *collective intelligence* from civil society, academic and private sector participants of the Delphi and the ensuing appreciation of participative policymaking; they also propose that the process demonstrates the role that can be played by the UN (and other intergovernmental agencies) in international participatory policymaking in the digital age, especially if they modernise the way they assist member countries in developing public policy agendas. On the basis of the eLAC experience, Hilbert *et al. (ibid.)* advocate the potential of online foresight tools to facilitate participation in resource-scarce developing countries.

UN agencies have sponsored many high-profile foresight exercises to explore concerns and problems that transcend national boundaries, and thus are relevant to international development. Examples of international assessments are shown in Table 3.1.

Table 3.1 Examples of international assessments outlining scenarios for the future

| International assessment | Year report published | Qualitative/quantitative scenarios | Policy focus |
|---------------------------------|------------------------------|---|--|
| Global Environment Outlook GEO4 | 2012 | The qualitative narratives are central, whilst the nine quantitative analytical tools play a supporting role | Broad policy goals include alleviating poverty |
| Millennium Ecosystem Assessment | 2005 | Qualitative (narratives produced by expert judgements) and quantitative (using computer modelling to produce quantitative indicators) | Broad policy goals include protection of human wellbeing |

Source: EEA (2011a) and Millennium Ecosystem Assessment (2005).

The latest Global Environment Outlook, GEO-5 (UNEP 2012: 489), builds on previous GEO reports and continues to provide an analysis of the state, trends and outlook of the global environment. It differs from previous GEO reports in its emphasis on internationally agreed goals (such as the Millennium Development Goals (MDGs) and those of various multilateral environmental agreements) and in providing possible means of accelerating achievement of those goals. The Millennium Ecosystem Assessment presents a range of mixed method scenarios for how the quantity and quality of ecosystem goods and services may change in coming decades.

UN agencies are also among the sponsors of the Global Energy Assessment 2012, which adopts futures horizons of 2020, 2050 and 2100 (GEA 2012). The final report includes a chapter dedicated to consideration of energy in relation to poverty and development. Central to the integrated analysis of the energy system is a scenario exercise exploring some 40 pathways that satisfy simultaneously the aspirational social and environmental goals articulated by the GEA (*ibid.*: Preface); one of the four stated goals is that of universal access to modern energy services by 2030.

The Intergovernmental Panel on Climate Change (IPCC) was established to address global warming; the assessment comprises construction of a range of scenarios of the effects of various factors related to global warming and their consequences. In 2013 and 2014, the IPCC released three components of its Fifth Assessment Report; full reports are due to be released by October 2014.

3.3 The UK Foresight programme

The UK Foresight programme was established in 1994 to embed a futures approach in strategic policymaking in government. It is considered a relatively mature programme in the European context, together with Sweden and the Netherlands (EEA 2011b). With a budget of £2 million per year (Parke, interview 7 November 2013), the UK Foresight programme conducts major two-year studies, with the primary purpose of informing UK policy, although increasingly the studies are global in nature. The major UK foresight studies follow a standard process, selecting foresight techniques from a basic menu, to generate a body of evidence on the topic in question (through the commissioning of evidence papers); a final synthesis is also produced with key messages but no recommendations. These studies are essentially expert-led, reflecting the ‘less egalitarian/participative tradition to policy making’ observed in the institutional arrangements of the UK (EEA 2011b: 49).⁶ There is, however, broader engagement with stakeholders, and especially decision-makers, from an early stage in the process in order to secure their buy-in and to facilitate effective uptake of the findings. Table 3.2 outlines the main projects of the UK Foresight programme that intersect with international development.⁷

Table 3.2 Projects of the UK Foresight programme with relevance to international development

| Project | Collaboration | Papers commissioned |
|---|---|--|
| Reducing Risks of Future Disasters (2010–12) | Expert group involved representatives from NGOs, academia and the private sector | 14 papers |
| Global Food and Farming Futures ⁸ (2009–11) | Politically co-sponsored by DFID and DEFRA. Follow-up actions ⁹ identified for UN, OECD, Oxfam, Gates Foundation and World Economic Forum | >100 evidence papers |
| Migration and Global Environmental Change (2009–11) | Partners included UNHCR, UNICEF and DFID Involved 350 experts and stakeholders, across 30 countries. Workshops in Ghana and India | 70 papers and other reviews |
| Detection and Identification of Infectious Diseases in UK and Africa (2004–6) | Collaboration with African Union Process involved >300 leading experts and stakeholders from nearly 30 countries (including 20 African countries), as well as many international organisations | >60 science reviews, papers and case studies |

Against the backdrop of these large-scale studies, the UK’s Foresight Horizon Scanning Centre (HSC) was created in 2005 to tackle narrow policy questions often at the request of a particular department. Horizon scanning occurs in a wide range of UK government departments, including DFID, even if it does not feature among those listed in the review of

⁶ This contrasts with Finland, Sweden and the Netherlands, where political tradition is more participatory (EEA 2011b: 53).

⁷ In addition to the studies outlined in Table 3.2, two seminal studies were conducted on food and coastal defence, and obesity, but these were not undertaken with international development goals in mind, and whilst they may have had global resonance, no evidence regarding their impact on developing countries was available to the author.

⁸ This project cost £2 million, exclusive of a team of four or five full-time staff (Nisbett, interview 7 May 2014). Other significant futures studies on food and agriculture include IAASTD (2009), which was launched as an intergovernmental process under the co-sponsorship of the FAO, GEF, UNDP, UNEP, UNESCO, the World Bank and WHO; and the Agrimonde project (CIRAD and INRA 2009) which explores possible futures of the world’s agricultural and food systems up to 2050, and seeks to identify the fundamental challenges that agricultural research will have to face. De Haen and Réquillart (2014) outline suggestions for foresight work in the area of sustainable production and consumption.

⁹ Source: Foresight (2011).

cross-government horizon scanning led by Jon Day (Cabinet Office 2013: Annex E); the paper argues that ‘Horizon scanning needs to be embedded into the Civil Service mindset as a useful tool in decision-making. [...] Horizon scanning should be seen as complementary to current analysis and policy thinking, not as an isolated discipline.’ Horizon scanning, deemed ‘the foundation of foresight’ by Loveridge *et al.* (2010), has a distinctive role to play in the realm of international development, notably to support identification of key issues and challenges of the future, as in the case of a scanning exercise commissioned by UK Collaborative on Development Sciences (UKCDS) on behalf of DFID in 2010, based on interviews with leading international development thinkers (see Rhydderch 2010).

3.4 The Rockefeller Foundation

The Rockefeller Foundation has established the Searchlight function, a programme of horizon scanning with a view to informing philanthropic decision-making. The Rockefeller Foundation works with 12 partners which conduct regular regionally-focused scans across Asia, Africa and the Americas; partners include a range of research institutes, policy thinktanks, and market research companies, which are involved in data collection, analysis and dissemination. According to Juech and Michelsen (2012), the development and philanthropic sectors have generally been slow to adopt foresight practices, lagging behind businesses and government, and the Searchlight function represents the first systematic trend monitoring effort in the philanthropic and broader social sector. The Searchlight function ‘demonstrates how the practice of anticipating and tracking trends and envisioning different alternatives for how global issues might evolve can be harnessed to shape the future of human development and to improve the lives of poor and vulnerable populations’ (*ibid.*: 439). One of the organisations collaborating with the Rockefeller Foundation is the Institute for Alternative Futures (IAF), a US-based consultancy. In 2009, the IAF convened a workshop of leading foresight experts in Bellagio. The workshop report (Bezold *et al.* 2009) highlights the rationale and practice of *pro-poor foresight* – a term coined to mean foresight as applied for the purposes of human development – in accelerating and enhancing ‘smart globalisation’ and in gaining a better understanding of foresight in relation to a set of key issues that are relevant to the global South.

The Institute for the Future (IFF) also played a major role in Rockefeller’s Catalysts for Change, a project based on the premise that collaboration on a global scale can yield unique insights into ways to create a more prosperous, equitable future. The project sought to augment the diverse scans of the horizon of poverty and social change by professional foresight experts by integrating bottom-up crowd-sourced ideas for innovation, using a proper visualisation tool as a common language and framework (Vian *et al.* 2012: 451). To this end, they convened a three-day global collaborative foresight game which engaged with 1,600-plus people in more than 79 countries. As Vian *et al.* (*ibid.*: 466) observe, ‘Foresight and forecasting practices have their modern roots in elite institutions that often look at the future “from the outside in”. But in a world of high connectivity and increasing transparency of information, the capacity for participatory foresight practices “from within” has already changed the landscape of analysis and guidance of our complex global systems. The Catalysts for Change project joins the growing number of efforts to build a much broader base of foresight literacy as a core competency for our global society’. This example points to the potential for online tools to reach large numbers of people at global and local levels as part of crowd-sourcing or collective intelligence efforts in foresight processes.

4 Scenarios

Wright, Cairns and Bradfield (2013: 561), in a journal issue which provides insights into the state-of-the-art in scenario methodology, define scenario techniques and methods as ranging from quantitative modelling approaches to qualitative narrative methods, and mixed methods that encapsulate both. For example, the Institute for Security Studies (ISS), a thinktank in South Africa, uses the International Futures (IFs) forecasting system to generate quantitative scenarios such as those presented in *African Futures 2050* (Cilliers, Hughes and Moyer 2011).¹⁰ A range of quantitative and qualitative and mixed method scenarios can be found in those generated as part of large foresight exercises such as the international assessments sponsored by intergovernmental organisations, and those documented in the EEA's catalogue of scenarios in the environmental field (EEA 2011a). The Foresight HSC (2009) states that scenario planning is for medium- to long-term strategic analysis and planning; it describes scenarios as *narratives* set in the future. Scenarios offer examples of possible futures, which are then used to explore how the world would change if certain trends were to strengthen or diminish, or various events were to occur. These scenarios can be used to review or test a range of plans and policy options; to stimulate the development of new policies, or as the basis for a strategic vision; and as a means of identifying 'early warning' indicators that signal a shift towards a certain kind of future.

There are a significant number of scenario sets in the public domain that relate to policy questions relevant to international development;¹¹ however, they are not always accompanied by background information on the scoping of the exercise. Gordon (2011) classifies scenarios as either adaptive or normative. Adaptive (or future-aligning) scenarios are developed by organisations and institutions in order to ensure they are fit for purpose; this includes the use of scenarios as part of organisational strategic planning exercises, as well as country or regional-level long-term development planning and visioning. By contrast, normative (future-influencing) scenarios, also known as visionary scenarios, make an intervention in order to change the course of events acting on it, that is, to influence and shape the future. The examples that follow in this section tend to make use of narratives, developed as part of foresight initiatives conducted on a more modest scale as compared to the large foresight studies associated with intergovernmental organisations.

4.1 Adaptive scenarios

4.1.1 DFID

There are examples of adaptive scenario use in bilateral agencies such as DFID as well as INGOs. According to Foresight HSC's Scenario Planning Guidance Note (2009: 5), 'DFID, the FCO [Foreign & Commonwealth Office] and the cross-departmental Stabilisation Unit have undertaken country and region-focused scenario planning to inform strategy and programmes, and to improve coordination.' MacDonald facilitated scenario processes for DFID in Sudan, Iraq and Kosovo between 2002 and 2007 (interview, 7 April 2014). The Sudan scenario-building exercise was a collaboration between DFID, the FCO and the Ministry of Defence (MoD); it was well resourced, and it comprised a research phase, involving three or four researchers, as well as three days in Khartoum. The Iraq scenarios of 2007 were 'more typical' in resourcing terms; there was a research phase, and a workshop

¹⁰ This report is a comprehensive look at expectations for human development, economic growth, and sociopolitical change in Africa over the next four decades. The ISS positions itself as a thinktank that produces policy-relevant research, and acknowledges funds from various bilateral governments, including Denmark, Finland, Germany, Netherlands, Norway, Spain, Sweden and Switzerland.

¹¹ As just one example, the South African government regularly produce scenarios (MacDonald, interview 7 April 2014).

convened with UK government/DFID staff based in London. The Kosovo scenarios were done hurriedly and on a much smaller scale, with very little research input (*ibid.*). Scenarios have also been used by DFID Yemen and DFID Nepal to develop contingency plans (Foresight HSC 2009: 14–18).

DFID's 2008 draft guidance on country and regional planning states that scenario planning should be included as part of the Country Assistance Planning (CAP) process, and that a brief explanation be included of how the different scenarios have informed the programming choices proposed. There is no evidence available on the extent to which these guidelines have been followed in practice. However, Foresight HSC (2009) provides two case study examples demonstrating ways in which scenario planning has been incorporated by DFID into planning exercises. The first example is DFID Bangladesh, which developed scenarios to 2020 to inform their new CAP. The two-month process was facilitated by external consultants; data were collected and analysed from internal and external sources, interviews were conducted with external experts on Bangladesh, and a two-day workshop was held. The exercise cost £75,000 and was considered expensive because they didn't source expertise from within Bangladesh. The final report was made public. The second example is DFID Nicaragua, which led a scenario planning exercise as part of their exit strategy, as a way to help the wider international donor community examine their policy engagement in the country. The three-month exercise involved international donors, representatives of NGOs and civil society, the private sector and academia; Nicaraguan experts were involved in the analysis. Follow-up to the exercise was anticipated, with the USA and Denmark likely to lead in taking the outputs of the exercise into donor policy planning.

There are other examples of scenario sets that have been commissioned by DFID, presumably to inform thematic priority-setting, such as Ballantyne, Curry and Sumner (2011)¹² on the impacts of the financial crisis, and Pickens, Porteous and Rotman (2009) on scenarios for branchless banking; limited information is available on the process for these studies, and as such it is assumed that they were conducted as academic, desk-based studies. The Outsights (2004) project presents scenarios for the very poorest from 2030, based on the assumption that growth and development towards the 2015 MDGs will exclude the poorest; Outsights commissioned research papers, conducted 30 interviews with stakeholders from government, multilateral agencies, business, NGOs, the media, academia, and included 40 participants (from ten countries) in workshops.

4.1.2 INGOs

MacDonald (2004) outlines his approach to using scenarios with CARE International UK and CARE in the Sudan to clarify their role and objectives, as part of organisational strategic planning and reorientation. With CARE International UK, he facilitated a three-day workshop, which included people from other NGOs, government, and the media; journalists were included for their 'ability to grasp the bigger picture'. Scenarios were developed to 2023, against which they then assessed their strategic options. MacDonald notes also that planning has to shift from linear thinking to a creative and flexible response that is able to anticipate change early and respond. MacDonald concludes that whereas scenario analysis has been widely used by the private sector since the 1970s, the 'use of scenarios in development NGOs is still in its infancy and there is much still to learn' (2004: 119). Ramalingham (2012) argues that development and humanitarian agencies need to be agile in their response, and that this fits closely with the resilience¹³ agenda. Scenarios, as a tool in the strategic planning toolkit, should therefore become a core part of business as usual.

¹² The authors' methodological note indicates their use of field anomaly relaxation (FAR), a version of the morphological scenarios approach.

¹³ DFID's working definition of 'resilience' is: 'Resilience is the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses, while continuing to develop and without compromising their long-term prospects.'

Literature on the application of foresight in the humanitarian sector is surprisingly scarce. *Humanitarian Horizons: A Practitioners' Guide to the Future* (Humanitarian Futures Programme 2009), a project undertaken jointly by the Feinstein International Center of Tufts University and the Humanitarian Futures Programme of King's College, London, is targeted at humanitarian agencies; the publication presents trends and projections based on reports by leading thinkers in the areas of climate change, globalisation, demographics and changes in the humanitarian system. The authors advocate the need for humanitarian agencies to be forward-thinking and to manage risk more proactively, rather than being risk averse.

4.1.3 National planning exercises

Many African countries have national planning commissions, and have used scenario building as part of processes to develop long-term strategies; examples include South Africa's Vision 2025, Kenya Vision 2030, and Namibia's Vision 2030.¹⁴ These initiatives reflect the broad consensus in Africa in the early 1990s that African nations needed to set their own agendas and anchor them in long-term visions driven by African interests and demands, not the outside interests that had long controlled the flow of overseas development assistance (Martin-Breen 2014). According to Professor Alioune Sall, Director of the African Futures Institute, they have been keen to ensure that foresight exercises are conducted as much as possible in a participatory manner, in order to facilitate citizen participation in reflecting on and answering core questions such as: 'Where do we want to get to as nations?' (Ibrahim 2013). He goes on to say that 'Where our calls [for support] have been heeded, countries have been able to avoid the pitfalls of foresight exercises turning out to be another closed exercise led by technocrats talking to other technocrats; they have seized these as an opportunity to open and sustain a conversation on the past, the present and the future of the nation.' Arguably, this kind of scenario exercise starts to converge with the normative or visionary type described below.

4.2 Normative scenarios

Andreescu *et al.* (2013) suggest that normative foresight exercises result in scenario development in which there is a greater concern with the basic values and procedural arrangements governing the future world depicted in the scenario, and thus construction of normative narratives in a participative approach predictably results in deliberations around democracy. This is highly relevant in the example of scenario processes in East Africa facilitated by the Society for International Development (SID), an international non-governmental network of individual and institutional members across 125 countries. SID was instrumental in initiating processes for the development of national scenarios in Kenya, Tanzania and Uganda, and also at the regional level, with facilitation support from scenario expert Barbara Heinzen, but the processes were designed to maximise ownership at local and national level. Heinzen (2004) labels these scenarios as public interest scenarios, concerned with developing skills and opportunities for public dialogue, facing uncertainty through collaborative learning processes, and developing capacity for political agreement.

According to Harcourt and Muliro (2004: 2), 'SID's own interest in exploring scenario exercises in Eastern Africa in the mid-1990s was driven largely by the fact that far-reaching structural adjustments were being undertaken in various countries with seemingly scant concern for long-term impacts and the choices that some of these adjustments would inevitably foster. The absence of broad-based dialogue on these key issues was one indicator (...)' The South African scenarios (such as the renowned Mont Fleur scenarios)¹⁵ also provided inspiration (Muliro, interview 7 April 2014). Whilst the special issue of the *Development* journal (Harcourt, Heinzen and Muliro 2004) does not provide a detailed

¹⁴ As mentioned in Section 3, some of these planning and visioning exercises have been developed with support from UNDP and more recently the Institute for Alternative Futures (IAF) on foresight concepts and methodology.

¹⁵ Further discussion and analysis of the Mont Fleur scenarios process can be found in Kahane (1992) and Gillespie (2004).

overview of the specific tools used as part of the scenario-building exercises, the articles do provide information on aspects of the process, and especially the public engagement dimension. The East Africa scenarios were not the first in the region, but their innovation was the active involvement of a wide cross-section of interests and stakeholders, through an ambitious public dissemination component. In all three countries, there were elements such as extreme political divide, political stalemate, lack of democracy, and the scenarios served as an exercise in national dialogue.

The Kenya scenarios were a conscious attempt at participative policymaking, in an effort to provide an alternative to undemocratic governance in Kenya. The exercise conducted from 1998–2000 comprised a research component, with a small grant from the British Council; five workshops convened every four to eight weeks; and an extensive dissemination process. SID partnered with the Kenyan policy thinktank Institute of Economic Affairs (IEA) to support organisation of the events held in Kenya. USAID was the main donor of the process, with a grant of US\$200,000 to SID. The one-year dissemination process, which focused on use of the scenarios to catalyse dialogue, comprised two phases (Maina and Sivi 2004): the first targeted opinion leaders in the public sector, private sector and civil society; the second phase targeted the general public. The second phase was carried out through partnering with credible and respected community organisations; core roadshow activities included a series of participatory theatre workshops and presentations, as well as distribution of a research compendium (with the broad facts, data and arguments behind the scenarios, and what was driving the trends) and a 48-page booklet which laid out the four scenarios in story form. The scenarios were met with enthusiasm: ‘People wanted to listen, wanted to share their stories. Only in one place they were chased away by agents of the state. In other places they were sent to break up the meeting but ended up staying’ (Muliro, interview 7 April 2014).

5 Impact

Until recently, remarkably few attempts at evaluation of futures and foresight work have been identified worldwide (Slaughter 2009: 16; EEA 2011a; Havas *et al.* 2010: 97), and there is scant literature on evaluation frameworks for foresight initiatives. There is a general reliance on self-evaluation; governmental foresight activities have generally been evaluated by the direct facilitators, such as the agencies responsible for commissioning the studies, or foresight practitioners (Milojević 2013). Whilst the UK Government Office for Science commissioned an external review of its entire foresight programme (Georghiou *et al.* 2006), the UK Foresight programme's project evaluation mechanisms are largely internal, conducted by members of the project team: one-year reviews are routinely undertaken to assess how the UK Foresight programme's major foresight studies have been taken forward, based on interviews with actors who were identified in the action plan; a mid-term review is also conducted for a sample of projects three to five years after the launch of the final synthesis report. Parke (interview, 7 November 2013) observes that evidence of impact is very variable for the different studies: 'Some projects have currency in the policy world for a long time, others for a very short time; some are still being picked up by the research community three to five years on, if no longer in the policy community. In some cases, we continue to work with policy stakeholders in different guises, even ten years after the project [has officially ended].' The foresight study on infectious diseases, which involved collaboration with the African Union (AU), is believed to have contributed in concrete terms to the AU's development of a ten-year framework on managing risk of infectious diseases, and the creation of the Southern African Centre for Infectious Diseases.

The foresight literature provides plenty of examples of the challenges of embedding foresight studies in policy decision-making; Sagasti (2004: 1) notes the oft-observed challenge of linking 'future-oriented exercises to the messiness and immediacy of political events and decision-making', and in this respect foresight shares many common challenges with research more generally: it is difficult for policymakers to make the time; policymakers may not own the process; foresight studies generally consider the long-term future horizon, and this may be incompatible with short-term political thinking; and the implications of a foresight study may be unclear (Rhydderch 2013). Schultz (2006: 11) notes that horizon scanning's design criteria do not augur well for its quick uptake and widespread dissemination in any evidence-based decision environment; for whilst research is expected to be authoritative, a horizon scan is necessarily associated with uncertainty.

Johnston (2010) notes that members of the International Foresight Professionals' Network¹⁶ are under pressure to demonstrate the value of investments in foresight in consequent policy and planning; Johnston synthesises the literature regarding the various functions of foresight in policymaking, and the discussion paper is a preliminary effort to develop a foresight impact schema, in which he outlines five typologies of policy impact: awareness-raising, informing, enabling, influencing and directing policy. Whilst these represent a useful contribution to the impact debate, there are also other important considerations, namely the importance of evaluating impact of the process as well as any product; Kuosa (2011: 22) considers tangible as well as intangible outcomes of foresight initiatives. Given their interdisciplinary nature and multi-sectoral nature, foresight exercises often behave as a 'knowledge junction' between different areas of research (EFMN 2009: 14), and impact in the form of improved networking and information flows should not be ignored.

¹⁶ The Network membership comprises representatives of foresight units from various OECD member states; whilst they recognise the need to link more effectively with developing countries to harness regional expertise on critical global issues such as infectious diseases and food security (OECD International Futures Programme 2010: 3), international development is not their primary purpose.

The debates around the impact of scenarios are interesting because of their focus on transformational processes. As stated by Le Pere (2004: 108–9), ‘the real test of scenario building is not whether its architects get the future right, but to change behaviour in the right direction on the basis of seeing the future differently’. The future is fundamentally unknowable, yet everyone holds implicit assumptions about the future, depending on their own mental model, based on experience and knowledge. By bringing together individuals operating within different paradigms, the worldview of any one individual or organisation may be challenged, and thus individuals’ mental maps changed or expanded.¹⁷ This highlights the importance of acknowledging and exploring uncertainty through collective process. Wack (1985: 140), a pioneer of scenario planning, describes the transformational process: ‘Scenarios deal with two worlds: the world of facts and the world of perceptions. They explore for facts but they aim at perceptions inside the heads of decision-makers. Their purpose is to gather and transform information of strategic significance into fresh perceptions. This transformational process is not trivial – more often than not it does not happen. When it works, it is a creative experience that generates a heartfelt “Aha!” from your managers... obliges them to question their assumptions...’. This kind of forward-thinking exercise with explicit consideration as to how the world will change may be compared to the collective design of a theory of change for international development policies and programmes, where a range of worldviews and assumptions may enrich the discussion and help to ensure that any strategy is ultimately more robust.

As in other applications of foresight, the evidence of use, usefulness and impact of foresight initiatives in international development are largely anecdotal. In the organisational decision-making context, MacDonald (interview 7 April 2014) considers that a key outcome is greater resilience, such that individuals and organisations are better prepared to face uncertainty and ‘to manoeuvre skilfully when life takes unforeseen turns’, but acknowledges that actually measuring this presents a challenge. In the context of visionary public interest scenarios such as those developed in East Africa by SID, Heinzen (2004) suggests that the creation of a new shared language can be the marker of successful scenario work; in the case of the Tanzania scenarios, one noteworthy aspect was that subjects previously considered taboo, such as donor dependence and the supposed unity of the country, became open discussion points when the scenarios were shared with the broader public (Eyakuze 2004). Heinzen also considers whether the foresight exercise led on to something else, as a measure of success (Heinzen, interview 31 March 2014); she offers anecdotal evidence of knock-on effects, explaining how individuals who were closely involved in (and transformed by) the process of developing the Kenya scenarios with SID subsequently played a key role in the national government-led visioning process, Kenya Vision 2030. Both practitioners can provide anecdotal evidence of changes they have observed in their client group as a result of the foresight process, and in some instances, shifts of strategic direction resulting from the development of scenarios and testing of policy/programming options.

Given the non-linearity and complexity of policymaking processes, and the challenge of evaluating how any subsequent decisions and policies actually affect different stakeholders, and especially the poor, perhaps it is better to focus on assessing the extent to which the level of futures literacy¹⁸ has changed among key stakeholders and decision-makers as a result of the foresight process – thus measuring aspects which are closer to the circles of influence of those commissioning or facilitating the foresight initiative. I suggest that indicators of futures literacy as reflected in decision-making behaviours might include an individual’s awareness of the role and potential application of foresight to international development policy and programming, capacity to apply foresight thinking by designing and

¹⁷ Schoemaker (1993) explores the psychological basis for scenario planning as a way to overcome corporate blind spots and myopic thinking frames, whilst Bradfield (2004) shares insights from psychology around belief perseverance and confirmation bias that make scenario building an appropriate way to inform decision-making processes.

¹⁸ This term was coined by Schultz (2006).

facilitating a foresight process or commissioning an externally-facilitated process; at an organisational level, futures literacy would be reflected in an enabling environment, whereby resources are available for foresight activities and futures thinking is incentivised.

6 Conclusions and future directions

Foresight initiatives have been conducted by a range of actors, in different thematic sectors, across different regions, on both a grand and a modest scale; however, the body of evidence is highly fragmented. Future-oriented studies are better established (and resourced) in certain sectors of international development, such as food and agriculture, whilst no evidence was found of foresight in relation to education in an international development context. There are interesting examples of *ad hoc* initiatives and processes, such as the East Africa scenarios supported by SID. Yet, for the most part, futures thinking has not entered the mainstream of international development in terms of the discourse and practice, and thus remains marginal to international development endeavour. This is hardly surprising, given that foresight is of itself a field still in its infancy. Whilst there are various repositories and databases¹⁹ of foresight studies and projects, there is none dedicated to international development initiatives *per se*. With the exception of outputs generated by the Humanitarian Futures Programme, literature on foresight in the international humanitarian field is scant. This paper represents the first attempt to review the evidence of the application of foresight approaches and techniques to policy-related work in international development.

Foresight has an important role to play in international development, to ensure that policies are robust and forward-looking, and that development organisations and institutions are resilient and agile, able to cope with change and manage increasing uncertainty and complexity in order to tackle the global and local development and humanitarian challenges ahead. Futures thinking could be more effectively integrated into strategy planning cycles of international development institutions across the board and, in general, this would require greater futures literacy among international development actors. National-level policy thinktanks, in Africa and elsewhere in the developing world, have a particular role to play in supporting foresight studies, and promoting methodological adaptation and innovation in their various contexts. There is a great opportunity to harness rapid advancements in the field of ICT for crowd-sourcing and collective intelligence as part of foresight exercises, countering the more traditional top-down, expert-led approaches.

¹⁹ These include the Sigma Scan and Delta Scan of the UK Horizon Scanning Centre, the Global Futures Intelligence System of the Millennium Project, and the 'Dynamo' database of the European Foresight Monitoring Network.

Annex

List of interviewees

| | |
|-----------------|---|
| Barbara Heinzen | Independent consultant |
| Neil MacDonald | Independent consultant, director of Gondwana Development Associates |
| Arthur Muliro | Society for International Development (SID) |
| Nick Nisbett | Research Fellow at Institute of Development Studies (IDS) |
| Jon Parke | Head of Foresight Follow-up at Government Office for Science |

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Brighton BN1 9RE

T +44 (0)1273 606261

F +44 (0)1273 621202

E ids@ids.ac.uk

www.ids.ac.uk



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