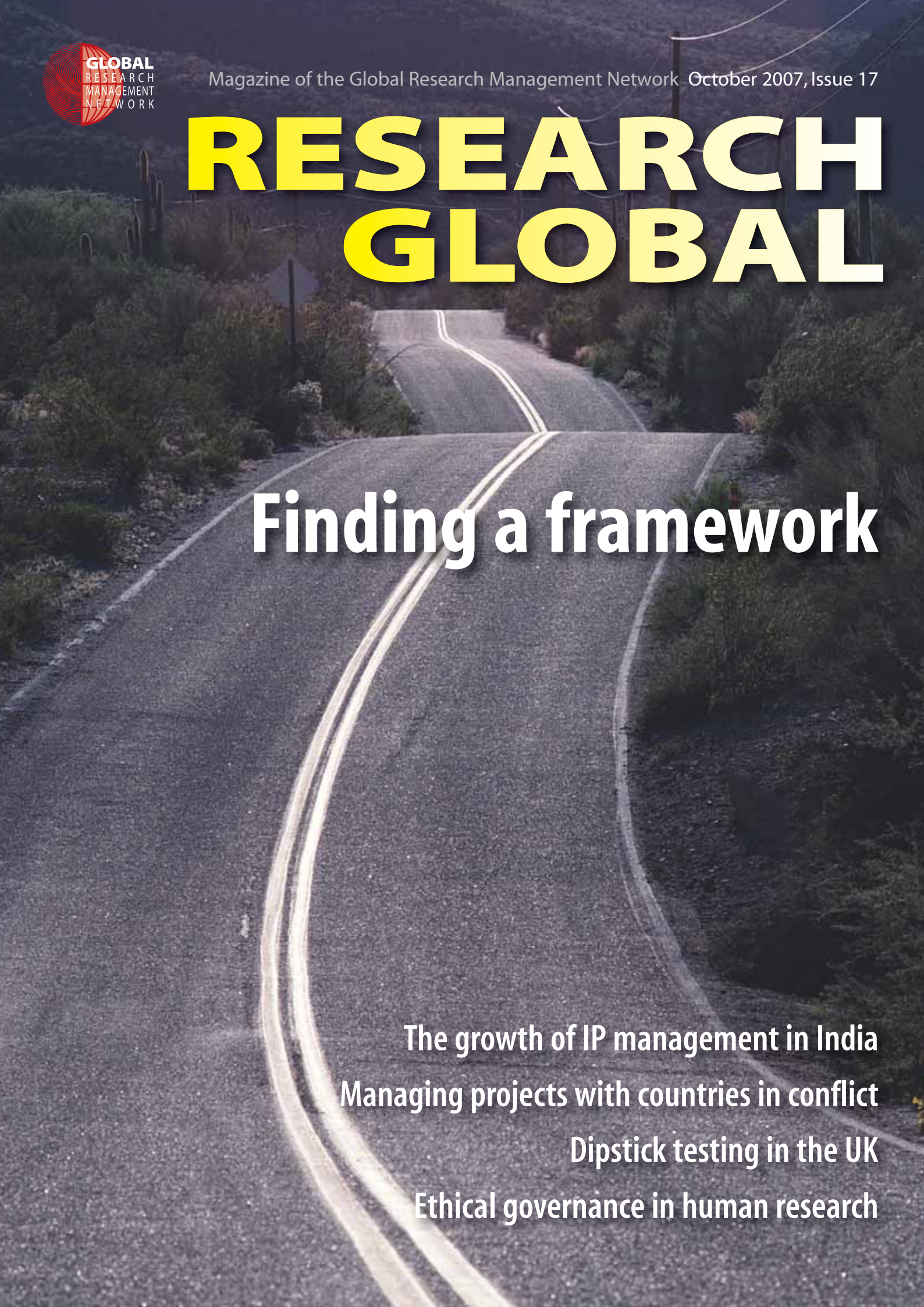
Magazine of the Global Research Management Network October 2007, Issue 17

RESEARCH GLOBAL



Finding a framework

The growth of IP management in India

Managing projects with countries in conflict

Dipstick testing in the UK

Ethical governance in human research

Research Global
(Formerly *Research Opportunities*)

Editorial Team:
Dr John Kirkland, Julie Stackhouse
Patrice Ajai-Ajagbe, Natasha Lokhun
(resman@acu.ac.uk)

Book Listings and Reviews: Nick Mulhern

Design: Chris Monk

Printers:
Chandlers Printers Ltd, Bexhill-on-Sea

Research Global is published three times per year by the Association of Commonwealth Universities on behalf of the Global Research Management Network.

Woburn House
20-24 Tavistock Square
London WC1H 9HF
Tel: +44 (0)20 7380 6700
Fax: +44 (0)20 7387 2655

www.acu.ac.uk/researchmanagement

The Global Research Management Network is a partnership between the Association of Commonwealth Universities (ACU) and the Society of Research Administrators International (SRA International), dedicated to the development of an international collaboration amongst the research management community.

Taking

Things are moving quickly in the world of research management. In past issues of *Research Global,* we have described how universities are learning to cope with a series of obligations, relationships and functions that did not exist a decade or two ago. The pace of change has been uneven between regions, countries and even institutions. Overall, though, it is no exaggeration to say that what we are witnessing is the creation of an entirely new profession.

Articles in this issue reflect a variety of research management work where navigating new territory is very much the order of the day. For example, Raghvendralal Saha gives an interesting account of the evolution of IP management in India – an area which is still being developed to keep abreast of and comply with international standards. Gary Allen, in his discussion of the governance of ethical conduct, reminds us that we cannot be complacent even when working within established frameworks and must always strive to 'resource reflective practice'. Sara Farley highlights how donor strategies can be very subjective and how strategies are often tailored to suit each project. She pierces 'the veil that shrouds donor approaches to aid' and poses the question of how best donors and partner countries can work together to effect development. Patrice Ajai-Ajagbe reports on a project to establish research management in West Africa – a project which spans several countries and at this stage requires the 'creation' of its long-term beneficiaries. Then there is Bonnie Stewart's account of managing international projects with countries in conflict, which is perhaps an extreme example of finding a framework but nevertheless demonstrates the flexibility and malleability of research management as a profession.

We need to take stock of developments – not only to establish the current state of play, but to try and find some framework that can be used to measure progress, and chart future plans. This is particularly important in those regions in which change has not been coordinated through any single government or regulatory body.

stock


Dr John Kirkland

As a contribution to this debate, we suggest a framework that analyses progress under three phases. The first is *awareness raising* – measures to help ensure that practitioners and institutional leaders recognise that research management is an issue. The second is the conversion of such awareness into *organisational structures* to make sure that this awareness is put into practice. The third is the development of the *external environment* to support these structures, and help ensure sustainability.

To some extent, these phases can be seen as consecutive. The development of structures, for example, requires a degree of awareness to have been generated. This is not always the case, however. If activity in the three phases gets out of line, there is a serious danger that investment, whether from universities, governments or donors, may be wasted.

The current situation in many African universities, for example, shows signs of this dysfunction. A great deal has been done to raise awareness, albeit unevenly between institutions and regions. Much has also been achieved to develop a supportive external environment. We have reported on the successful development of the Southern African Research and Innovation Management Association (SARIMA), and now on attempts to replicate this success in West Africa. The Research Africa project, in which the ACU is a partner, is seeking to develop a sustainable funding and news service to support the profession.

But what about the second 'phase'? If awareness of the issues is not converted into workable structures within universities, it may be wasted. Such structures are also needed to make external support structures such as WARIMA and SARIMA worthwhile. Yet this, with the notable exception of South Africa, has so far proved the most illusive part of the process. Perhaps this is not surprising, since it is also the most labour-intensive, but it is something that donors should take note of if they wish to safeguard their investments.

The analysis above relates to Africa. Yet the three 'phases of development' have wider applicability. It is a concept that planners in other regions could adopt to analyse what stage their own systems have reached, and to focus future priorities accordingly. RG

Dr John Kirkland is Deputy Secretary General (Development) of the Association of Commonwealth Universities.

The governance of ethical conduct

we're alert but should we be alarmed?

Can research managers help transform research ethics from a battleground into a constructive and collaborative process? **Gary Allen** proposes a way forward.

The relationship between research ethics committees and researchers, across the Commonwealth and beyond, is often fiery. There is no shortage of evidence in the academic and popular press of the level of distrust and disquiet that too often overshadows and sours this relationship. The potential for institutions and research managers to play a positive role in this context is rarely discussed. Indeed, when the impact of institutional research governance frameworks is canvassed, the commentary tends to focus upon what some have described variously as 'ethics creep', the wildfire spread of bureaucracy, or the establishment of a self-perpetuating industry. At the same time, we are also witnessing some very public demonstrations of the institutional risks associated with even an alleged breach of ethical standards.

This set of circumstances has tended to focus our attention upon the establishment and operation of bureaucratic systems and the production of formal policies. Furthermore, institutional governance frameworks tend to rely upon the premise that if the mere existence of a rule does not modify behaviour, then the threat of penalty will force compliance.

It should not be surprising that such an approach often prompts researchers to react with something between begrudging compliance and overt resistance. Quite rightly it has been observed that a significant disconnect has evolved between following the rules and the realities of ethical and appropriate conduct in research.

I do not mean to imply that research managers are solely responsible for the level of discord between researchers and research ethics committees. However, it is important that we recognise that if we persist with an approach based solely upon compliance and risk management we are at best perpetuating the unsatisfactory status quo, or, at worst, perhaps adding to the problem.

The frameworks that have evolved in many jurisdictions rely predominantly upon the work of a research ethics committee. There is significant commentary available on the problems confronting research ethics committees; suffice to say here that, like research managers, it appears that ethics committees can be become focussed on compliance and risk. Furthermore, in the hopes of being viewed as fair and consistent, many ethics committees treat all research as being the same and apply a set of absolute rules without regard to the specifics of individual projects.

Israel (2004) in his report on the impact of research ethics on criminological research commented on the degree to which projects can be distorted and even made unviable by the ethical review process. Like many other commentators, Israel noted that this situation did not necessarily reflect a problem with the national framework, but instead could be attributed to how some ethics committees applied that framework.

In a landscape where 'doing research ethics' has come to mean expertly filling in a form and following the absolute directives of a committee, we have become hostage to the canons of risk and compliance. For research managers and committee members, 'the compliance problem' is the number of researchers who do not submit their work for clearance, or otherwise defy the institution's research ethics arrangements, and in so doing expose their institution to risk. However, we should acknowledge that 'the compliance problem' might be that by focussing exclusively on following the rules we perpetuate an adversarial climate.

A useful first step is to reconsider why institutions establish and operate a research ethics framework, and why ethical conduct should be fundamental to the conduct of high quality research. Is there an element of institutional risk management? Possibly…but this should be considered an important consequence of a sound research ethics framework, but not an objective in its own right. Is it to protect the welfare and rights of research participants? This is certainly a primary objective, which is often articulated as a primary concern by national guidelines, though I note that commentary by some researchers (Bamber 2007) usefully points out that there are situations where this might not be the case. Another important objective is actually to *facilitate* the conduct of research. A corollary of all of these objectives might also be that we need to maintain the confidence of the wider community in our research, so they will continue to fund, support and participate in our projects. The facilitation of high quality and ethical research should be a fundamental tenet of our practice.

We need to maintain the confidence of the wider community in our research, so they will continue to fund, support and participate in our projects.

The point then for an institution's research ethics arrangements is not to prevent a project going amiss or to 'catch' a researcher in wrong doing, but instead as a constructive discourse intended to resource the reflective practice of researchers and to help them get on with their research. So how can research managers have a positive impact on this situation?

One of the fundamental early steps in this process of change is a shift in focus so that training and advice/support is given at least an equal standing as the administration of the research ethics process. An element of this shifted focus is recognising that there are governance responsibilities that can, and should, occur outside of meetings of an ethics committee.

At Griffith University we commenced a process intended to completely transform the interaction between our research ethics committee and our research community, but also to

in human research:

enhance the various governance practices that operate outside of the committee. Some of the key features of the new 'Griffith Model' are outlined below.

Proportional ethical review – The University introduced a three-level ethical review process, where the paperwork, review and processing time is linked to the level of the risk of the proposed research. This is based on an online tool that assesses the risks and ethical issues for a project. A significant proportion of the University's research is then reviewed via an online process with approval being issued within a matter of days. This review is policy-based, drawing upon University-endorsed policy positions.

Research Ethics Advisor (REA) – Every academic element of the University was invited to appoint at least one member of academic staff as a REA for their area. REAs are a local source of advice for students and staff, deliver workshops and seminars in their area, facilitate communication to and from the ethics committee, and provide research ethics advice to the senior staff of the element.

Research ethics manual – An online booklet-based research ethics manual has been produced, with booklets addressing specific ethical or methodological issues (e.g. the participation of young people in research). Rather than being a statement of rules, the booklets outline any external regulatory requirements and offer advice and tools to assist a researcher in justifying their approach to a particular issue or challenge.

Case study-based training – Rather than training based on 'better form filling', the approach at Griffith University has shifted in focus, so training encourages researchers to consider research ethics as a design and quality issue, with case studies used to explore real challenges.

Enhanced governance processes – New systems were introduced to address issues outside of an ethics committee meeting (e.g. variations to an approved project), for the monitoring of research (e.g. random audits) and in the interaction between administrative elements (e.g. the issuing of media releases about research, and the creation of budgets for projects).

Whilst there has not been any formal analysis of the impacts of these changes, there are still some useful indicators of the outcomes. In the first two years of the change in approach, there was a 40% and then 30% increase in the number of new applications. There was also around a 150% increase in the number of variations to existing clearances. An analysis of this increased activity showed that it reflected an increased participation rate.

All administrative areas of Griffith University are subject to periodic external review. The Office for Research was last reviewed in 2005. The review panel met with a range of researchers (including research students and supervisors) and key stakeholders. The review panel also sought and considered confidential submissions from across the University. In its final report, the review report noted that:

- the institution's research community showed significant support for the changes to the University human research ethics governance arrangements;
- there was 'uniformly strong endorsement' for the University's research ethics system, which was described as 'effective and responsive'; and
- the work and contribution of the new ethics team was greatly appreciated.

At the risk of understatement, commentary of this kind reflects a significant and positive change in climate.

Conclusion

All is far from rosy in the climate between research ethics committees and researchers, and there is at least a perception that research managers may actually make this situation worse. Part of the current problem is that prevalent approaches are invariably based on promoting compliance with absolute rules and in catching researchers in wrongdoing. Such an approach may actually be encouraging a culture of resistance or blind obedience. Instead, what is required is an approach based upon the principle of resourcing reflective practice, which situates research ethics as a key design, conduct and quality issue. Research managers can play a positive and fundamental role in this process. RG

Dr Gary Allen is Manager, Research Ethics at Griffith University, Australia.
Email: g.allen@griffith.edu.au

References:

Bamber, G. & J Sappey. 'Consenting adults and the path to truth', *The Australian* <http://www.theaustralian.news.com.au/printpage/0,5942,21259575,00.html> [accessed 9 March 2007]

Israel, M. 2004. *Ethics and the Governance of Criminological Research in Australia* (Sydney: New South Wales Bureau of Crime Statistics and Research)

Donor strategies for effecting develo

Sara Farley writes on how donor countries and organisations work to enhance 'capacity for development' through science, technology, and innovation.

Growth and development are the keys to unlock the divide between developing and developed countries. The 2006 United Nations Conference on Trade and Development (UNCTAD) Least Developing Countries (LDC) report argues that the capacity of a country to produce goods and services is what enables growth and development. More precisely, 'productive capacities' – those 'productive resources, entrepreneurial capabilities and production linkages [that] together determine the capacity of a country' – are essential in passing from the ranks of LDC to developed country status (UNCTAD 2006).

Science, technology and innovation (STI) are among the most powerful tools that developed countries use to build sufficient productive capacity to ride the fast-moving waves of technological change. Those without such capacity to swim are left to sink. These STI tools can make productive resources – natural resources, human resources, and physical capital – more potent contributors to growth and development (e.g. through the modification of crops, the reduction of disease, or the hastening of goods to markets). STI can also facilitate learning and linkages either in the form of technical training for civil and mechanical engineers and technicians who construct the roads, bridges, and airports required to bring partners together, or through information and communication technologies (ICT) that allow ideas and people to connect at high speeds.

Yet, science, technology and innovation demand the capacity to learn from those who would seek to harness them for development. Here, entrepreneurial capability – a matter of knowing what to do and how to do it to produce and compete – is critical. With this entrepreneurial capability, economies are better facilitated to produce, absorb, and use knowledge for competitiveness, poverty reduction, and a host of other development goals.

How these notions play out in national policy differs greatly from country to country. As OECD countries offer assistance to those falling behind, the aid they extend reflects not just their philanthropy but their worldview. The choice to give unconditional aid or tied-aid, assistance for human resources development or infrastructure, support to private sector development or health is shaped not only by the needs of partner countries but by the priorities of those offering assistance.

The differences in donor countries' assistance to Country A versus Country B, when both express similar demands for science, technology and innovation-based aid, serves as the jumping-off point for a new study prepared as an input to UNCTAD's 2007 LDC report (the study may be downloaded at: http://www.unctad.org/sections/ldc_dir/docs/ldcr2007_Farley_en.pdf).

According to the study, what was a community characterised by little strategic guidance around STI is now starting to evolve. Since 2005, a number of donors have taken up the task of articulating new STI strategies or freshening stale ones. Among them, Canada's International Development Research Centre (IDRC) and the African Development Bank each created new STI-focussed programme areas and with them new positioning papers. The UK's Department for International Development (DFID) and the Swedish International Development Agency (SIDA)'s Department for Research Co-operation (SAREC) will also release revised research strategies soon, according to contacted sources. Meanwhile, China, Korea, India, Brazil and South Africa are settling into their seats at the donor table. A handful of established donors to STI – the Netherlands, Norway, Denmark, and the World Bank – are asking questions internally as to how their approaches can be improved. Changes within these donors may be anticipated as a result of these internal reviews.


Sara Farley

© Martine Bisagni

Unfortunately, the research presented in the study also found that the process of formulating strategies to guide donor support to STI appears to have stopped short of forwarding comprehensive tools to optimise donor assistance in the STI area. What is missing within most donors' strategies is a roadmap that guides donors and their partner countries toward certain models of support for STI based on countries' level of development. Even within those few existing donor strategies that do provide further differentiation, the heterogeneity between countries within any group classification may not always be sufficiently captured or addressed within the language of the strategy.

Their strategic challenges aside, donors do not provide all countries with comparable STI support, research reveals. Some donors, such as Japan and the World Bank, provide only a small proportion of their total support for STI to LDCs. In fact, in the case of the World Bank, more than half of all major non-agricultural projects in science and technology between 1980 and 2005 went to just seven

STI are among the most powerful tools that developed countries use to build sufficient productive capacity to ride the fast-moving waves of technological change. Those without such capacity to swim are left to sink.

opment

middle-income countries. At the other end of the spectrum, several donors, including Sweden, Norway, Denmark, Canada, the UK, and Switzerland, provide most of their STI support to LDCs. In Norway, for example, all seven of its priority countries are LDCs.

Within the LDCs, a few favourites elicit most of the STI aid. In fact, official development assistance (ODA) to LDCs is concentrated in just 10 of the 50 countries bearing the LDC mantle. Together these 10 receive 60% of all donor assistance (OECD 2006). For those 40 countries with the very lowest development indicators, it appears little donor attention is paid to the need for STI for development.

Unpacking STI aid in the LDC context

What activities, lending instruments, and initiatives constitute donor aid to science, technology and innovation varies greatly. Previous attempts to evaluate donors' effectiveness in STI support have been stymied by a lack of systematic analysis of donors' STI initiatives. Through interviews, field visits, and desk research a small universe of individual STI-related projects, initiatives, programmes, and activities supported by multilateral and bilateral donors takes shape. The UNCTAD study explores some 170 separate initiatives cited by donors, uncovered through desk research, or encountered by the author during field visits to developing country partners.

Clustering these 170 initiatives together based on their common features reveals four distinct orientations of STI support. Within the four clusters, the categories of activity donors most frequently support are described – as in Table 1.

Analysing the STI activities of donors within each of the clusters elucidated a number of insights:

- Donors appear to gravitate toward supporting STI initiatives in cluster 2, which constituted 84 out of the 170 profiled initiatives. LDC-based cluster 2-type projects and programs run the gamut – from those addressing university strengthening in Uganda to technical assistance initiatives that encourage private sector development in Mozambique. However, some categories within cluster 2 – Centres of Excellence development, STI policy setting and governance, and infrastructure development – see little action on behalf of donors in LDCs as compared to other groups of developing countries.
- Most donor-supported cluster 2 initiatives place little emphasis on simultaneously building capacity in the informal or traditional sectors that dominate productive activity in LDCs and the modern knowledge sector that dominates research, technology development and innovation globally. While such initiatives may exist, they are not eliciting sufficient attention within the donor community to make their impact widely known and scale up their success.
- Cluster 3-related initiatives are numerous (53 of the 170 initiatives reviewed) and growing as a proportion of donor support to STI. As the sophistication of technology increases, supply chains become global, and public and private partners deepen their connections, linkages will dominate an increasing share of global S&T activity.
- As scientists, entrepreneurs, and technologists rush to collaborate with one another in cluster 3-type initiatives, a trend of LDC-exclusion has left many would-be collaborators outside of STI partnerships. Compelling evidence of this trend comes from a World Bank-commissioned RAND study examining the changing dynamic of STI collaboration in the developing world. According to RAND, some kinds of linkage activity between LDCs (termed 'Scientifically Lagging Countries' in the study) and other countries appear to be declining. Of the donor-supported linkage activities reviewed for the UNCTAD study, some

continued on page 21

Table 1: Four Clusters of Donor Support to STI for Development

Cluster 1	Cluster 2	Cluster 3	Cluster 4
Global or regional public goods initiatives	**Initiatives that deepen local (i.e. sectoral, sub-national or national) STI capacity**	**Linkage-based initiatives**	**Integrated initiatives**
• Support to research for global or regional public goods	• University development in STI-themed disciplines • Technical and vocation education and training • Sector-focussed skill upgrading through graduate and postgraduate training • Productivity enhancement through technology and skills deepening in the private sector • Research and development • Centres of excellence • STI decision making and priority setting • Science and mathematics in primary and secondary schools, including teacher training • STI infrastructure and equipment • Information and communication technologies	• North-South linkage initiatives • South-South linkage initiatives • North-North-South linkages for policy alignment • Sectoral and cross-sectoral linkages initiatives • Linking individuals or institutions	• National Innovation Systems Initiatives • Integrated Innovation Initiatives

Sara Farley is a science and technology strategist and international development specialist who has helped a number of international aid agencies craft strategies to guide their work in science, technology and innovation, among them the World Bank and the African Development Bank. Since 2001, she has worked on strategy and operations at the World Bank and has been commissioned to work on a range of science, technology, and innovation issues for organisations such as the Rockefeller Foundation, UNCTAD, SRI International, and the British Council in Nigeria.
Email: sara.e.farley@gmail.com

Quality grantsmanship training in West Africa

Jennifer Shambrook and **Labode Popoola** report on a workshop held at the University of Ibadan, Nigeria, aimed at improving the success of research funding applications.

Recognising the impact that growth in research can have on the economy of a burgeoning nation, West African research institutions are eager to obtain and fine-tune the skills needed to seek and obtain extramural research funding. It is not only important that individual research scientists obtain expertise in these skills, but also that they are able to transfer these skills to the colleagues with whom they collaborate. In answer to the vast need for grantsmanship training in West Africa, the University of Ibadan, Nigeria, maintained its role as a leader in the academic community of the region by not only sharing expertise with their own academics, but also opening the doors to academics and researchers of neighbouring nations. The format was designed to train individuals, as well as train trainers and provide resources for the attending delegates to utilise (and replicate) at their respective home institutions.

Having successfully mounted a similar workshop in-house in July 2003, the Postgraduate School of the University of Ibadan was the host of the second National Training of Trainers Workshop on Planning and Writing Grant-Oriented Proposals. The workshop was held from 25-27 June 2007, at the University of Ibadan campus. The conference was attended by 144 delegates from 42 institutions within Nigeria, and five institutions in other West African countries. Registered attendees were from various disciplines and all levels of academe from graduate students to deans.

The programme

Postgraduate School Dean, Prof Labode Popoola was the chief organiser, leading an extremely competent team of academics, which included Dr Victor Adetimirin (Sub-Dean), Dr O A Olorunnisola, Dr Segun Ademowo, Dr Yinka Aderinto, Dr Olu Aleru and Dr Kayode Ogunsanwo. The team put together a programme that was comprehensive, fast-paced, well-presented and interactive. The resource persons used were experts from the University of Ibadan; Prof Lai Erinosho from Olabisi Onabanjo University, Ago Iwoye, Nigeria; and two non-regional visitors from the United States, Dr Charles Okigbo, from North Dakota State University, and Ms Jennifer Shambrook, from the Medical University of South Carolina. Ms Shambrook was jointly sponsored by the University of Ibadan, the MacArthur Foundation and the Society of Research Administrators International.

The Vice-Chancellor's opening address underscored the need for Africa to take advantage of the advances in technology and the available competitive research grant opportunities, so as to embark on cutting-edge research that will lift the continent from its present state of underdevelopment. His remarks were followed by the keynote address from Ms Shambrook on 'The importance of research in evidence-based policy making, practice and social change'. The opening session was followed by five technical sessions that took place over three days.

The technical sessions took the participants through the stages of grant application development and through reporting and financial management. The first technical session was chaired by Prof Folorunso Adewole, the immediate past Provost of the College of Medicine at the University of Ibadan. The various types of grant-funded research proposals were reviewed, followed by an extensive overview of the various portions of a 'typical' grant proposal. The grant proposal was broken down into:

1 Cover page, abstract, executive summary, introduction and background
2 Statement of research problem, research objectives, expected results, and impact
3 Research methods, complementary activities, institutional environment, and personnel
4 Budget and timelines
5 Curriculum vitae, resume of collaborators, letters of support, references and appendices.

It is not only important that individual research scientists obtain expertise in these skills, but also that they are able to transfer these skills to the colleagues with whom they collaborate.

The second technical session was chaired by Prof E O Lucas, a former dean of the Postgraduate School. This included a didactic session presented by Prof Akinbo Adesomoju and Prof Layi Erinosho, which gave criteria for assessing research proposals. This information was used in the group exercise that followed. Participants were divided into five small groups, with similar disciplines grouped together. Each group was led by a resource person and tasked with reviewing grant proposal concepts from members of the group, utilising the information already learned in the workshop about proposal development and assessment, and working as a group to develop a viable proposal (or proposals). The group work progressed through the third and fourth technical sessions, with presentations by a representative of each group to describe the outcomes of the group experience in technical session IV. The groups each developed one to three concept papers, with plans to develop them into full proposals, but more importantly the groups all reported gaining much from the networking experience of the group activity.

The third through to the fifth technical sessions also contained time periods for more didactic sessions. The third technical session was chaired by Prof B O Fagbemi, also a former dean of the Postgraduate School. Here, Prof Adeyinka Falusi, a recognised regional expert in research ethics, led a panel discussion on that topic. This was followed by a presentation on

Delegates at the 2007 workshop, University of Ibadan

the importance of writing progress reports by Dr Jide Olorunnisola and Prof Uche Islugo-Abanihe.

The fourth technical session was devoted to grant administration. The University of Ibadan Bursar, Alhaji J A Bankole, spoke about the importance of fiscal accountability and detailed many of the finer aspects of that area of grant administration. Prof Akinbo A Adesomoju discussed other aspects of grant administration. As mentioned above, it was during this session that the group reports were given. These were followed by closing remarks from the Deputy Vice-Chancellor (Administration), Prof A A B Agbaje.

The fifth technical session was held on the last day and was chaired by the immediate past Dean of the Postgraduate School, Prof Idowu Olayinka. Both non-regional guests spoke during this last session. Dr Okigbo presented 'A guide to American funding support for research' and Ms Shambrook presented 'Establishing in-house grant writing and peer review groups'. Other topics presented during this final session were 'Accessing information on grant sources', and 'Strategies for effective knowledge transfer', by Dr S A Babarinde of the University's Department of Teacher Education. An additional, previously unscheduled, session was added to the programme during the fifth technical session at the request of the meeting participants, to present a logical framework for proposal development. Prof Foluso Okunmadewa anchored this aspect.

PowerPoint presentations and papers were made available to all participants for use at their home institutions.

Networking and cultural events

Although the event was packed with group tasks and information-dense sessions, there was also time for valuable networking opportunities. Many participants reported in their post-workshop comments that the networking opportunities were equally as valuable as the actual training experience. Networking events included a visit to the zoological park, a command performance in the drama theatre, cocktail receptions, luncheons each day, and a grand dinner gala for presentation of the certificates of training on the last evening of the workshop. At the dinner gala, one of the guests came to the podium and summed up the experience to a standing ovation and applause when she expressed her feelings: 'This has not just been the one of the best conferences I've ever attended in West Africa, this has been one of the best conferences I've ever attended anywhere in the world. I will be back next year'.

Proceedings and plans for the 2008 workshop

Plans are already underway for an enhanced workshop in June 2008. Proceedings of each of the papers presented at the 2007 workshop will be available soon as a training resource to anyone desiring to replicate this workshop in their own institution. For more information about the 2008 workshop, or to obtain a copy of the proceedings for use in your own institutional training efforts, please visit the Postgraduate School, University of Ibadan website at www.postgraduateschool.ui.edu.ng, or contact the Dean directly at labopopoola@yahoo.com or l.popoola@mail.ui.edu.ng RG

Jennifer Shambrook is Associate Chair of the Department of Psychiatry and Behavioral Sciences at the Medical University of South Carolina.
Email: morganjf@musc.edu

Prof Labode Popoola is Dean of the Postgraduate School at the University of Ibadan.
Email: l.popoola@mail.ui.edu.ng

IP management in publicly funded research in India

The growing trend of international and 'unconventional' research collaborations means that the IP world has to navigate new territories constantly. Here **Raghvendralal Saha** outlines the Indian experience and response to IP-related issues in recent years.

Policies on government funded research

Publicly-funded research in most countries is conducted through governments' own departments or ministries or through autonomous R&D institutions and universities. In India, almost 80% of expenditure on R&D is incurred by the Government which, therefore, has an immediate interest in publicly-funded research and its outcomes. Government departments, such as the Indian Space Research Organization, in most cases own all the rights in respect of intellectual property (IP) generated by their scientists and the scientists (inventors) do not get any share of revenue accrued from the licensing of IP. However, such departments also fund universities and other R&D institutions to carry out research and the rights of IP in these cases will largely belong to the Government. There are other government departments, such as the Department of Science and Technology, which provide funds for extramural research to universities and other publicly-funded R&D institutions.

A large number of research laboratories and centres supported by the Government have a great deal of functional and financial autonomy. Examples of such autonomous bodies are the laboratories of the Council of Scientific and Industrial Research, the Indian Council of Agricultural Research and the Indian Council of Medical Research. These laboratories are engaged in intramural, extramural and contract research. As commonly practiced elsewhere, IP rights in contract research belong to the contracting agency unless there is an agreement for the sharing of rights. Extramural funding largely comes from government departments such as the Department of Science and Technology. These agencies have elaborate IP policies and their own IP offices or cells which take up protection and management of IP generated in their laboratories. In some cases the technology transfer function lies with another group within the organisation. These agencies do not automatically claim ownership of IP rights in extramurally-funded projects as it depends on the terms and conditions stipulated by the funding agency. Some times these agencies also fund projects in universities and R&D laboratories and in such cases they tend to retain the ownership rights.

First policy breakthrough

The Ministry of Science and Technology issued guidelines, *Instructions for Technology Transfer and Intellectual Property Rights*, in March 2000 to help enhance innovations by scientists, research institutions and universities. The salient features of the guidelines, which are applicable to projects funded by the Ministry of Science and Technology, are:

1 Institutions may retain the ownership of any IP generated.
2 Institutions shall take necessary steps to commercially exploit patents on exclusive or non-exclusive bases.
3 The owner institution is permitted to retain the benefits and earnings generated out of the IPR. The inventor(s)'s share shall be limited to one third of the actual earnings.
4 IPR generated through joint research by institution(s) and industrial concern(s) can be owned jointly by them or as may be mutually agreed by them through a written agreement. The institution and industrial concern may transfer the technology to a third party for commercialisation on exclusive/non-exclusive bases. The third party, exclusively licensed to market the innovation in India, must manufacture the product in India.
5 Institutions shall set apart not less than 25% of the revenue generated from IPR to create a Patent Facilitating Fund for the management of IPR.
6 The Government shall have a royalty-free license for the use of the IP for the purposes of the Government of India.

Science and Technology Policy 2003

The Science and Technology Policy of India released in 2003 is upbeat on intellectual property rights and related issues. It focuses a great deal on the transformation of new ideas into commercial successes. It states that the development of skills and competence to manage IPR and to leverage its influence will be given a major thrust. This area calls for significant technological insights and legal expertise and will be handled with high priority. Efforts will be made to create synergy between industry and scientific research by creating Autonomous Technology Transfer Organizations as associate organisations of universities and national laboratories to facilitate the transfer of the know-how generated to industry.

Support to universities for IP protection

All educational institutions, including universities, colleges and schools, can approach the Patent Facilitating Centre (PFC – set up by the Department of Science and Technology) for full technical, legal and financial support in protecting and managing their IPR. Often, the requests from universities are routed through one of the 20 Patent Information Centres created by the PFC in different states. Universities retain all the rights to such patents as the PFC's support is available only if universities own the rights. The PFC does not have any claim in such patents. It has so far filed more than 350 patent applications in India and other countries from around 60 universities/academic institutions, and many of them have been granted. It may be noted that, without such financial, legal and technical support, many universities and academic institutions would not come forward to protect their inventive work. This model is quite different from that practiced in other countries, where universities

have to find their own funds, mostly generated through licensing. Indian universities will take some time to reach that level. The PFC has been working consistently in the last 12 years to create awareness and build capacity through different methods. It has organised nearly 325 IPR awareness workshops all over the country, both independently and also in association with many government ministries and departments, and industry associations.

The experience of Indian universities

Until 1995, the culture of universities and academic institutions protecting their inventive work through patents was almost nonexistent. However, efforts made by multiple agencies in the country have made a difference. The total number of Indian filings by Indian academic institutions was only 35 in 1995, but this number grew to 169 in 2004. The growth is substantial, although the absolute number is still low.

The need for technology transfer offices

The gap between invention and commercialisation has been addressed in many universities by setting up technology transfer offices (TTOs) which undertake activities such as managing the IP of universities, licensing IP, and managing research contracts. Managing TTOs is a new challenge as it requires a good mix of legal and technical skills which are often difficult to locate. In a country like India, where the culture of protecting innovations through legal instruments is relatively new, the task of starting TTOs can be problematic. University faculties are generally not keen to manage such offices as they do not see any academic growth. Also, one is not always able to find the right people from outside as such people are in short supply. However, in the past decade or so, some leading academic institutions in India have set up offices similar to TTOs which are slowly coming of age and looking after the management of IP and technology transfer. Traditionally, such institutions have been maintaining offices which look after all R&D projects funded by the Government and other agencies. Some people may feel that both functions should be performed under one roof. However, it is not essential to have a 'one roof' concept but, if these functions can be coordinated, the end result will be good. The other problem often faced by such offices is the shortage of financial resources to protect inventions in India and elsewhere. Each institution has to maintain a balance between resources and the demand of its faculty to protect its inventive work. People are not always able to differentiate between a paper being published in a journal and a patentable invention, and therefore the demand for protection may be proportional to the number of papers published or accepted for publication. For example, the Indian Institutes of Technology (IIT) at Bombay, Delhi, Kharagpur and Roorkee and the Indian Institute of Science have brought out their own IP policies, which they practice. The main feature of the policies is that these institutions will have the right to own inventions and other IP generated in their institutions through their research activities. A new culture is slowly taking root in terms of encouraging academicians to participate in forming start-up companies and setting up technology incubation centres.

International R&D

Publicly-funded research and academic institutions are experiencing a new situation where sharing and managing IP with similar institutions and industries in other countries is a crucial element. Such agreements are usually decided at country-level and have to take several public issues into consideration. IP licensing and technology transfer are complex tasks and the complexities increase several-fold when the stakeholders (in terms of IP generation, licensing and maintenance) belong to different sovereign countries and legal jurisdictions.

Perhaps there is a requirement to evolve a robust system internationally which is driven more by the wish to enhance collaborative research opportunities rather than by pure commercial considerations.

Bilateral agreements have to address many complex issues, from the definition of IP and associated rights to satisfying the public need that exists in each sovereign country. Therefore, there is an urgent need to address international collaborative research and development while discussing IP licensing and technology transfer from publicly-funded institutions. The issues demanding attention are many, and include:

- absence of parity between the IPR laws and other laws related to technology transfer and taxation of stakeholders
- difficulty in the definition of foreground and background inventions or IP especially by the scientific community
- sharing of IP in different countries
- sharing of revenue and ownership of IPR in the case of joint research by publicly-funded institutions and industries
- maintenance of confidentiality of research activities and findings
- selection of jurisdiction for resolving disputes

Perhaps there is a requirement to evolve a robust system internationally which is driven more by the wish to enhance collaborative research opportunities rather than by pure commercial considerations. Ownership issues in university-industry collaborations may take a complex shape as industries generally do not want to share IP rights with government; however, the universities they work with will receive much of their funding from their respective governments in the foreseeable future. RG

(Views expressed in this article are purely those of the author and do not represent the views of the organisation with which he is affiliated.)

Raghvendralal Saha is Director of the Patent Facilitating Centre, Technology Information Forecasting and Assessment Council at the Department of Science and Technology, India.
Email: raghav@nic.in

Managing international projects with countries in conflict

A small peace institute in San Diego, USA has successfully brought together countries in conflict to collaborate on research and applied agricultural projects in the Middle East. **Bonnie Stewart** describes how a small institute is making a difference in the world.

The Fred J Hansen Institute for World Peace was established at the San Diego State University Research Foundation in 1979 thanks to the generosity and foresight of Fred J Hansen. Mr Hansen came to the United States from Denmark at the age of ten. He was successful in his career as an avocado grower and real estate developer and as a result, in his later years, he had the opportunity to travel throughout the world.

From these travels, Mr Hansen became convinced that world peace could be achieved in part by better understanding among individuals living in areas in conflict. More important, if these individuals could be brought together to work on projects of mutual benefit, international understanding would be fostered. The mission of the Institute is based on these convictions.

Peace through agriculture 1980-2007

The early founders of the Hansen Institute were faced with the challenge of bringing people together from countries in conflict in order to foster mutual understanding. This was not an easy task. A region in the world and key participants had to be identified. A programme that would be of interest and value to all the participants was needed. A well-constructed plan and a source of funding needed to be developed. Once funding was secured, either through a grant application process or through individual solicitations, the task of managing the project had to be tackled – a formidable accomplishment when dealing internationally with countries in conflict.

For the Hansen Institute team back in 1980, it turned out that timing was everything. President Jimmy Carter, President Anwar Sadat and Prime Minister Menachem Begin had recently concluded the Camp David Peace Accords, which was viewed as a breakthrough in the peace

The Moroccan Technical Committee visits coastal agriculture regions in Israel

stalemate in the Middle East. Consequently, the Hansen team decided that the Middle East would be the area where they would focus their efforts. They made a fact-finding trip to Israel and Egypt, and it was during this visit that Egypt and Israel agreed to cooperate in agriculture and desert development. These topics were of highest mutual interest and economic benefit to both countries and this became the focus for the Hansen Institute.

The early years of the programme involved Egypt, Israel and the US. By 1992, the collaborations were expanded to include Morocco. Even though political relations between Israel and Morocco had not yet been established, high government authorities in both countries requested that the cooperative programmes be established. The government of Morocco requested the involvement of the private sector – another formidable challenge. In 1998, the cooperative programmes were further expanded to include the Palestinian Authority and Jordan. Then the political situation in the region deteriorated.

In 2001, opportunities for applied work in the region had declined significantly. One step forward and two steps back seemed to summarise the situation. However, because of the existence of the internet, it was easier to maintain contacts throughout the region – a task impossible ten years earlier. Finally, by 2006, the political situation in the Middle East improved. The Hansen Institute began working again in collaboration with the Peres Center for Peace to promote peace through agriculture.

How have these complicated projects with countries in conflict been managed? Once the region and partners are identified and the programme plans developed and funding is secured, how does one manage the programme?

Managing the programmes

Peace through agriculture was a winning formula in fostering international understanding. Managing these programmes was challenging. No one formula worked but there were five basic areas to address: political, technical, logistical, financial and contract reporting to programme sponsors. For the early programmes, the Hansen Institute was the umbrella organisation for the programme and provided administrative and programmatic oversight. This was done because the countries in the region were not able to openly work together and it was easier to have an outside organisation to spearhead the work.

A steering committee, made up of key individuals in each participating country, was established for the purpose of discussing cooperation and addressing any political issues that might inhibit technical progress. The committee met twice a year in alternating countries in the region, even though political events some-

Successful programmes must be of high priority to the countries and individuals involved, must benefit a large number of people and must generate scientific and economic dividends.

Egyptian, Israeli, Palestinian, Jordanian, Moroccan, Italian, American and other delegates at the Peres Center/Hansen Institute-sponsored Integrated Crop Management, Market and Product Development Workshop, November 2006, in Cairo, Egypt

times made it difficult to meet and work together. The steering committee found ways to resolve problems such as getting visas or permits for travellers, or resolving personal differences that caused disruption in the programme.

The technical committee handled the science and the business aspects of the programme. Scientists and business partners met twice a year to discuss the collaborative research and to address the project demonstration sites in each county. In Israel, the sites included research institutes where scientists from each country collaborated in the development of new varieties of fruits or vegetables best adapted to desert regions. In Egypt and Morocco, the project sites included demonstration farms where new crop varieties were tested for their adaptability. New production technologies and new crops were demonstrated to the local farmers. An Israeli farm manager worked with Egyptian and Moroccan counterparts to establish and run the project site and to manage the export and business aspects of the farms.

The logistical, financial management and agency interface for the regional cooperation programmes were handled by the US Program Director of the Hansen Institute. This was done because it was complicated for countries in the region to work together directly. Although the situation today has improved for the most part there is still a need for outside partnerships.

The logistical management was by far the most difficult and problematic area of the collaboration. Getting scientists and project participants to all the participating countries was influenced in part by the overall political environment. Travel was not easy. Permits for scientists to leave their countries and visas for them to enter another country took time and effort, involving letters from the Hansen Institute to consulates and employers and often intervention from the country's steering committee representative who was always politically connected. Once permits and visas were secured, travel was not always guaranteed pending political events in the region. Furthermore, finding a time that was mutually available was also problematic. Major holidays for all the religions in the region resulted in a significantly narrowed period of time available for meetings.

The fiscal oversight was managed by the US Program Director. The budget included money for collaborative activities such as the technical and steering committee meetings and money for in-country activities such as the demonstration site development. Subcontracts were issued to the partners to cover the in-country activities. The subcontract budgets were managed by a university, a government organisation or by a fiduciary agent equipped with the necessary fiscal checks and balances. The fiscal management approach for these regional projects varied depending on the nature of the contract and the partners involved. Timing and budget flexibility were negotiated based on best fiscal management practices and the ability of the local organisations to adhere to these requirements.

The programmatic oversight was performed by the US Program Director in cooperation with the Country Coordinators and the Technical Committee Director. It was important to make sure the programme achieved the stated objectives and also to report the accomplishments to the programme sponsors. However, making sure that the technical objectives were met was not always as straightforward as it seemed. Action items discussed by the steering and technical committees were clearly defined at the meetings. Once participants returned to their home countries, however, competing demands for their time made follow-up a challenge. In order to keep on track, regular communication and follow-up action item lists were essential. Such communication during the early programmes was more difficult and costly since the internet was not readily available. Periodic phone and regular fax communications between the US Program Director and the Country Coordinators were the main approach for monitoring technical progress and addressing problems. This changed in the late 1990s when email communication became common, when global systems worked efficiently and software compatibility issues were resolved. Managing collaborative programmes with countries in conflict requires regular communication among partners – direct communication and face-to-face meetings are the best. Reporting accomplishments as well as obstacles to the programme sponsors is important for continued success.

Managing international projects with countries in conflict is challenging but immensely rewarding The various political situations impact the ability of participants to meet, travel and communicate with one another. During the course of a programme this situation may change – for better or worse. Successful programmes must be of high priority to the countries and individuals involved, must benefit a large number of people and must generate scientific and economic dividends. Peace can be achieved only through the dedication and hard work of individuals who are committed to this goal. There is no model that will work for every area of the world – but a creative and flexible fiscal and programmatic management approach is needed in order to adapt to the constantly changing political environment, whilst accomplishing the technical objectives that will pave the way toward international understanding and peace. RG

Dr Bonnie A Stewart is Executive Director of the Fred J Hansen Institute for World Peace, US Program Director, and Director, Program Development at San Diego State University Research Foundation.
Email: bstewart@foundation.sdsu.edu

Triple helix headlines and highl

We can be better together. Traditional organisational structures promote silo-based approaches within academia, business and government. Trilateral, multidisciplinary collaborations address complex problems from multifaceted perspectives to transcend national and cultural boundaries and provide escape from narrow sector silos. New structures are required to foster collaborations that will promote integrated outcomes, allow faster transfer of results, and encourage innovation. The Institute for Triple Helix Innovation is designed to foster seamless, interdisciplinary collaboration between public, private and academic research sectors. By exploring critical interfaces between government, academia and industry, the Institute aims to increase access to global scientific expertise, quantify new collaborative models, promote evidence-based product development, and investigate new paradigms for innovation. In each issue, **Leigh Jerome** provides highlights of emergent items, products, events and research related to cross-sector, multi-disciplinary research and development.

For more information, visit: http://www.triplehelixinstitute.org
Contribution ideas for this column can be emailed to: info@triplehelixinstitute.org

Games offer help for information overload and collaboration

Games may be the answer to our information overload problems. New tools, inspired by interactive games, are being used to help people prioritise their hundreds of email messages so they won't miss important items. Second Life has been using virtual currency to reward and motivate participation, but now the concept is being adapted for corporate email programmes. The enterprise productivity application Attent™ incorporates psychological and economic principles from successful games. It uses a virtual currency called Serios™ that enables users to attach value to an outgoing message to indicate its importance, which helps the recipient prioritise email. It also provides tools that enable users to analyse communication patterns in order to better understand collaboration, teamwork and goal alignment. http://www.seriosity.com

International symposium on grids for science and business

A one-day international symposium was held on 12 June 2007, aimed at bringing together parties interested in the short- to medium-term evolution of grid technologies as a promising ICT paradigm. For computing and/or data storage, it offers unprecedented solutions at very affordable costs. The technology will soon move from academic and scientific circles to industry and institutions. Future grid applications will have functions across different fields and will involve many parties. The event was organised by the Flemish Interdisciplinary institute for BroadBand Technologies (IBBT) and Ghent University (UGent) in collaboration with the Université Libre de Bruxelles (ULB) and Vrije Universiteit Brussels (VUB), with support from BEgrid, The Enabling Grids for E-sciencE (EGEE) project and EUROLABS. http://events.ibbt.be/grid2007

Conflict Of Interest (COI) toolkit

The Federation of American Societies for Experimental Biology (FASEB) issued a call to the scientific community to adopt more consistent policies and practices for managing financial relationships between academia and industry in biomedical research. FASEB subsequently launched the Conflict Of Interest (COI) Toolkit – a website designed to help researchers, institutions, publications and industry put the FASEB recommendations into practice. http://opa.faseb.org/pages/advocacy/coi/toolkit.htm

Links between spin-off companies and higher education are flourishing

The sixth Higher Education-Business and Community Interaction (HE-BCI) survey report has been published, analysing the results of the 2006 higher education-business and community interaction survey for UK higher education institutions. According to the report, the number of spin-off companies with links to higher education institutions is on the rise, with growing commercial research and intellectual property income underscoring higher education's key role in the economy. The report further finds that the quality of these companies is also increasing, with the number of spin-offs in business for three years or longer rising from 592 in 2004-2005 to 669 in 2005-2006. http://www.hefce.ac.uk/news/hefce/2007/hebci.htm

Internet changes the rules for marketing

The dot.com boom may have fizzled, but innovative websites are grabbing a big share of marketing dollars. At the same time, they are giving consumers a voice on what products and services they like and dislike. *Fortune*'s Jeffrey O'Brien reports how one such site, Yelp.com, has become an online platform for user reviews of local businesses in many cities in the US. Small businesses promoted positively on the site can find themselves being overwhelmed with new customers without having to spend anything on marketing. Consumers benefit by being able to access a variety of opinions and rankings by other consumers, not just the company line in an advertisement or the Yellow Pages. http://money.cnn.com/magazines/fortune/fortune_archive/2007/07/23/100134489/index.htm

ights

New effort to tap technology to aid the service economy

Need for innovation in the service sector led to the creation of the Service Research and Innovation Initiative by a group of large technology companies, universities and professional associations. This new organisation will support and promote research to find ways that technology can increase productivity and innovation in the service sector. The initiative is an example of how broad collaboration based on shared goals can bring innovation and develop new fields such as 'service science'. http://www.thesrii.org

New technology for visual collaboration

Sharing photos on the web is one thing, being able to knit images together is the beginning of new collaborative potential. Microsoft Live Labs has developed an immersive technology that allows users to explore minute details of a 3D environment by clicking and dragging their mouse over photographs to see the smallest details in high resolution, zooming out, and panning 360°. It can create hyperlinks between a multitude of shared images and content from the internet using semantic information on the webpage or embedded in the photo. Photosynth has exciting potential for scientific collaboration, as it allows a variety of views, photographs and other related material to be integrated and explored in a 3D image. http://labs.live.com/photosynth

Innovation comes from creative collaboration

Excerpts from a *Computerworld* interview with Laura Campbell, recipient of the 2007 EMC Information Leadership Award, indicate that even a project as daunting as collecting and digitising all the content of the US Library of Congress can be conquered with enough innovation and leadership. As she explains, good leaders need not only a vision, but also a solid strategy for executing that vision, and successful innovators understand the value of involving others in the development of strategy and the importance of embracing differing ideas and values. http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=294195&intsrc=hm_list

Innovation Indexes for six Pacific region locales

The Institute for Triple Helix Innovation released its Initial Innovation Indexes on 27 July 2007. These indexes serve as indicators of innovation potential for six Pacific Rim locales: the US states of California, Hawaii, and Washington, and the nations of China, Japan, and Singapore. The indexes were calculated from ten years of retrospective data on economic trends, ecological sustainability, technological progress, and demographic development within each of the six locales. They will be used for longitudinal comparison of each of the respective locales. Megatrend data will be updated annually to allow adjustments that reflect changes in underlying data and trends. http://www.triplehelixinstitute.org/projectInfo/megatrend.html#indexes

Why do manufacturing firms choose to collaborate on innovative projects?

The *SSTI Weekly Digest* reports on findings from the Center for European Economic Research regarding the motives of collaborative firms. In 'Motives for Innovation Co-operation – Evidence from the Canadian Survey of Innovation', Tobias Schmidt categorised firms based on their reasons for engaging in collaborations: 1) Cost sharing for innovation; 2) Accessing external knowledge; 3) To enable scale-up in production; and 4) To develop commercialisation activities. Similarities and differences in firm characteristics and collaborative motives are discussed. ftp://ftp.zew.de/pub/zew-docs/dp/dp07018.pdf

New website for social entrepreneurs

Social Edge, a program of the Skoll Foundation, is a website for social entrepreneurs. The site offers live discussions, blogs and other resources for sharing ideas on succeeding in business with a 'social profit' motive. They offer links to communicate and share ideas with others, as well as to read about the past experiences of leading social entrepreneurs.
http://www.socialedge.org

Social enterprise typology breaks down traditional boundaries between non-profit and private sectors

We are entering a new era of social enterprises. Virtue Ventures defines a social enterprise as 'any business venture created for a social purpose – mitigating/reducing a social problem or a market failure – and to generate social value while operating with the financial discipline, innovation and determination of a private sector business'. Virtue Ventures was founded in 2000 to share ideas on social entrepreneurship and focus on social impact and value along with profit. Resources available on the website include an extensive 'Social Enterprise Typology' for download, video interviews on the topic, and links to various online publications. Virtue Ventures offers a variety of services to social enterprises as well as providing information on how enterprises can have a greater social impact.
http://www.virtueventures.com RG

Dr Leigh W Jerome is Director of the Institute for Triple Helix Innovation in Hawai'i.
Email: info@triplehelixinstitute.org

International round up

2007 EARMA Annual Conference – a brief review

The 2007 EARMA Annual Conference took place in Warsaw, Poland, on 29 June-1 July. A pre-conference workshop on the new electronic application process for National Institutes of Health grant funding (given by Dr Ann Davis of the Fogarty International Center) was held just prior to the conference on the Friday.

The main conference began on the Saturday and the opening address was by Prof Jerzy Buzek MEP, Rapporteur for the Framework 7 Programme (FP7) on the European Parliament's Committee on Industry, Research and Energy (ITRE). Prof Buzek stressed the growing need for excellence in research management to match the excellent science being performed within Europe. Prof Buzek also called for an increase in the number of research administration professionals, and to raise the level of skills in managing research strategy, intelligence and resources.

In a letter to all delegates, and following on from his video message to the 2006 conference, the European Commissioner for Science and Research, Mr Janez Potočnik, stressed similar themes. He noted that 'excellence in science requires excellence in the management of science' and linked the importance of professional research management to the success of the European Research Area (ERA) and the six 'pillars' that should form its foundation, according to the Commission's recent Green Paper on the ERA.

Prof Buzek's presentation was followed by keynote presentations from Dr Ester Basri from the OECD, on the factors and policies which influence the international mobility of researchers, and Dr Leonidas Karapiperis of the European Commission, who spoke about new perspectives for the European Research Area and the Commission's Green Paper.

The remainder of the morning session was devoted to presentations on the new risk-sharing finance facility in FP7, and the challenges posed by international science and technology cooperation in the ERA.

In the afternoon, two parallel sessions were held on the operational and administrative aspects of the European Research Council and the new Marie Curie Schemes in FP7. These sessions were followed by three interactive parallel workshops on other aspects of research management – the ideal FP7 research support office, international research collaboration, and key issues for FP7 in the new member states.

In the evening, delegates were invited to a formal dinner in the Royal Castle (or *Zamek*) in the historic old centre of Warsaw – a magical setting – followed by drinks on the outdoor terrace of the castle.

The second morning of the conference was devoted to EARMA itself – how best to manage and govern the organisation in the future to achieve all the goals its members expect. Kathleen Larmett, of NCURA (the National Council of University Research Administrators) in the United States, gave some very useful and interesting insights into the governance of organisations such as EARMA. This was followed by the annual General Assembly.

Further parallel workshops were held in the afternoon on time management strategies for research managers when preparing proposals, and grant and consortium agreements in FP7. The format of future EARMA Annual Conferences was also discussed

The event was once again very well received by delegates and we look forward to the next Conference in 2008.

Paul Craven is Vice President of EARMA.
webmaster@earma.org


San Diego, USA

The **Association of University Technology Managers** will hold its 2008 Annual Meeting at the San Diego Marriott Hotel and Marina, San Diego, California, USA, on 28 February-1 March.

The theme of the 2008 AUTM Annual Meeting, 'Changing Horizons', reflects the nature of what the AUTM does, how this has changed in the last three decades, and how the AUTM anticipates these changes are going to reflect different approaches to technology transfer.

For more information visit www.autm.org

The **SRA International** Annual Conference will be held on 13-17 October 2007 at the Gaylord Convention Center in Nashville, USA.

The dates of the next section meetings are:

- 2008 Southern/Midwest Section – 17-21 May 2008, Hilton Head Island, South Carolina
- 2008 Western Section Meeting – 7-11 June 2008, Denver, Colorado

For further information, visit the SRA International website at www.srainternational.org

INORMS 2008 – 'Exploring Similarities: National and International Research Management and Administration'

The next congress of the International Network of Research Management Societies (INORMS), hosted by the Association of Research Managers and Administrators (ARMA) UK, will take place in Liverpool, UK, at the new Arena and Conference Centre on 16-19 June 2008.

Registration will open on 1 January 2008. The deadline for submission of session proposals has been extended – please contact inorms2008@arma.ac.uk for further details.

For further information on the conference, please visit www.inorms2008.org

Delegates at the IPR workshop in London, May 2007

Engineering IPR Strategy: an international, interdisciplinary workshop

IP Australia and Bournemouth University will bring together an international group of academics and practitioners to discuss how the strategic management of intellectual property rights (IPR) enhances graduate enterprise skills. The event will take place at the IP Australia Conference Centre, Melbourne, Australia, on 7 December 2007.

The Melbourne workshop follows two successful London workshops facilitated by Profs Jim Roach (engineer) and Ruth Soetendorp (IPR management), as part of a project funded by the UK Higher Education Academy. Engineers and IPR specialists from Europe, the US and India met to share experiences of innovative educational initiatives, 'not taught – but self managed', that will prepare students for the professional encounters of their working lives. Read more about the project at http://www.engsc.ac.uk/resources/ipminiproj/index.asp

Call for papers

We welcome papers on the following topics:

- Intellectual property education
- Strategic management of IPR
- Developing entrepreneurial expertise
- Interdisciplinary collaborative teaching
- Curriculum design – in engineering and law

To discuss your contribution, please contact either of the Event Organisers:

Prof Ruth Soetendorp, Centre for Intellectual Property Policy & Management, Bournemouth University: rsoetend@bournemouth.ac.uk

Prof Jim Roach, School of Design, Engineering and Computing, Bournemouth University: jroach@bournemouth.ac.uk

Further general information is available from Emily Cieciura, CIPPM Co-ordinator. Email: ecieciur@bournemouth.ac.uk or telephone: +44 (0)1202 965197

The **Association of Research Mangers and Administrators (ARMA) UK** have organised two residential events, taking place within the next six months. A Senior Managers' course (Level 3) is planned for January 2008 and a Middle Managers' course (Level 2) is planned for March 2008.

Further details on these courses and other ARMA events are available at www.arma.ac.uk

NUC headquarters in Abuja, Nigeria

The West African Research and Innovation Management Association (WARIMA)

The inaugural WARIMA conference will take place in November 2007, at the National Universities Commission (NUC) headquarters in Abuja, Nigeria (see page 20).

The event will bring together research management staff, academics, donors and policy-makers with an interest in the development of research management in the West Africa region.

A workshop on 'Accessing International Funds: the basics of proposal preparation' will also take place during the conference in November at the same venue.

Further details are available on the WARIMA website at www.warima.org

Reflections on dipstick testing from both sides of the fence –

the need for propriety with grant expenditure

Funding bodies, as well as universities, are increasingly accountable for the conduct of the research they support. **David Langley** describes how this is being addressed by the UK's largest research funder.

Each year, the seven UK Research Councils (which although independent from Government receive their funding from it) invest around GBP 2.8 billion in research covering the full spectrum of academic disciplines. Since 1996, the issue of how the Chief Executive of each Research Council, as Accounting Officer of their organisation, obtains assurance that research funding is spent correctly and with propriety has been solved through a light touch 'audit' called dipstick testing. The process involves completion of a pre-visit questionnaire by each institution followed by a visit from a team of grant administrators (the team is not comprised of auditors) from one or more Councils. Typical questions include 'who is responsible for ensuring adherence to the terms and conditions under which grants are awarded at your institution?' or 'what management information is available on expenditure and who uses it and for what?'. During the visits the teams meet a number of senior officers from the university and its support services, e.g. finance, purchasing, internal audit, research support offices, as well as principal investigators themselves. In practice, priority is given to those institutions in receipt of the largest volume of funding and approximately 15 institutions are visited each year, each of which receives a report of the outcome of the visit plus a grading. Those institutions in receipt of smaller levels of funding may be requested to complete a questionnaire only, and only those for which there are concerns are subsequently visited.

During the visit, the team undertakes a review of expenditure on a small sample of awards, looking particularly at staff appointments and costs (i.e. checking the people employed on a piece of work are the ones actually doing it) and non-staff costs, including consumables and large equipment. The category of cost guaranteed to receive particular focus from the dipstick team is usually travel, for example reviewing whether staff have (or were able) to travel first class (against terms and conditions) and whether the grant could have been used to pay for an annual holiday. In reality, dipstick teams rarely discover anything seriously remiss, although there are stories of principal investigators who used their grant to pay for an annual subscription to *Motorcycle News* or for their staff Christmas party! Most concerns are with those institutions, although few in number, where the dipstick team cannot obtain assurance about expenditure of those grants sampled; this is usually attributable to deficits in management information, poor financial systems or controls, weaknesses in authority to incur expenditure and monitoring.

The visits are often viewed with apprehension by those universities chosen to be visited (and they could be an uncomfortable experience if controls were evidently poor) but they facilitate something more important than assurance – they are one of the few opportunities which research support staff actually get to meet and have face-to-face dialogue with colleagues from the Research Councils who themselves are involved with the terms and conditions of awards from a funder's perspective. This aspect introduces a collaborative approach, promoting mutual understanding of the relative requirements of the Research Councils, as sponsors of the research, and the universities as providers. In my opinion, this proves the most valuable output from the visits since there is a tacit acceptance that universities are unlikely to set out to defraud the Research Councils *per se*. The visits can be used internally as a trigger for additional resource or to focus attempts to introduce improvements in processes or systems. An added benefit is that colleagues from different Research Councils get to meet each other since visits are undertaken by teams from a group of

The visits can be used internally as a trigger for additional resource or to focus attempts to introduce improvements in processes or systems.

Councils. Indeed, dipstick testing was one of the first examples of the Councils working collectively and, if anything, served as a precursor to Research Councils UK, the strategic partnership aimed at encouraging the individual Research Councils to work together and develop common practices and systems.

The issue of how a university should institutionally manage its research portfolio is a complex one, especially since most organisations are large, and have remote academic departments with devolved authorities. The problem is that effective monitoring relies on appropriate controls at the point of expenditure, i.e. in the academic department. Any central unit observes spending after the point of expenditure when it is too late and 'battles' can then ensue between the centre and academic department if the former asks the latter to correct something that is inadmissible. Moreover, the centre is perceived as unhelpful and 'jobsworthy' yet is ultimately accountable for grant management. Many organisations attempt to divert this responsibility to the principal investigator, yet this does not absolve the university of its responsibility to ensure that monies received are spent in a way appropriate to the award. The key to achieving appropriate accountability within the oversight of a central research office is often through effective departmental managers or administrators who have knowledge of the research portfolio in their department, have authority to approve and hence stop expenditure on individual grants, and who can (and usually do) monitor activity regularly. These administrators are often close to the personalities of the principal investigators and can often influence behaviour in a more subtle way than through central control by faces which are less familiar (or even so remote that they are never seen). The roles and responsibilities of the major players need to be clear and enforced.

There are opportunities for control which can be achieved through appropriate financial systems; however, these can be prescriptive since they often involve capping components of a project budget thereby preventing overspending. Although effective, they can remove flexibility and cause more problems than they solve, creating tension between principal investigators and support staff. The model has more flexibility if terms and conditions allow virement between cost categories but this can be more complex to set up within a system. It is ironic that these strict controls have a positive downstream impact on invoicing since the majority of costs are *bona fide* and contain no surprises for the funder, enhancing the institution's reputation for grant management.

The implementation of Transparent Approach to Costing (TRAC) and Full Economic Costing (FEC) methodologies at UK universities has prompted a review of dipstick testing processes, which will be replaced by a process called the Funding Assurance Programme (FAP). The new system was introduced as there was recognition that current processes could be improved and expanded. In particular there was concern that sample-based visits did not offer sufficient breadth, that each Research Council tended to approach visits slightly differently, and that a potentially increased workload was not deliverable with current resources. Prior to the introduction of FEC, the dipstick testing teams did not focus greatly on use of indirect, facility or estate charges, yet their increased importance under FEC meant greater transparency was required. Logistically, FAP is likely to be more complex since it will check calculation of institutional FEC rates. Furthermore, it seems likely that funding for scientific research will continue to increase, hence the financial risk will be greater. A new RCUK Assurance Unit is developing a strategy for methods to obtain assurance, one which looks like it aims to also satisfy the requirements of non-Research Council funders and hence avoid unnecessary duplication of effort and cost. This would be readily welcomed by the university community.

It is likely FAP will continue the previous emphasis of dipstick testing, i.e. establishing propriety of expenditure on grants. But a wider, equally important question that needs to be asked is how an organisation or a funder seeks assurance about the quality of the research itself other than 'classical' outputs such as scholarly articles or books. There is increasing interest from a range of stakeholders in these deliverables which include the economic and social impact of research, licences, patents and spin-out companies, influence on policies and government initiatives and the benefits to society generally. Organisations will need to develop processes and systems which will enable them to capture these outputs. Whether FAP should encompass and 'audit' these is a moot point.

What interest does dipstick testing have for the wider university community, especially outside of the UK? I advocate that institutions should adopt the principles and initiate their own internal 'dipstick testing' reviews of academic departments. This would provide internal checks and assurance on the management of the research grant portfolio (above and beyond that given by internal audit) but, just as importantly, would facilitate research support staff meeting with principal investigators to discuss how they manage 'their' grants and hence improve communication. It will enable a university to send a strong message to principal investigators and funders that they take their responsibilities seriously. Care is needed when communicating the rationale behind the programme – support for them in their grant management rather than a simple flexing of the compliance muscle. If a researcher feels particularly strongly they do not wanted to be 'dipstick tested' then those are probably the people you want to start with first! RG

Dr David Langley is Director of Research and Enterprise Development at the University of Bristol, UK. He previously worked for the Medical Research Council, where he was their representative on the Dipstick Testing Group. He subsequently joined Imperial College London as Director of Research Services, where he was the recipient of a dipstick visit, so has experience from both perspectives.
Email: David.Langley@bristol.ac.uk

Establishing research management in West Africa II

Patrice Ajai-Ajagbe reports on the project behind the establishment of the West African Research and Innovation Management Association.

It is almost a year since the convening of academics and policymakers in Lagos for the international conference on Research and Innovation Management in West Africa (as reported in *Research Global 15*). The meeting was organised to canvass support for 'structured' capacity building in research and innovation management in the West Africa region – and it was agreed at this meeting that this would be best achieved through an association specifically set up to enhance capacity in this area.

It would be practical to have such an association for the region. Most West African countries (excluding Ghana and Nigeria) have fewer than ten higher education institutions – and some countries have only one! Thus, having a shared association would not only be cost-effective, but would also give many institutions and individual research management staff a sufficiently large network with which to share and compare notes.

In addition to the above, the association is expected to provide services (e.g. training, consultancies, updates to members); act as a galvanising agent for research activity in the region through the pooling of resources; and be a representative body through which the region's research activity can be accessed and profiled. However, because the West Africa region operates in three 'official' languages (Arabic, English and French), at this stage we expect membership and participation in the association's activities to come primarily from the Anglophone countries in the region.

In this case it is expected that WARIMA will help 'create' and develop the sector at the same time.

The West African Research and Innovation Management Association (WARIMA) steering committee (which was formed at the 2006 meeting) actively sought external support for its first year, recognising that the success of this period would be vital to WARIMA's long-term sustainability. A grant was obtained from the England-Africa Partnerships (EAP) programme for a one-year project, which will specifically cover start-up, development and running costs for WARIMA in its first year.

Prof Idowu Olayinka, Chair of the WARIMA steering committee

The Association of Commonwealth Universities (ACU) which was a sponsor of the 2006 Lagos meeting, was instrumental in bringing together all the partners for this one-year project, including the Institute of Education, University of London (IOE) as the England partner for the project. The IOE formally applied for and was awarded the above-mentioned EAP grant for this purpose. The project director based at the IOE is also the Deputy Chair of the Association of Research Managers and Administrators (ARMA) UK, and through ARMA will play an important role in harnessing wider UK involvement. Already, several ARMA members are involved in preparing good practice guides for research management, which will be distributed at an ARMA-run workshop for WARIMA members in Abuja, Nigeria, in November 2007.

The Africa partners of the project are the University of Ibadan, Nigeria (where Prof Idowu Olayinka, the Chair of the WARIMA steering committee, is based), the University of Sierra Leone and the University of Ghana (which are both represented on the steering committee), and Walter Sisulu University in South Africa, which has first-hand experience of developing new research structures in recent years. The ACU is also a partner and provides administration support to the project director at the IOE.

Since the EAP grant was awarded in March 2007, the project partners and the steering committee have been working to establish WARIMA's focus in its first year of operation. Interestingly, the more established research management associations were formed by existing research management staff who came together to create a forum for their occupation – with the resulting associations serving to professionalise their work further. However, in this case it is expected that WARIMA will help 'create' and develop the sector at the same time (the overwhelming majority of delegates at the 2006 WARIMA conception meeting were senior academics – an indication of profile of the sector). Thus, WARIMA intends to take a more overtly steering (as opposed to representative) role in its first few years.

Most of the 'start-up' work has already been done by Prof Olayinka and his team at the University of Ibadan – formal registration of the association, WARIMA office staff recruitment and training, recruiting membership, publicity and provision of the WARIMA office premises. The inaugural conference and annual general members' meeting scheduled for November this year will bring together much of the work being done to develop the association. Non-regional colleagues are most welcome to attend!

The ARMA-run workshop mentioned earlier will take place during the conference and it is the first of three such training events scheduled to take place in West Africa between November 2007 and March 2008.

Further details on the conference, the workshops and WARIMA in general can be found on the WARIMA website at www.warima.org RG

Patrice Ajai-Ajagbe is Programme Officer at the Association of Commonwealth Universities.
Email: p.ajai-ajagbe@acu.ac.uk

Continued from page 7

categories of support – North-South linkage initiatives, North-North-for-South linkage initiatives, and institutional linkage initiatives such as Networks of Centres of Excellence – saw limited donor activity in LDCs as compared to non-LDC countries.

- If donors wish to promote cluster 3-type linkage initiatives effectively in LDCs, a deeper understanding is required of what motivates institutions and individuals to link in the first place. Many studies herald the promise of linkage strategies for 'latecomers' to science- and technology-based development. The question for LDCs and the donors who support their development is whether this approach works in the lowest STI capacity environments of the LDCs.
- Like a stream, STI collaboration affords a route through which scientific and technical knowledge can flow into a country from international sources. If, however, the country lacks the ability to absorb that knowledge, adapt it, disseminate it, and put it to good use, its potentially positive and lasting effects simply drain away (RAND 2002). Benefiting from the flow (i.e. cluster 3 linkages initiatives) requires institutions and resources to create first an absorptive capacity that will allow a collaborating country to make the knowledge and technology its own and put it to its own uses (i.e. foster local innovation). This requirement constitutes a baseline level of scientific infrastructure and human resources capacity to make collaboration an effective mode of capacity building. Countries with capacity below this baseline level cannot measurably use collaboration to build capacity. Above the baseline, collaboration becomes a viable mechanism for augmenting capacity.
- Partnering effectively with LDCs to address their STI needs requires LDC government and donors to address simultaneously the challenge of linkage creation, associated with cluster 3, the capacity building aspects of cluster 2, and certain elements of the knowledge generation activities promoted in cluster 1. Since most of the initiatives that donors support ignore some of the most distinctive characteristics of LDCs' knowledge systems, a new generation of donor-supported integrated innovation initiatives (IIIs) in LDCs appears warranted. This new generation of initiatives would appropriate the holistic and integrated characteristics ascribed to the National Innovation Systems framework but would be grounded in the realities, challenges and opportunities that distinguish LDCs from other country groupings where the NIS framework may yet be more appropriate. The study profiles a few examples of successful III initiatives in the LDC context.
- For the III paradigm to become the standard in donor support to STI in developing countries and in LDCs in particular, several conditions must be met. Namely, LDCs themselves must be in the driver's seat of policy reforms and donor coordination, with national governments and local partners taking the lead in defining integrated priorities and a vision for an III approach. Transition from the status quo to this new approach entails building the capacity of LDC governments to manage donor investments in STI to foster integration and complementarity. Once mainstreamed in LDCs, the III approach to STI for development in LDCs might merit more direct budget support on behalf of donors as they migrate away from a past of ad hoc, disparate investments.
- Facilitating the best choice for donors and their developing country partners between funding initiatives in clusters 1, 2, 3, or 4 entails knowing when certain kinds of STI initiatives render benefits. As new research provides insight into how LDCs can best build capacity to tap into and benefit from knowledge networks, donors and their developing country partners are encouraged to differentiate their approaches to support STI for development in a way that is attuned to this research. These insights make possible a future in which developing countries and donors are equipped to provide guidance regarding which types of investments are most urgently required to establish a baseline capacity above which other types of investments would pay off.
- Determining which aid tools or modalities are best suited to the socio-economic development of a country is no small task. No doubt the traditional approaches have been marred by an ad hoc nature, too much bureaucracy, under-funding, ignorance of some of the enabling conditions required for success, and a limited appreciation for the integrated nature of STI and the need to foster it accordingly. Some new models classified under the 'new philanthropy' banner are radically challenging old approaches though they have yet to be widely adopted in the bilateral and multilateral donor communities. From an LDC perspective, these new methods may provide a positive starting point in deadlock situations.
- The task of articulating national priorities and strategies for STI for development is as much about stocktaking and evaluation as it is about goal-setting. A necessary area for LDC and donor attention is inventorying countries' pockets of STI strength and cataloguing their investments and achievements (e.g. by institution and at the project level, including data on patents, publications, etc). Beyond knowing which institutions and lines of work are underway, tracking who is involved in STI in a country and codifying what skills are required to solve key STI-related challenges merits attention.
- The future of global support to STI in LDCs is likely to differ radically from the current snapshot provided by the study. Three emerging trends could shift the orientation of donors' support markedly: (1) greater basket funding, (2) strategic rethinking, and (3) increased donor coordination around the Poverty Reduction Strategy Papers. To what extent these three trends will render greater support for STI in LDCs specifically is not yet clear.

The question for donors is no longer whether STI can solve development problems, as we know that science, technology, and innovation are driving forces for poverty reduction and of modern economic growth and competitiveness. The question is how best donors and partner countries might harness these tools in the future to respond to the particular challenges individual countries face. Piercing the veil that shrouds donor approaches to aid constitutes a critical step toward reaping the rewards that donor coordination, transparency, and accountability can render. RG

Project management – a perspective from **Botswana**

Oggie Maruapula considers the role that project management has to play in the function of research management offices.

The increase in the proportion of research commissioned on a project-by-project basis has been a major trend in recent years. This causes a problem for universities since, although terms and conditions may be negotiated centrally and it is the institution that takes responsibility for meeting obligations, day-to-day management of projects rests with the research team, who may come from a very different background.

The capacity of university central research management units to monitor the performance of research teams is limited for several reasons. First, because of time and logistics – there are many more projects than research administrators. Second, there may be objections on the grounds of administrative interference. Finally, the capacity to meet project objectives will often depend on expertise that can only be found within the academic research team.

The role of the project manager is to facilitate linkages and integration, and to work with the various stakeholders involved in all the project components.

One approach that could be taken in these circumstances is to encourage a stronger awareness of project management issues within the research team itself. Project management cuts across disciplines and transcends many boundaries and fields of specialisation. The project management cycle is a reiterative continuum that should be self-reinforcing. Figure 1 shows the typical stages of a project cycle as conceptualisation, design, implementation, monitoring, and evaluation. Then the cycle restarts. During all the mentioned stages, the role of the project manager is to facilitate linkages and integration, and to work with the various stakeholders involved in all the project components. For example, at the design stage there are issues of project scope and specification that need to be treated within the project charter – a document that could be referred to as that which is 'commissioning' the project, research or consultancy work. At the same time, during project implementation stage, there could be issues requiring variation in scope – perhaps due to a change in the client's demands and needs. Such requirements may necessitate revisiting the project design, as often happens in research, consultancies and construction projects – where the client becomes 'educated' during the process of project implementation.

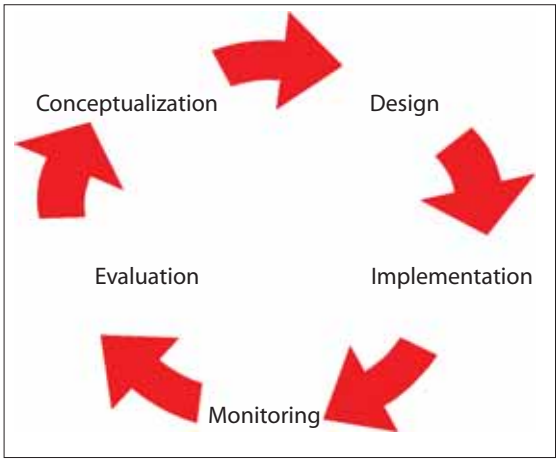


Figure 1: Typical project cycle

Research management is about good research administration, governance, and the promotion of university-wide research projects. Research projects may be anything and everything under the administration and management of university research management offices (RMOs) in their varied forms. In some universities these RMOs are called Directorates, Centres, Departments or other similar names. The important things to note, however, are the purposes, functions and responsibilities with which these establishments are charged. In the case of the University of Botswana, for example, the mandate of its Office of Research and Development (ORD) is primarily to foster the establishment and maintenance of a research culture within the university's academic community – many of whom are primarily lecturers, with their research activity taking up a significantly small portion of their time. The ORD has its own website and is the focal point for all research activity taking place at the University of Botswana. This research activity is placed into six categories:

a. research proposal writing
b. research fund administration
c. research project planning and implementation
d. monitoring
e. publication and information dissemination
f. evaluation of possible research impacts

The foci of the University of Botswana's ORD are *research quality*, *research funding*, and *research commercialisation*. Within the research funding portfolio, the ORD believes that project management in particular will play a pivotal role in ensuring research proposals are well developed by researchers. The university currently provides post-award project management training to research staff (this scheme was introduced in 2005) and plans to expand training in this area. The university also believes that project management should be seen as a distinct profession in its own right.

It is expected that the building of comprehensive project management competencies and understanding among researchers will result in the uptake of research project activities by the same – as project management is about

practice. In fact, for researchers it is beneficial to conceptualise their research as mini-project assignments that should fit a bigger research programme. This is because research resources are often constrained by time, funding, metrics and many other features which derive their language and definition from the way projects are managed. In its expansive application, project management takes into account issues such as stakeholder satisfaction, procurement, ethics, and knowledge creation, storage and its dissemination.

There are obvious benefits emanating from linking project management understanding to research management; for instance:

- well-defined, better-scoped, informed and potentially fundable research proposals could be generated by researchers, most of whom are not very familiar with research proposal writing owing to their demanding focus and commitment to lecturing
- research project activities could be more appreciated as success in undertaking research might yield more research project activities being completed on time, within budget and according to set objectives
- there could be a professional infusion of project management competencies into RMOs – hence the building of new skills and knowledge within RMOs commensurate with concepts of perceiving universities as learning organisations

In the case of Botswana, because project management is a young and relatively emergent profession in the country, there still are very few professional instances where one would find a professional project manager being in charge of the full project development cycle. And this is a challenge to be met – hence ongoing training to professionalise the discipline. The University of Botswana is therefore involved in the training of project managers. Also, through its Office of Research and Development, the University of Botswana provides ongoing project management support to researchers. RG

(The views expressed in this article are purely professional and independent, and are not necessarily representative of the views of the Office of Research and Development of the University of Botswana.)

Oggie B Maruapula is Assistant Director for Research Funding and Project Management Support at the University of Botswana.
Email: oggie@mopipi.ub.bw

Frameworks for Africa-UK Research Collaboration in the Social Sciences and Humanities: African University Perspectives

Strong and successful collaborations with researchers internationally are important ingredients for any university that wishes to build research capacity and increase the global reach of research outputs. Recognising this, the Association of Commonwealth Universities (ACU) has just published a new report, commissioned by the British Academy (the UK's national academy for the humanities and social sciences), which explores the challenges to successful collaboration between African and UK universities.

The report *Frameworks for Africa-UK Research Collaboration in the Social Sciences and Humanities: African University Perspectives* follows a recent consultation undertaken by the ACU of African researchers and research managers. It identifies what could be done to make partnerships more successful and sustainable, and to encourage and support future collaboration. The focus is very much on practical needs and on the limitations of existing collaborative funding models. As the title suggests, the report sets out to deliver the views of the African university research community, although the practical focus on research capacity and delivery means it will also be of interest to those involved in research outside the social sciences and humanities field.

Firm conclusions on best practice are not made. Instead, key issues are discussed, suggestions are made on how these problems might be tackled, and further questions are posed. In identifying these key questions, the report sets an agenda for more in-depth discussions at a British Academy-ACU meeting, to be held in Nairobi in February 2008, which aims to develop practical and workable models for future research collaboration.

ACU members in Africa and all those who participated in the survey will receive a hard copy of the report. Free PDF copies can be obtained from Jonathan Harle at j.harle@acu.ac.uk

Extension Survey

The ACU is conducting a survey of **Extension Capacity and Community Engagement Activity** at universities throughout Africa, Asia, and countries in the developing world. The aim of the survey is to better understand the structures, challenges, and innovative activities that universities take up in community engagement, research diffusion, lifelong learning, and other aspects of outreach. If you are engaged in such activity at a university in a developing country, please download the survey at:
http://www.acu.ac.uk/resman/survey.html
As the ACU seeks to build a new community for extension workers to share their experiences, the previous deadline for submitting completed surveys has been extended to late 2007. We look forward to hearing the views of a wide number of respondents to help us understand the needs of extension work in developing countries. Thank you for your input!

Recent Publications

ACU Librarian, **Nick Mulhern**, summarises.

International

Giving Knowledge For Free: The Emergence of Open Educational Resources

An analysis of models for freely shared educational resources, related intellectual property rights, and university support for such initiatives. Although focussed on e-learning it raises issues of knowledge ownership, sharing, and distribution, and the consequent potential impact on national economic achievement.
[OECD; CERI; 9789264032125; OECD; 2007 (www.oecd.org/dataoecd/35/7/38654317.pdf)]

Higher Education and Regions: Globally Competitive, Locally Engaged

Addresses the increasing recognition that HEIs can have both a national research presence and contribute to the region in which they are located. Incorporates national and regional analysis, and reviews 'engagement' with reference to 'teaching, research and service to the community'.
[OECD; 9789264034143; OECD; 2007 (www.oecd.org) (www.oecdbookshop.org)]

OECD Principles and Guidelines for Access to Research Data from Public Funding

Prompted by a Science and Technology Ministers meeting in 2004. The Principles and Guidelines are 'intended to assist all actors involved when trying to improve the international sharing of, and access to, research data'. The nature of 'public funding' varies between countries but the value of initiatives such as this lies as much in the issues it categorises (technological, institutional, financial, legal, cultural) as the specific guidelines it formulates.
[OECD; 9264034021; OECD; 2007 (www.oecd.org) (www.oecd.org/dataoecd/9/61/38500813.pdf)]

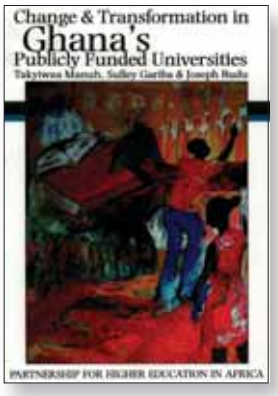
OECD Reviews of Innovation Policy

An OECD series assessing national innovation systems, and respective government support, for OECD and non-OECD countries. Includes policy and good practice recommendations. New Zealand and South Africa are among the countries covered. The first such report for China was launched by OECD and the Chinese Ministry of Science and Technology at a related conference (27/08/07)
[OECD; (2006 – to date); OECD (www.oecd.org) (www.oecd.org/document/62/0,3343,en_2649_201185_38848318_1_1_1_1,00.html)]

The Global State of Higher Education and the Rise of Private Finance

The first briefing paper in a series prepared by IHEP's Global Center on Private Financing of Higher Education (GCPF), providing a summary and analysis of the significance which private finance now has in HE internationally. University-industry collaboration is briefly noted, but as one among several opportunities, or techniques, that have been realised in contributing to higher education funding. Acknowledges the importance of 'adaptation to national circumstances' in recommending appropriate funding policy.
[Hahn, R.; 2007; IHEP. GCPF (www.ihep.org)]

Africa



Change and Transformation in Ghana's Publicly Funded Universities

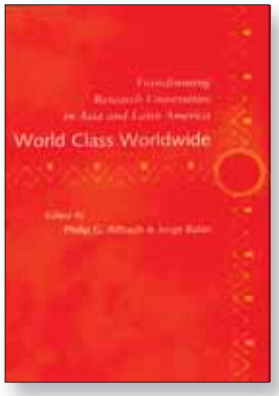
Part of the Higher Education In Africa series, this is one of several PHEA-commissioned national titles published this year. It is a general study of the country's system and current issues, but useful therefore in contextualising possibilities and challenges for 'research and knowledge production', and resource mobilisation and management, among other areas.
[Manuh, T.; Gariba, S.; Budu, J.; Partnership for Higher Education in Africa (PHEA); 978-0-85255-171-4; J. Currey; Woeli Publishing Services; (Published in association with the Partnership for Higher Education in Africa (PHEA)); 2007 (www.foundation-partnership. org/index.php) (www.jamescurrey.co.uk)]

Asia & Americas

Higher Education, Research, and Knowledge in The Asia-Pacific Region

Part of the IAU Issues in Higher Education series. These essays on the research environment and related policy support include analyses by region and country (e.g. China, India, Indonesia, Japan, Philippines, Thailand) as well as identifying general, and potentially international, trends in research management.
[Meek, V.L.; Suwanwela, C. (eds.); 9781403970954; Palgrave Macmillan for the IAU; 2007 (www.palgrave.com/products/title.aspx?PID=276139) (www.unesco.org/iau)]

World Class Worldwide: Transforming Research Universities in Asia and Latin America



This comprises several institutional and country-based case studies, including China, India, Brazil and Mexico, developed from a related Center for International Higher Education (CIHE)/Ford Foundation project. It provides a context for reviewing 'research universities in developing and middle-income countries – a small but growing subset of research universities worldwide', and acknowledges their 'special role because they are often the sole link to the international knowledge network'.
[Altbach, P.; Balan, J.; 978-0-8018-8662-1; John Hopkins University Press; 2007 (www.press.jhu.edu)]

Europe

Moving People And Knowledge: Scientific Mobility In An Enlarging European Union: A Summary Report

A project funded by the ESRC (Science in Society Programme) and the Anglo-German Foundation has resulted in a report exploring 'the relationship between highly skilled scientific migration and the transfer of knowledge within the EU'. It considers the patterns and motives for migration, and the opportunities for 'reverse knowledge transfer' through the influence of international scientific networks. Concepts of brain drain/gain are seen instead in the context of 'an on-going flux and circulation' of staff pursuing scientific research and employment opportunities. (A related book is to be published by Edward Elgar (www.e-elgar.co.uk).)
[Ackers, L.; Gill, B.; Guth, J; (European Law and Policy Research Group); ESRC; Anglo-German Foundation; 2007 (www.liv.ac.uk/law/elprg/docs/MOBEX2_Summary_Report_FINAL_20_June_2007.pdf)]

Research Funders' Policies For The Management Of Information Outputs: A Report Commissioned By The Research Information Network (RIN)

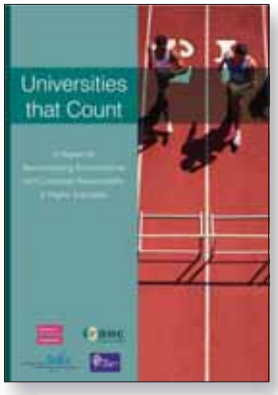
A comparison of the varying policies applied in the UK by research funding councils, universities, charities, government departments and business. Covers IP, published articles, repositories, curation and preservation, as well as unpublished research and metadata. Acknowledges that there is 'a growing realisation that the full value of the wide variety of information outputs from research will be realised only if research policies, practices and support systems develop appropriately'.
[Research Information Network (RIN); 2007; RIN (www.rin.ac.uk)]

Payment Of Publication Fees

(An RIN briefing note, 1 (Dec 06))
Full-economic costing, directly-incurred, and indirect cost models compared.
[Research Information Network (RIN); 2006 (www.rin.ac.uk)]

Universities That Count: A Report On Benchmarking Environmental And Corporate Responsibility In Higher Education (Testing the Appropriateness of Business in the Community's Corporate Responsibility Index and Environment Index for the Higher Education Sector)

A project benchmarking UK HE institutions of varying sizes, responsibilities and histories. Confirms that the (UK) 'HE sector as a whole is in the early stages of strategically and systematically managing their environmental and social impacts'. Useful in acknowledging the environmental obligations of universities: 'they are also huge organisations in their own right, with an infrastructure that is equivalent to any business'.



[Business In The Community (BITC); Environmental Association for Universities and Colleges (EAUC); HEFCE; Leeds Metropolitan University; 2007; LMU (www.eauc.org.uk) (www.hefce.ac.uk)]

UUK Policy Briefings

A new series of free briefings papers was launched last year (10/06), with the aim of reviewing 'current and emerging policy issues'. Two new titles have been published recently; both are focussed on the UK research environment but carry implications for research management elsewhere. ***Monitoring Research Diversity: Changes Between 2000 And 2005*** examines the profile of UK university research, specifically the potential impact of concentrating funding in the 'largest and most highly rated university units'. ***Publishing Research Results: The Challenges Of Open Access*** considers the opportunities offered by 'new and emerging methods of disseminating research information and outputs'.
[UUK; 1-84036-153-0 / 1-84036-152-2; UUK; 2007 (www.universitiesuk.ac.uk)]

RG

Research news

The news section of *Research Global* is brought to you by **ResearchResearch** – a leading publisher of news and funding opportunities for researchers.

With editorial teams in London, Washington DC, Sydney, Brussels, Stockholm, Amsterdam and Cape Town, ResearchResearch provides a comprehensive source covering research funding, policy and management. It gives research support staff and principal investigators the tools they require to make their jobs easier and increase their research income. More than 200,000 researchers and policymakers at universities, research establishments and government departments worldwide subscribe to their online services.

Network members can sign up for a free three-week trial of the online service. For further information contact Jon Thornton on +44 (0)20 7216 6531 or at jt@researchresearch.com

DFG establishes six new clinical research groups

(first published 24 July 2007)

The DFG, Germany's main funding agency for basic research, has established six new clinical research groups, it was announced on 18 July 2007. The groups will start work in July and will focus on a range of serious diseases and disorders, such as Parkinson's and Alzheimer's disease, bowel cancer and heart failure. The aim is to develop novel therapies and drugs which will have a greater impact on the treatment of such diseases.

The DFG's groups generally combine clinical, applied and basic research, and promote training and career opportunities for young scientists at these institutions.

As with the other 35 research groups the DFG has previously established, the group's institution is required to provide 50 per cent of the funding as well as the salary of a professor who will act as the principal investigator.

China and Korea record strong growth in patent applications

(first published 30 August 2007)

Worldwide patent applications are growing at an average rate of 4.7 per cent per year, with the largest increases recorded in the Republic of Korea and China, according to the 2007 World Intellectual Property Organisation (WIPO) Patent Report.

With an increase of almost a third over 2004, the State Intellectual Property Office of China (SIPO) became the world's third largest recipient of patent filings in 2005, with the amount of applications filed increasing eight-fold in China and doubling in Korea from 1995 to 2005.

More than three quarters of all patent applications in 2005 were filed at five offices – the Japan Patent Office, the US Patent and Trademark Office, the Korean Intellectual Property Office, SIPO and the European Patent Office.

NIH devoting smaller portion of its budget to training, education

(first published 30 August 2007)

The National Institutes of Health's spending on training grants and fellowships as a percentage of the agency's budget has declined significantly in the last two decades, according to new data published by the Federation of American Societies for Experimental Biology. NIH support for students as a percent of its total funding fell from approximately 4.3 per cent in 1985 to 2.7 per cent in 2006.

The data also indicate that success rates for NIH fellowship applications have dropped from about 45 per cent in 2001 to around 27 per cent in 2006. The percentage of all US biomedical PhDs who are tenured or in tenure-track positions is also steadily decreasing, from 46 per cent in 1981 to 28 per cent in 2006.

The number of postdoctoral students supported by research grants or non-federal sources has increased remarkably over the past 20 years, while the number supported by traineeships or fellowships has remained stable during the last two decades. But the percentage of biomedical PhD recipients with a postdoctoral appointment within one or two years of completing their degree has declined over the last decade.

New Australian research Code of Conduct released

(first published 4 September 2007)

The National Health and Medical Research Council, the Australian Research Council and Universities Australia have jointly announced the release of the Australian Code for the Responsible Conduct of Research. The code 'advocates and describes best practice in research for researchers and institutions, as well as setting out a framework for handling breaches of the code'.

The parties recognise that the overwhelming majority of researchers conduct research responsibly and within a sound ethical framework. But they note that when incidents of misconduct do occur it is important that they are managed appropriately.

The code advises on how to manage research data and materials; how to publish and disseminate research findings (including proper attribution of authorship); obligations in peer review; how to collaborate across institutions; and how to manage conflicts of interest. It also provides guidance to institutions when establishing independent external inquiries to evaluate allegations of serious misconduct.

Professor Gerard Sutton, chairman of Universities Australia, said the code was a good outcome from the efforts of the three organisations. 'This is a demonstration that the university sector takes very seriously its responsibility to maintain the highest standards of quality and ethical conduct in its research activities.'

Regional patent drafting workshop opens in Harare

(first published 4 September 2007)

Thirty scientists from across the African continent have converged in Harare, Zimbabwe, for a regional patent drafting workshop. The workshop, jointly organised by the World International Property Organisation (WIPO)

and the African Regional Intellectual Property Organization, began on 3 September 2007.

The workshop aims to increase the level of patenting in Africa. The continent's scientists, according to an official from WIPO, have been slow to take advantage of intellectual property rights resulting in them losing the economic benefits from their innovations. The workshop ended on 14 September.

OECD highlights missing results of increased R&D spending

(first published 6 September 2007)

China is not reaping the benefits of the increased funding of research and development (R&D), according to a new report from the Organisation for Economic Cooperation and Development. Although the amount allocated towards R&D has more than doubled in the past decade, reaching 1.34 per cent of gross domestic product in 2005 from 0.6 per cent in 1995, the emphasis is wrong, says the report. It shows that 70 per cent of R&D focused on research for new products and not on the basic research needed to build the 'innovation-oriented' economy that China aims to achieve by 2020.

The report points to the falling number of undergraduate students choosing to study science, warning that this might mean a shortage of skilled workers in the field. Even though public research organisations, such as universities, are investing in new equipment and facilities, this has not meant growth in the number and quality of researchers, notes the report. The OECD calls for the Chinese government to promote a more open, market-oriented approach in its science and technology policy.

Responding to the findings in the report, Wan Gang, the Chinese minister of science and technology, said that to enhance innovation capacity, China should seek international cooperation, both by setting up research institutes abroad and inviting more foreign research units to China.

Tian Lipu, director of the Chinese patent office, said intellectual property regulations need to become a priority for China if the country is to move towards an economy based more on innovation.

FY08 budget could bring layoffs at national lab

(first published 10 September 2007)

The US Department of Energy's Los Alamos and Sandia National Laboratories held internal meetings on 6 September 2007 to consider the funding impact the House of Representatives' fiscal year 2008 Energy and Water Appropriations Bill could have.

In a statement issued ahead of the meetings, Sen. Pete Domenici, R-NM, a ranking member on the Senate Energy and Water Appropriations Subcommittee, said, 'Clearly the House-passed bill would mean very substantial layoffs at Sandia, Los Alamos and other sites across the [DoE laboratory] complex'.

However, the lawmaker noted, the ultimate FY08 spending figures are not yet set and can still be influenced. 'I will fight as much as I can for the funding levels in the Senate's FY08 plan, current levels or even the president's budget request as the appropriations cycle grinds on this month,' Dominici asserted. If the campaign is successful, he said the projected layoffs would be 'much less severe than what would occur under the House plan'.

To address the issue, Dominici has teamed up with Sen. Byron Dorgan, D-ND, who chairs the Senate Appropriations Committee's energy and water subcommittee. The two legislators have agreed to work together to ensure that the Senate takes up its committee-passed FY08 Energy and Water Appropriations Bill as soon as possible. Such action would mean that the legislation would go to a conference committee where the substantial differences in the higher Senate and House-passed versions would be negotiated.

Grants to fund research into eating disorders in Western Australia

(first published 11 September 2007)

Princess Margaret Hospital health professionals working on care for children and teenagers battling eating disorders have received part of AUD 2 million in research funding.

Specialist clinical psychologist Julie McCormack from PMH's Psychological Medicine Department and her team will use the AUD 151,225 grant to investigate new techniques in the treatment of eating disorders, aiming to develop ways to maximise the amount of support for the sufferers and their families.

Jim McGinty, Western Australia health minister, said the funding was aimed at 'giving the people who are working hands on with patients the resources they need to explore better ways to provide care'.

Several of the other projects to receive funding focussed on ways to improve access to care for people living in remote and regional areas.

'There are many great ideas out there among practising clinicians including developing preventative strategies and looking at ways to improve the way health care is delivered in WA,' McGinty said. RG

Funding opportunities

This edition of *Research Global* features funding opportunities brought to you by **ResearchResearch**. With editorial teams in London, Washington DC, Sydney, Brussels, Stockholm, Amsterdam and Cape Town, ResearchResearch provides a comprehensive source of funding opportunities open to researchers around the world. ResearchResearch.com – your resource for Research Funds, Sponsors & News.

Microbicide Innovation program (R21/R33)

Closing Date: letter of intent 19 October 2007; full application 20 November 2007

Details: The National Institute of Allergy and Infectious Diseases, the National Institute of Mental Health and the Office of Research on Women's Health invite applications for the microbicide innovation program. The MIP seeks applications in the field of topical microbicides advancing:

- development of new microbicide approaches and targets through preclinical and basic research;
- discovery and exploration of microbicides directed against HIV or sexually transmitted infections linked to HIV acquisition;
- emerging technologies or models that contribute to the development of new and more efficient ways of assessing microbicide safety, efficacy and acceptability;
- exploration of complex prevention strategies that incorporate vaginal, rectal, or penile applied microbicides in the context of mucosal active vaccines.

The purpose of the program is to support novel and under-explored strategies in the field of topical microbicides. This broadly based program will support development of microbicides and will facilitate technology or methodology design and development that may advance the field as a whole.

Applications will be accepted from domestic and foreign for-profit or non-profit organisations and public or private institutions. This funding opportunity will use the NIH R21/ R33 phased innovation award. NIAID intends to commit approximately USD 2 million in fiscal year 2008 to fund 10 to 15 grants. Individual awards for the R21 phase may not exceed USD 275,000 in direct costs over the two year grant period, with no more than USD 200,000 in direct costs allowed in any single year. The R33 phase will be limited to USD 300,000 direct costs per year for three years. RFA-AI-07-034 (replaces RFA-AI-06-042)

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=186803&orgLang=EN

International fellowships

Closing Date: 01 November 2007

Details: *The Lancet* invites applications for its two international fellowships which are awarded GBP 25,000 each. The aim of these fellowships is to help doctors to contribute to medical care and research in a country very different from their own. The differences may lie in a country's delivery of healthcare, research or health priorities, or educational facilities. Fellowships are open to medical graduates of any age and should last at least six months.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=171004&orgLang=EN

Novak award

Closing Date: 01 November 2007

Details: The Acton Institute for the Study of Religion and Liberty invites applications for its Novak award. The award rewards new research by scholars early in their academic careers who demonstrate outstanding intellectual merit in advancing the understanding of theology's connection to human dignity, the importance of the rule of law, limited government, religious liberty, and economic freedom. Nominees must have a demonstrated interest in the relationship between theology, economic liberty, and the free and virtuous society. Important principles in this relationship include the recognition of human dignity, the importance of the rule of law, limited government, religious liberty, and economic freedom. Nominees must display the potential to contribute to the advancement of a free and virtuous society.

Scholars who have received a doctorate from an accredited domestic or international programme in theology, religion, economics, philosophy, business or a related field during the current or previous five calendar years are eligible to enter, as are current doctoral candidates in these fields, who are in the process of completing their dissertations. All qualified individuals will be considered for the award without regard to race, sex, national or ethnic origin, citizenship, religious affiliation, or disability.

The recipient of the Novak award will present his or her research in a public forum known as the Calihan lecture. A cash prize of USD 10,000 as well as travel expenses to the Calihan lecture will be granted.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=161219&orgLang=EN

Research grants for Getty scholars and visiting scholars

Closing Date: 01 November 2007

Details: The J Paul Getty Trust is inviting applications for its research grants for Getty scholars and visiting scholars. Each year the Getty Research Institute accepts applications from established scholars working on projects related to a specific theme. In 2008-2009, the institute focuses on the theme of networks and boundaries. Applications are invited from researchers of all nationalities in the arts, humanities, and social sciences. Scholars are in residence for the entire academic year. A salary-replacement stipend is awarded, up to a maximum of USD 75,000. Visiting scholars are in residence for shorter periods of time, usually three months. A monthly stipend of USD 3,500 is awarded.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=169819&orgLang=EN

Specialized center of research program

Closing Date: 01 November 2007

Details: The Leukemia and Lymphoma Society

invites applications under its specialized center of research program. The program was established to encourage multidisciplinary research focused on the prevention or cure of leukaemia, lymphoma or myeloma. The purpose of this initiative is to bring together research programmes that are focussed on any aspect of these diseases in order to foster interactions, cooperation, and to enhance interdisciplinary research among the participants. The programme requires synergy among at least three research programmes and these programmes may be supported by scientific core laboratories.

The center's maximal annual total cost, direct and indirect, cannot exceed USD 1.25 million. The aggregate costs over five years cannot exceed USD 6.25m. Applications may be submitted by individuals holding an MD, PhD, or equivalent degree, working in domestic or foreign non-profit organisations. Applications may be multi-institutional in nature. Applicants need not be US citizens, and there are no restrictions on applicant age, race, gender or creed.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=184575&orgLang=EN

Innovation prize

Closing Date: 02 November 2007
Details: The Berthold Leibinger Stiftung invites applications for its innovation prize for outstanding research work in applied laser physics. Innovation should involve the direct utilisation or creation of laser light.

Three prizes, worth EUR 20,000, EUR 10,000 and EUR 5,000, will be awarded. All individuals and project groups who have completed a publicly accessible outstanding scientific research or technical development work in applied laser technology are eligible to participate.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=155224&orgLang=EN

ED Thomas fellowship

Closing Date: 02 November 2007
Details: The José Carreras International Leukaemia Foundation offers its ED Thomas fellowship for studies relating to the diagnosis, prevention and cure of leukaemia and related haematological malignancies.

The fellowship provides funding of USD 50,000 for one year, renewable for two years. Candidates must hold a MD or PhD degree and have completed at least three years' postdoctoral training, but must be less than ten years past their first doctoral degree. Candidates must have a sponsoring institution.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=168751&orgLang=EN

Prevention and control of diabetes

Closing Date: 02 November 2007
Details: The International Diabetes Foundation's Bridges project invites applications that support cost-effective and sustainable interventions that can be adopted in real world settings, for the prevention and control of diabetes.

Bridges funds two types of project:

- pilot projects defined as a study in translational research which will generate initial data to reproduce it at a larger scale. Pilot projects should last for a maximum of two years and the maximum amount per project will be USD 65,000;
- outcome projects for investigators that have generated clinically significant findings in pilot projects. Outcome projects should last a maximum of three years and the maximum amount per project will be USD 400,000.

Projects should be based on interventions already proven to be effective in trials to prevent and treat diabetes, to improve care of type 1 and type 2 diabetes and delay its complications. Proposals focusing on high risk and underserved populations disproportionately affected by diabetes are encouraged.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=185589&orgLang=EN

Hubble fellowships

Closing Date: 08 November 2007
Details: The Space Telescope Science Institute invites applications for its Hubble fellowships. These fellowships support outstanding postdoctoral scientists whose research is broadly related to the scientific mission of the Hubble space telescope. The research may be theoretical, observational, or instrumental. The programme is open to applicants of any nationality who have earned (or will have earned) their doctoral degrees on or after 1 January 2005, in astronomy, physics, or related disciplines. Support is available for up to three years at an annual stipend of approximately USD 56,000 plus benefits, and an additional allowance of USD 16,000 per year for travel and other research costs.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=173787&orgLang=EN

Thesiger-Oman International Research Fellowship

Closing Date: 30 November 2007
Details: The Royal Geographical Society (with the Institute of British Geographers) invites proposals for its Thesiger-Oman international research fellowship. The society offers two annual fellowships of up to GBP 8,000 each for geographical research, including fieldwork, in the Middle East and other arid regions of the world. One fellowship will focus predominantly on the physical aspects of the desert environment and the other on the human dimension of arid and semiarid environments. Applicants must hold a doctorate and have a proven research record beyond their PhD, with at least three years' experience at postgraduate level or above. Candidates should be affiliated to a higher education institution, which can be anywhere in the world.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=184299&orgLang=EN

International Visiting Research fellowship

Closing Date: 30 November 2007, 5pm
Details: The University of Sydney invites applications for its international visiting research fellowship. These fellowships are offered to researchers of high standing at any stage in their career to share and disseminate new and original ideas or techniques, initiate and undertake collaborative research and facilitate interaction and training of the university staff and students.

Applications are currently invited for travel between March 2008 and March 2009. Applic-

ants are expected to be based full-time at the university for the duration of the fellowship. Fellowships comprise a living allowance of up to AUD 1,500 per week and return economy class airfare to Sydney up to AUD 2,500. Awards will not exceed AUD 20,500 including travel. Applications from returning expatriate Australians are encouraged.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=186274&orgLang=EN

Expertise Transfer fellowship

Closing Date: 30 November 2007
Details: The International Agency for Research on Cancer is offering an expertise transfer fellowship to enable an investigator to spend normally from six to 12 months in an appropriate host institute in a country classified by the World Trade Organization as a low or medium resource. The main objective of this programme is to transfer knowledge and expertise in a research area relevant for the host country and related to the agency's programmes: epidemiology; biostatistics; environmental chemical carcinogenesis; cancer etiology and prevention; infection and cancer; molecular cell biology, molecular genetics, molecular pathology and mechanisms of carcinogenesis.

Applicants should be established cancer researchers actively engaged in the field with appropriate scientific or medical qualifications and an excellent publications' record. They must also belong to the staff of a university or a research institution.

The annual remuneration is up to USD 70,000 and will take into account the ongoing salary of the fellow. This amount may include limited support for the project. The cost of travel will also be met. The award should be taken up no later than November 2008.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=186568&orgLang=EN

Dan David prizes

Closing Date: 31 November 2007
Details: The Dan David Foundation invites nominations for its Dan David prizes. There are three prizes of USD 1 million each for achievements having an outstanding scientific, technological, cultural or social impact on the world. The awards will honour individuals who have made outstanding contributions in the past, present and future categories. The topic for the past category is creative rendering of the past: literature, theatre, film. The topic for the present category is social responsibility with particular emphasis on the environment. For the future category, the topic is geosciences. Nominees may be individuals or organisations. There are no eligibility restrictions in terms of nationality, age, race, gender, religion or political affiliation.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=168366&orgLang=EN

Volvo Environment Prize

Closing Date: 01 December 2007
Details: The Volvo Environment Prize Foundation invites nominations for its Volvo environment prize. The prize is awarded for scientific, socioeconomic, or technological innovations or discoveries which have direct or indirect significance in the environmental field and are of global or regional importance.

The prize rewards achievements. Priority is given to an individual or to a group of named individuals, rather than to institutions. The prize is for SEK 1.5 million.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=167791&orgLang=EN

Genetics prize

Closing Date: 31 December 2007
Details: The Peter Gruber Foundation invites nominations for its genetics prize. This is awarded for insights in the field of genetics. These may include original discoveries in genomic organisation, function, regulation, variation, and transmission. Nominations may be submitted by individuals, organisations, and institutions that are active in or have an appreciation for contemporary genetic research and study. Self-nominations are not accepted. The prize includes a gold medal and an unrestricted USD 500,000 award.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=184550&orgLang=EN

Iwan Åkerman award

Closing Date: 01 February 2008
Details: The Nationaal Fonds voor Wetenschappelijk Onderzoek invites applications for its Iwan Åkerman award. The award aims to stimulate research on compressors, expansion machines and related technical disciplines such as aero- and thermodynamics, electromechanical drive systems, power electronics and high-speed motors, advanced bearing and seal concepts, new high-performance materials and surface coatings. Within the scope are also derivative systems for transformation and recovery of energy, as well as systems to condition the quality of compressed air or gases.

The award is open to researchers worldwide with a university degree in sciences or in applied sciences. The award is worth EUR 25,000.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=183801&orgLang=EN

Cystic Fibrosis scholarships

Closing Date: 01 March and 01 September annually
Details: Cystic Fibrosis Worldwide invites applications for its scholarship programme. The programme is available for individuals working in the field of clinical cystic fibrosis-care who wish to improve their knowledge in a recognized CF centre worldwide. Normally, the applicant will come from and be returning to a country or region where CF resources are in need of improvement or development. Applicants will normally be medically qualified.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=180331&orgLang=EN

Francis Fontan prize

Closing Date: 15 April 2008
Details: The European Association of Cardio-Thoracic Surgery is inviting applications for the Francis Fontan prize. The prize is awarded to a medical doctor with specialty training in cardiac or cardio-thoracic surgery. The prize is worth EUR 30,000 and should cover the costs of one year's stay at a major European department or any other research facility. The activ-

ities during this year are left to the discretion of the prize-winner and the head of the department visited, but should primarily involve fields such as research training, research activities, advanced clinical education or departmental management. There are no nationality restrictions for applicants.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=183965&orgLang=EN

Robert E Shope international fellowship

Closing Date: 15 May 2008
Details: The American Society of Tropical Medicine and Hygiene welcomes applications for the Robert E Shope international fellowship. This is for individuals with doctoral-level degrees who seek fellowship funding support for travel, living and research support to work in laboratories in the tropics to pursue studies in arbovirology or emerging tropical infectious diseases.

The award will provide USD 10,000 to help defray travel costs, living expenses and research abroad.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=186367&orgLang=EN

Field Research Fellowship

Closing Date: 31 July annually
Details: The Korea Foundation is inviting applications for its field research fellowships. The program is designed to facilitate in-depth research on Korean topics by supporting onsite study and research by scholars and Korea specialists. Fellowship awards may last three to 12 months and support Korea-related research in the humanities, social sciences, culture and arts, and comparative research related to Korea. Candidates may not currently reside in Korea. The foundation invites applications from:

- doctoral candidates who have completed all academic requirements except their dissertation, entitled to a monthly stipend of KRW 1.3 million;
- assistant professors or lecturers with doctoral degrees, who may receive KRW 1.5 million per month;
- full and associate professors. Funding for these amounts to KRW 2 million per month.

In addition, each successful applicant is entitled to airfare costs, a settling-in allowance of KRW 300,000 and travel insurance.

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=169987&orgLang=EN

Applying information technology to command, control, communications, computer and intelligence systems

Closing Date: 30 September 2010, 2pm EDT
Details: The Air Force Research Laboratory is soliciting white papers for innovative technologies to support command, control, communications, computers, and intelligence applications. Of particular interest are technologies that can significantly reduce the time between information technology availability and its employment into the research and development programmes that support legacy and new military electronic systems. Also of interest are commercial technologies that can improve the functionality, performance, reliability, longevity, and usability of these new and legacy military electronic systems. This effort will investigate the application or development of emerging and in-use commercial information technologies, products and standards as they relate to the following technical areas:

- legacy and evolving Air Force C4I systems;
- simulation and modelling technologies applicable to AF C4I systems;
- technology for integration, test, and demonstration of AF C4I systems;
- development of appropriate information technology to enhance the capabilities of current and future AF C4I systems;
- development of technology to enhance and enable the use of collaborative environments in AF command, control, communications, computers, intelligence, surveillance and reconnaissance systems and enterprises.

The anticipated funding for fiscal year 2009 is USD 10 million. Individual awards will not normally exceed 24 months with dollar amounts ranging between USD 100,000 to USD 500,000 per year. All potential applicants are eligible. Participation of foreign or foreign-owned applicants is subject to foreign disclosure review procedures. Reference number: BAA-05-06-IFKA

ResearchResearch link:
http://www.researchresearch.com/getpage.cfm?pagename=FundingOpRecord&lang=EN&type=default&id=186840&orgLang=EN

RG

Global Research Management

Research management has a genuinely global dimension. An increasing proportion of research involves international collaboration, or is funded by international funding bodies. It is vital that stakeholders approach their endeavours with a degree of common understanding. And, of course, many of the issues that researchers seek to address have global implications. It is critical that results are disseminated or exploited on a worldwide scale, and according to common standards. A global network is the only way to achieve this goal.

Why you should join the Global Research Management Network

The network, a joint ACU-SRA International initiative, combines regular information, analysis and networking opportunities to keep you informed and connected to research management activities throughout the globe. It provides a structure relevant both to practitioners in the developing and developed world and is based around five main strands of activity:

Research Global magazine

Based on the ACU's successful *Research Opportunities* magazine, *Research Global* brings news, articles and funding information to members three times per year.

Free academic journal

To help provide a more theoretical background to the research management debate, all members of the network will receive a free subscription to the *International Journal of Technology Management and Sustainable Development*. The journal provides analysis and studies from a range of countries.

Benchmarking & good practice

The network will seek new ways to compare good practice and performance in a constructive manner – helping members to identify policies for implementation in their own work.

Electronic updates

Those members registering an email address will receive a regular briefing covering news and policy items.

Events & seminars

Further details on recent and upcoming events can be found at www.globalrmn.org

The Association of Commonwealth Universities

SRA International

www.globalrmn.org **resman@acu.ac.uk**