Abstract

The International Network for the Availability of Scientific Publications (INASP) has been working for many years with partner countries in the developing world to support all aspects of the scholarly research and communication cycle – by facilitating access to international scholarly e-journals, supporting the creation of indigenous e-journals, equipping librarians with the skills to support research, and helping libraries to create the infrastructure to enable them to deliver services in the digital library environment and provide integrated management of digital resources.

For a philanthropic organisation such as INASP sustainability is central as without a plan for self-sufficiency all philanthropic work will ultimately fail. This paper describes our Programme for the Enhancement of Research Information (PERii) approach to supporting sustainable availability, access and use of research that is owned by and embedded within researchers' own institutions. PERii has been described by Chan and Costa (2005)1 as “the most comprehensive initiative of access to worldwide research” and as well as the learning and successes, this paper will also set out some of the challenges that have arisen in building capacity to enable libraries to take charge of their own futures.

These challenges are significant. There are the obvious obstacles of funding and limitations of ICT and related infrastructures, but in many ways the real sustainability challenges relate to people: how to build on existing strengths and assets and enhance local ability to solve problems; encouraging and stimulating individuals to act either alone or, more effectively, together; and understanding the country context.

Widening access to serials in the developing world: the role and philosophy of INASP

Founded by the International Council for Science (ICSU) in 1992, INASP works with partners to support global research communication through innovation, networking and capacity strengthening, focusing on the needs of developing and emerging countries. We work with them to address their national priorities for:

- access to national and international scholarly information and knowledge;
- use, creation, management and uptake of scholarly information and knowledge via appropriate ICTs;
- national, regional and international cooperation, networking and knowledge exchange.

We also advise and advocate for improved policy and practice in achieving sustainable and equitable development through effective communication, knowledge and networks.

In 1999, INASP facilitated a meeting of researchers in order to discuss and identify their information needs. They identified a need to access the international scholarly literature, to publish their own research, and to develop the ICT skills and capacities necessary to achieve those two aims in the emerging digital world.

Building on INASP’s previous work with university libraries and journals published in Africa, the Programme for the Enhancement of Research Information (PERI) was designed as a coherent and systematic approach to meeting these needs. In implementing the programme across ten years, other needs have emerged. Today the core programme areas focus on:

- affordable access to international scholarly literature;
- successful writing, publishing and communication of research from developing and emerging countries;
- effective use, evaluation and management of ICTs to support research;
- development of modern, digital research libraries;
- increasing the uptake of research in policy making;
- advice and advocacy around the value and roles of research communication and the people engaged in it for sustainable and equitable development.

These activities involve researchers, librarians, ICT professionals, journal editors and publishers, and decision and policy makers involved in all stages of the research communication cycle.
Availability: working with editors, publishers and librarians to ensure that credible, timely and relevant research is available to researchers. This includes research published in subscription based and Open Access journals and books, and in institutional repositories.

Access: working with publishers, librarians, ICT professionals and policy makers to ensure that the IT infrastructure and institutional policy and practice enables researchers to access the information they need for the work.

Use: working with librarians, researchers and policy makers to ensure that researchers have the necessary information literacy skills, i.e. “To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information.”

Creation: working with researchers, editors and publishers to build and strengthen skills to write, publish and communicate research

Uptake: working with researchers and policy makers to promote and support evidence informed policy making.

As well as enabling access to free and Open Access resources and materials in over 80 network countries, PERii works in depth with 22 partner countries:

- Africa: Cote d'Ivoire, Ethiopia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zambia, Zimbabwe
- Asia Pacific: Bangladesh, Nepal, Pakistan, Sri Lanka, Vietnam
- Latin America: Bolivia, Cuba, Honduras, Nicaragua

This work was initially funded by the international development agencies of Denmark, Norway, Sweden and UK governments. Now in its second 5-year phase (PERii) the

programme continues to receive support from the Norway, Sweden and the UK
governments and now, significantly, approximately 40% of the total funding comes
from these partner countries themselves.

1. PERii’s philosophy

PERii approaches research information and communication as an interdependent
system of people and activities.

The ultimate goal of PERii is that the activities are entirely sustainable and country
owned. To enable this, activities are designed with a ‘cascaded approach’, with the
aim that every INASP-facilitated activity leads to a subsequent country-led follow on.
This builds or strengthens capacities within organisations rather than just individuals.
Over time, the aim is that each country will build a sustainable, self-supporting
network, provide and receive guidance and support to similar countries, and INASP’s
role will shift to meet any new demands which may arise. This is supported by
guiding principles of:

Equity: working to ensure that participation in PERii activities is open to as many
people as possible and that decisions on that participation are made in transparent
and fair manner. For example, INASP uses the United Nations Human Development
Index (HDI) and the World Bank Gross Domestic Product (GDP) to identify eligible
countries. As the partnerships between eligible countries and INASP involve a
significant, long-term commitment of expertise, time and money from both sides, it is
not possible to work with all eligible countries in this depth, so they are divided into
two groups:

1. Partner countries: INASP and the country jointly commit to making
appropriate staff capacity, resources and funding available to support
research communication activities, selected from the holistic set of activities
within PERii according to the country’s specific needs, plans and policies.

2. Network countries: INASP commits the time and funds to enable access to
resources such as training materials, publications, and a Directory of Free
and Open Access Resources via the country-specific web pages.

Stakeholder participation: central to this are the Country Coordination Teams. In
each of INASP's Partner countries and in many Network countries, Country
Coordination (CC) teams are responsible for planning, implementing and evaluating
activities.

These partnerships are professional collaborations between the CC teams and
INASP, formalised through jointly agreed Memoranda of Understanding and Annual
Agreements.

The members of the CC teams are generally drawn from bodies that have an existing
national mandate in supporting research capacity such as ministries of education,
science and technology, national academies, professional associations, library
consortia, university grants commissions, national research and education networks,
and beacon national universities.

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3 Funding from development agencies secured by INASP if necessary, transitioning to funding secured
by the country.
The teams are not employed or paid by INASP. Rather INASP programmes aim to respond to and support their existing work, within their communities’ identified needs and strategic and policy frameworks.

**Strategic partnerships**: as well as its key stakeholders (researchers, librarians, publishers, ICT professionals and policy makers), INASP works with partners such as professional associations, national research and education networks (NRENs), learned societies and academies, as well as like-minded sister organisations, to extend the reach and impact of PERii.

**Social responsibility**: INASP aims for all activities to contribute to long-lasting and sustainable change. Therefore, PERii strives to make sure that its activities balance environmental, economic, political and social concerns.

### 2. Availability and access in practice

Recent research⁴, found that in 2009 just over 20% of research was available via Open Access (8.5% at the publishers' sites, 11.9% free manuscript versions). This means that for researchers today, over 80% of the information and evidence they need for their work is in subscription-based journals.

Regardless of the merits of the different publishing models, this is the reality in which researchers are working, and PERii seeks to respond to their needs in that context. We work with publishers, editors and librarians to ensure that free, Open Access or subscription-based scholarly resources are widely available to researchers from their own institutional libraries.

Whilst donor funding enables INASP to carry out the networking, training and advocacy needed to initially enable this, the availability of resources has become embedded within the institutions, with direct relationships established between librarians/publishers and librarians/ researchers, once the resources they need are selected and registered for.

PERii provides support in building relationships between libraries and international publishers, supporting journals editors and publishers in developing and emerging countries to increase the quality and visibility of their national journals, and supporting libraries and institutions to make their institutional research literature available.

To give a sense of the process and scale of this work in practice, the next sections will focus on work and outcomes in 2010.

#### 2.2. Research information from outside developing and emerging countries

In 2010, negotiations for deeply discounted or free licenses to research information were undertaken on behalf of 22 partner countries and 37 network countries with Country Coordinators. This resulted in the choice of over 35,000 full text journals, 5,000 full text books and reports, and 25,000 abstracted journals from 50 international publishers and aggregators.

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Selection sheets were then sent to countries and selections made by consortia or other stakeholder consultations, with 106 institutions participating in such meetings.

PERii also collated and shared country-wide usage statistics, and worked with 116 staff from 78 institutions to build knowledge and skills around effective collection management, marketing and resource-related decisions at an institutional level.

Web pages were set-up to share materials, resources and training tools to further assist librarians in understanding licenses, negotiating for resources, and ensuring best practice on copyright. Individual mentoring around direct negotiations with publishers was also undertaken where requested.

Once the countries’ selections are made, INASP manages the invoicing and payment processes for resources purchased via PERii. When first working with a partner country, subscription costs are often met using donor funding held by INASP. This then transitions to self-funding by countries, sometimes with an intermediary stage of funding from donor funds held by the country before direct institutional funding, often via consortia.

Training in project management (involving over 200 people in 2010) and consistent and clear processes are leading to increasing ownership, responsiveness and professionalism around this renewals processes with 93% of subscriptions paid by partner countries and the proportion of timely payments by countries increasing year on year.

Institutions then register for the resources that are relevant to them and make them available directly from their institutional or library website. The researchers and students in the institutions should hopefully be unaware of INASP or PERii, and rightly regard the resources as their own.

In 2010, over 1300 institutions registered to access subscription-based resources. INASP also maintains and promotes a list of complementary programmes and high-quality free and Open Access scholarly resources.

### 2.3. Research information from developing and emerging countries

As well as helping to ensure that the research literature from outside developing and emerging countries is available to researchers from developing and emerging countries, PERii strives to ensure that the high quality, relevant and credible research generated in developing and emerging countries is visible and available globally. There are two aspects of the work in this area:

1. Published research via the Journals Online (JOLs) portals: in 2010, 622 journals (>70k articles) from developing and emerging countries are available, of which 86% are available in full text. As compared to 2009 this represents a 15% increase in journals, 28% increase in articles, with a concomitant 117% increase in full-text views of the research.

   As well as an increase in numbers, research carried out in 2010 indicates an increase in quality and visibility for journals participating in the JOLs, with more titles indexed by international indexes such as Biological Abstracts, Scopus, DOAJ, ISI Web of Science and Medline.

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5 [www.inasp.info/list-of-resources](http://www.inasp.info/list-of-resources)
Training and mentoring of 131 journal editors and publishers in managing and publishing journals supported an increasing number of journals to accept online submissions and peer-review.

2. Grey literature via institutional repositories: people from over 100 institutions (209 participants) attended workshops to build or strengthen skills in developing institutional repositories, so as to make content such as unpublished research, reports, theses and dissertations available. Participants report the training has had an impact on both policy and practice.

PERii’s work with partners to ensure that high quality research information is available to researchers in developing and emerging countries, and that in turn their research is available globally, helps to ensure that free, Open Access and subscription-based institutional, national and international research resources are available via 1-click access directly from institutional libraries or JOL websites.

However, although it is obviously a critical first step, this availability does not necessarily equate to access…Recent research\(^6\) carried out by the Association of Commonwealth Universities, concluded that

“The access problem is better understood through a deeper analysis of the complex and interwoven factors which determine the ease with which academics and students can ‘get into’ and make good use of electronic resources, and their reasons for doing so” which “…can be better understood as the interrelationship of availability, access and use.”\(^7\)

To help address these access factors, PERii stakeholders have requested support in the optimisation of the digital library environment and in training researchers. In 2010, work in this area included:

- Cascading training with librarians: as well as the training mentioned above, these included: library automation (279 participants); e-resource use training skills (485 participants); enhancing the ability of practising librarians to teach information literacy skills to faculty and students (2,200 participants);
- Cascading training and advocacy with ICT staff and policy makers: focusing on engaging technical staff and policy makers around library and research information policy issues, and technical aspects of optimising and managing bandwidth, these events engaged 94 participants;
- Local or visiting trainers/experts visiting institutions to offer tailored advice on network optimisation and management. Such visits, whilst relatively time consuming and expensive do produce immediate useful results.

The training and advocacy with librarians, ICT professionals and policy makers supported researchers in developing and emerging countries to access over 2,357,764 full text papers\(^8\) from the international literature over 6,026,911 papers written and published in developing and emerging countries.

\(^6\) Harle J (2010) Growing knowledge: access to research in East and Southern African universities
Association of Commonwealth Universities: London

\(^7\) Page vii

\(^8\) The actual number is likely to be higher as statistics are only available for IP access, whilst many papers will also be download via username and password, and some publishers are unable to provide the necessary statistics.
3. **Strengths and challenges of the model**

Implementation and evaluation of the ‘availability’ and ‘access’ aspects of PERii’s work indicate that the model set out above has the following strengths:

- Availability of multidisciplinary peer-reviewed and grey research literature research to and from developing and emerging countries;
- Tailoring to specific country contexts and needs;
- Demand for access and commitment to institutional funding is supported by initial country-wide licenses, funded by donor money where needed, that allows use and evaluation of resources;
- Supports development of country consortia, initially based around collaborative purchase;
- Collection development is led by partner Country Coordinating teams or consortia;
- Access to resources directly from institutional libraries;
- Strong professional relationships between INASP and in-country partners, formalised through documented agreements;
- Strong professional relationships between INASP and publishers, formalised through documented agreements;
- Direct working relationships between publishers and institutions, once they have registered for resources;
- Strengthened relationships between librarians and ICT professionals;
- Strengthened relationships between librarians and researchers;
- Increasing individual and institutional capacity to administer and finance activities;
- Sustainable individual and institutional capacity to train end users to access and use research.

Of course, there are challenges and lessons to learn too. Implementation and evaluation of PERii indicate that as well as continuing and improving the work we already do with partner countries, we need needs to consider and address, where possible the following challenges inherent in our model:

- Scaling up: the tailored, in-depth approach with 22 partner countries and 50 publishers is intensive and time consuming, and means that INASP are not currently able to meet demand for involvement from other countries and publishers;
- The transition from country-wide to consortial licenses supports sustainability and independence from INASP but may also lead to exclusion of institutions, depending on the membership model adopted;
- The transition from INASP-led to country-led negotiations for resources requires significant work in building relationships and capacity with partner publishers and countries;
- Although there is sustainable capacity to administer and implement some of the activities within the partner countries, the capacities to plan, manage and evaluate a coherent and strategic approach to research information needs to be passed on from INASP to partner countries.
4. Conclusion

Availability and access to research is an important and complex aspect of development. Ten years of implementation and evaluation of the PERii model have provided valuable outcomes, outputs and lessons.

As well as the PERii model, there are of course other initiatives such as those by Research4Life, eIFL and individual publishers and societies. If and how these models can become entirely sustainable – that is, entirely driven and owned by stakeholders in developing and emerging countries – is yet to be seen.

The challenges are significant and the work also takes place in a rapidly evolving publishing, funding, technology and development environment.

There are undoubtedly lessons to be shared and those lessons need to be widely and effectively shared to avoid duplication, or worse undermining, of previous work.