Strengthening research information production, access and use in Honduras

Final Project Report
December 2011

CONTENTS

Figures and Tables

Acronyms and Abbreviations

Asdi	Swedish International Development Cooperation Agency (Sp)
CEDAC	Centro de Diseño Arquitectura y Construcción
CIES	Centro de Investigaciones Economico Sociales
CREDIA	Centro Regional de Documentación e Interpretación Ambiental
CURLA	Centro Universitario Regional del Litoral Atlántico (UNAH)
ESNACIFOR	Escuela Nacional de Ciencias Forestales
FHIA	Fundación Hondureña de Investigación Agrícola
ICT	Information and Community Technology
INASP	International Network for the Availability of Scientific Publications
PERii	Programme for the Enhancement of Research Information ii
Sida	Swedish International Development Cooperation Agency
UDH,	Universidad de Defensa de Honduras
UJCV	Universidad Jose Cecilio del Valle
UMH	Universidad Metropolitana de Honduras
UNA	Universidad Nacional de Agricultura
UNAH	Universidad Nacional Autonoma de Honduras
UNITEC	Universidad Tecnologica Centroamericana
UPNFM	Universidad Pedagógica Nacional Francisco Morazan
USPS	Universidad de San Pedro Sula
UTH	Universidad Tecnologica de Honduras
UTIV	Tecnológica de Investigación Virtual

Executive summary

Three years for a project attempting to make significant contribution towards development of a research culture across a whole country. Ambitious indeed but this is what a joint UNAH, Sida and INASP project was set up not only to do in Honduras, but to do it sustainably so that the benefits would continue long past its project life. Three years on and the project has achieved much of what it set out to do and put in place conditions for the steps taken to continue and develop.

Many factors have contributed but essential to its successes has been:
- a clear 3 year plan with agreed funding developed collaboratively
- the commitment of a skilled and dedicated coordination team
- local ownership with buy-in of the library community and authorities
- a holistic approach with appropriate timing of the component parts
  - awareness and availability of high quality electronic resources
  - development of an appropriate infrastructure to allow access to these resources
  - enhancement of skills to provide users of these resources with required services
  - increasing opportunity to publish research and improve quality

Even though the project plan was developed together and implementation went well, there were elements which proved challenging, such as:
- scale of the project - national remit, intensive programme with large budget
- involving and retaining some stakeholder groups, especially groups not already working with
- developing new initiatives, negotiating, avenues of communication and reporting,
- unexpected interruption such as political upheaval, institutional politics or campus disturbance and remodeling

However these challenges were met and overall consensus is very positive with pride in what has been achieved. The annual logged figure for personal visits to the library labs is growing substantially as is the usage of the databases with downloads increasing from 9,337 in 2008 to 18,137 by end of 2010. A new system to help promote local research - LAMJOL, has recorded monthly visits up this year from 281 in January to 1,931 by June. Many activities have taken place during these 3 years enhancing capacity, the 310 events and 5,843 predominantly female training participants referred to in this report provide only a part of the story. Potential to continue development of the library services and support research output is very strong. Even if the consortium is slightly behind schedule, steps have been made towards its development and that of retaining the current availability of high quality databases. The library community has a network providing them with an avenue for discussion and sharing. The heightened visibility of the library and the services it offers along with the ability to advocate for further recognition from the university community and authorities, omens well for the future of research and development in Honduras. In order to establish the longer term impact, a follow up review is recommended in 3-5 years.

1. Introduction

This review report provides a summary of activities undertaken along with the outcomes achieved for the duration of the three year Universidad Nacional Autónoma de Honduras (UNAH) project aiming to support library and research information services in Honduras. Background to the project and information on the practicalities of the partnership and approach adopted is included along with details and assessment on achievement of the objectives. The report is based on quantitative data and qualitative feedback collected from online surveys and reports as well as through personal observation, interviews, meetings and institutional visits.

2. Background

Honduras, similar to other countries in the region, went through a tumultuous period in the latter part of the 20th century with changes in leadership and violent confrontation, and ending with the destruction caused by Hurricane Mitch (1998). Given the aftermath of this, the global impact and continuing fall-out from the financial recession which commenced in 2009, the new century has not brought the hoped for rapid development. Nonetheless, contrary to the prevailing demand by many governments for immediate results and despite slow progress, Honduras has continued increasing investment in education. Tertiary education falls under the direction of the UNAH, receiving a mandatory 6% of the government's educational budget. The Swedish International Development Cooperation Agency (Sida) has for many years been a significant and progressive donor and supporter of development in Honduras. However Sida, along with many large international donors aiming to maximise aid effectiveness, made the decision to support a strategy focusing resources in a geographical region. As a result 2010 was to be the final year of Sida funding for Central America. Although sustainability, capacity development and national ownership have long been amongst the guiding principles of Sida's approach, it was important that this approach should continue and that any remaining projects should be achievable within the identified time frame and sustainable in the longer term.

The International Network for the Availability of Scientific Publications (INASP) was invited to work on planning and subsequently on implementation of a project designed to support national access to information and contributing to development of a research culture. Through its Programme for the Enhancement of Research Information ii (PERii), a one year project focusing on providing access to international databases was implemented prior to 2008 when the more comprehensive 3 year project commenced. This new project adopted a holistic approach, extending the work started on access and incorporating each area of the research cycle. It aimed to do this in a sustainable manner by integrating into the wider organizational culture and structures, fostering collaboration and developing links at national, regional and international levels. Along with access to information, developing local capacity would form a central part of the project.

3. The plan

Facilitated by INASP, a detailed plan was developed in collaboration with national partners in 2006-2007. The local coordination team members, nominated by UNAH, were chosen due to their librarian background and experience in either training or on use of electronic resources.

Adopting a holistic approach, the project planned on:
- Strengthening access to research information production, access and use in Honduras in a sustainable manner by:
  - o supporting access to online research information;
  - o building institutional and national capacities to subscribe to, manage and use online information resources;
  - o building a national consortium to support access to and use of research information;
  - o strengthening journal publication processes and capacities;
  - o strengthening researchers' access to and use of international and national research publications.
- The specific objectives identified were:
  - o supporting access to online research information
  - o strengthening the publication of research
  - o enhancing UNAH library staff capacity
  - o developing and strengthening the Honduran inter-library network
  - o developing a national library consortium
  - o developing stronger researcher-focused services
  - o expanding the availability of Honduran resources online

The plan (Annex 3) set out clear objectives with corresponding activities and budget, expected outputs and a time line for implementation. Whilst a degree of flexibility was desirable, this plan was the guiding document and reference tool used by all project partners.

4. Implementation and performance in relation to planned objectives

From the outset there has been slight deviation from the planned schedule, commencing with signing of the agreement between INASP and UNAH. Although the project was planned for commencement in July, the agreement was not signed until mid November 2008 resulting in project activities starting later than anticipated. Assessment on achievement of objective is provided based on the collated evidence in the first instance. An additional and independent assessment ranking by the majority of participating institutions is also included.

4.1 Objective 1: Supporting access to online research information

Assessment on achievement of objective	Satisfactorily achieved plus unintended positive outcomes. Capacity of staff and adequate infrastructure to sustain services established. Availability of sufficient funding to maintain subscriptions considered challenging but achievable.
Assessment by institutions with 1 low and 5 high	100% at Level 5 (Excellent)

An essential and ongoing part of the project, this objective was given precedence with a high level of effort invested, especially in the first months of the project. Evaluation, access and usage of e-

resources was combined with training of trainers and delivered to the core group of institutional librarians. This group, made up of the institutionally identified PERii nominees, formed a close network with each other and especially with the PERii Honduras coordinating team.

4.1.1 Related activity and outputs:

During 2008-2011, selection on preferred subscription databases has taken place on an annual basis through stakeholder consultation. Resources to subscribe to are selected based on 3 criteria:

- Usage statistics;
- Funding availability;
- Information needs of end users

INASP negotiated on behalf of Honduras for access to the selected resources, mindful that the available budget was allocated to subscriptions according to the country's priority. In some instances two-year subscriptions were agreed. As well as ensuring continuation of access, this allowed for institutions to make the necessary budget adjustment required to cover future subscriptions costs.

Starting by negotiating access agreements with 27 publishers in 2008, by the end of the project there are agreements with 25. Of these 13 are provided free of charge. At the end of June 2011, 15 institutions had registered to access resources made available through PERii Honduras. For full details of all PERii Honduras participating publishers and eligible institutions see the INASP website at www.inasp.info/honduras or Annex 2.

The usage statistics for subscribed electronic resources have increased annually during the four years of subscriptions. In 2008 there were 9,247 full-text articles downloaded, by 2009 it was 15,945, and in 2010 the total was 18,137. The final 6 month figure of 9,927 downloads for January – June 2011, is showing an increase of 26.5% from the 7,849 recorded for the same 6 month period in 2010. The databases consistently show the most usage relate to EBSCO and Wiley-Blackwell, which by 2011 accounted for 74% of total downloads, 43% and 31% respectively. However as expected this will differ according to the specialism of the institution.
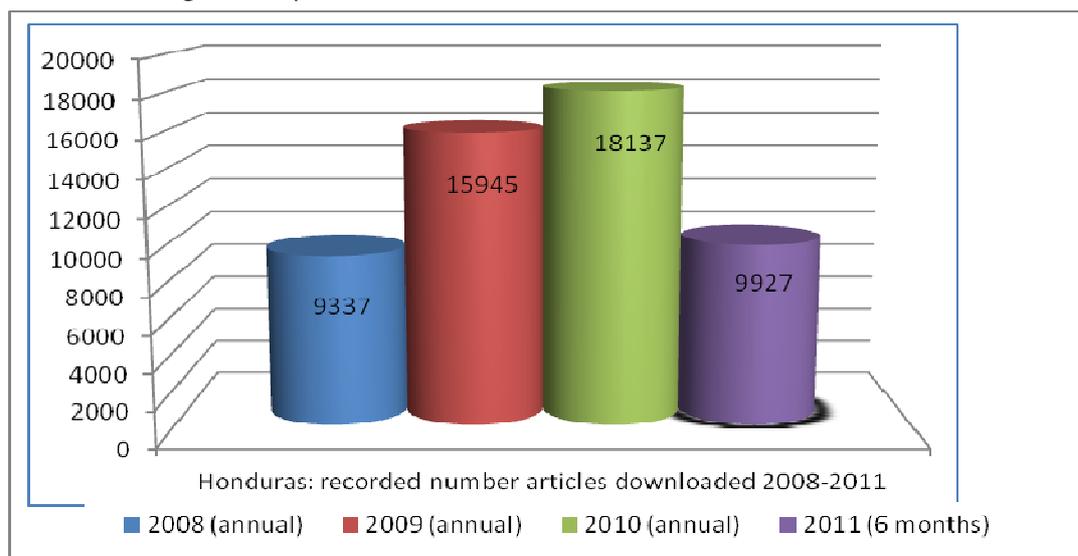

Figure 1 Total articles downloaded (2008-2011)

Honduras - monthly usage 2008-2011

	1	2	3	4	5	6	7	8	9	10	11	12
2008	35	589	1115	14	22	67	217	754	2654	1633	1328	909
2009	482	911	1151	2117	1708	584	1815	1515	1042	679	2938	1003
2010	803	980	854	1272	2894	1046	2505	771	1604	1745	3097	566
2011	1119	1457	1375	1648	2369	1959						
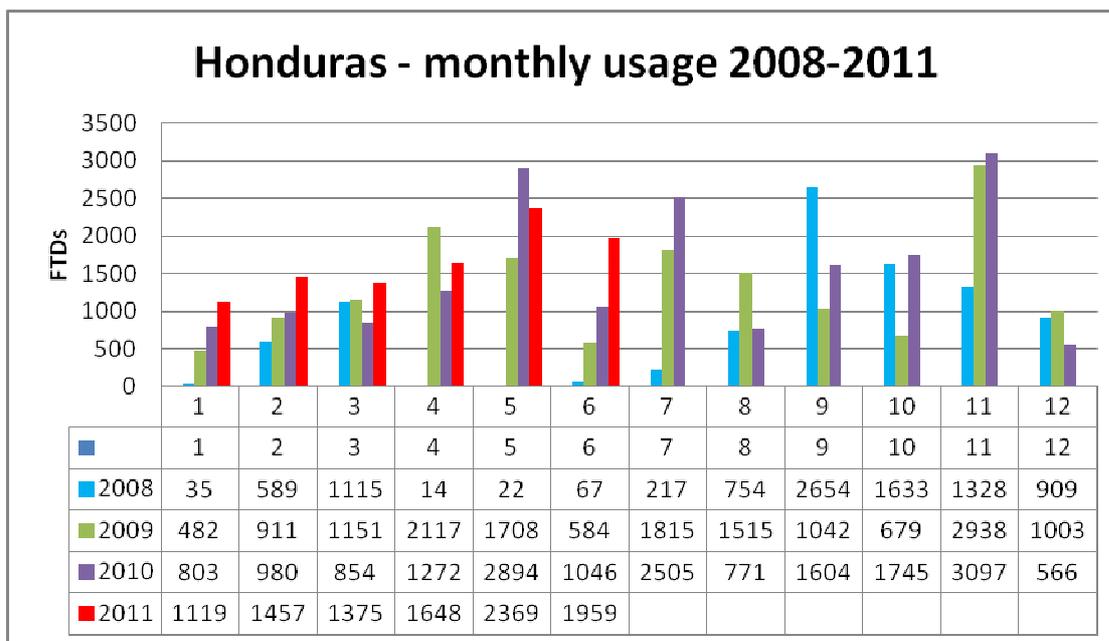
Figure 2 Number of articles downloaded monthly (2008-2011)

See Section 5 "Capacity Development" for details on activities implemented supporting enhancement of skills. The highest concentration of the many activities listed, relate specifically to this objective of supporting access to online information and resources.

4.1.2 Outcomes, impact and review evidence

Based on the comments and observations made during review, the positive impact and change which this project has contributed is clearly evident. Along with the commitment and direction of the local PERii team, a number of factors can be attributed to this success. Significant in meeting this objective, is the development of adequate infrastructure and staff capacity at the same time as providing access to a range of high quality online databases. The platform recently developed at UNAH as part of another joint Swedish funded project, has facilitated high speed access throughout the campus. Although limited currently, remote access is one of the new services being made available to researchers and students.

Problems remain for a couple of the national institutions in obtaining a public IP address that allows access through IP recognition to electronic resources. However the authorities in these institutions are changing and now giving greater importance to acquisition of an IP. There has been a growing realization on importance of research and the need for technology investment to advance development.

- Usage figures are increasing year on year as illustrated by the annual numbers of downloads in Fig.1 and 2, up from 9,337 in 2008 to 18,137 by end of 2010;
- Log of visitors to the library computer labs record an increase. For example, anticipated annual increase can be estimated to have more than trebled this year when based on figures for the UNAH Medical Library. Recorded users in the 5 month period (June-October 2011) were 14,711, averaging 2,942 monthly or an estimated 35,304 annually. This was a

substantial increase from the 10,520 recorded for the whole of 2010 with a monthly average of 877.
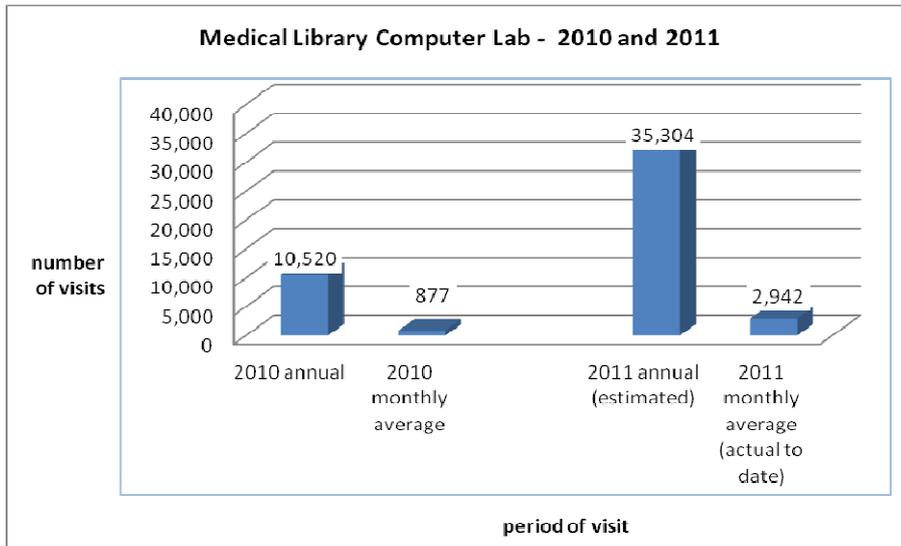
Figure 3 Medical Library – Lab visits

Again we can see this same trend continue when we look at lab figures for visitors to the UNAH's Virtual Library (Fig.3). By taking log data for the same single month annually, in this instance May, we can see the increase across the entire duration of the project, up from 14 at start to 288 by end of the project.
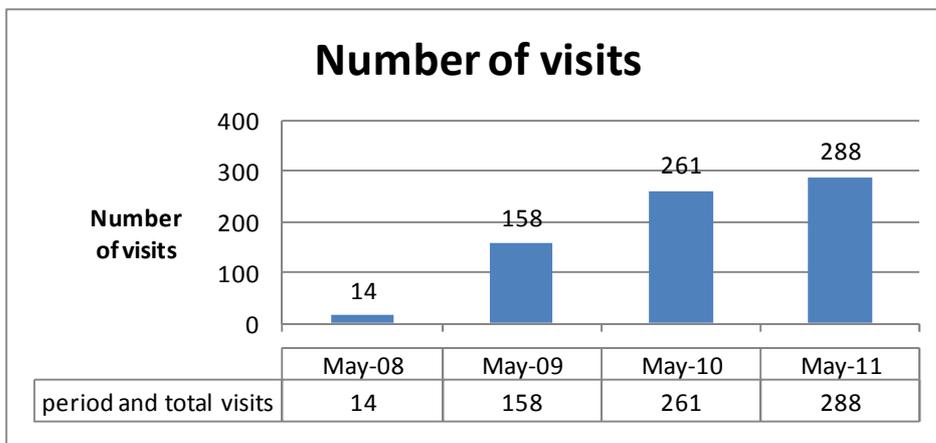
Figure 4 Virtual Library Lab – visitors during a typical month (2008–2011:May)

Sample feedback from stakeholders (English translation of Spanish response/comments):

During personal interviews with stakeholder groups the overwhelming conclusion is the project is making a notable difference:

SAMPLE FEEDBACK FROM LIBRARY: - Director, Librarian, Library Assistant, PERii Institutional Contact and Library Coordinator:

"For our university to have been able to have a wide gamma of online resources has contributed greatly to our university community who now have the information necessary for their research."

"I am very happy with PERii, the project has helped development in our library. We received 6 of the older UNAH computers plus 5 new. This has made a big difference but is not sufficient • to meet demand"

"I have had other training but they have been one off and not like with PERii where there has been a building up of training related to our new library services."

"The training received has helped development of my skills to access and make resources available, and assist others use the online journals. The range and quality of information available has increased and users of our library are impressed by this and the facilities."

"We have had incredible help from PERii in building capacity. I personally have benefitted and found the library diploma course especially useful. For example following the session on management referencing software, we now use Endnote."

"We no longer buy any hard copies of the journals and this has not created any problem"

"I am more familiar with the resources and confident to provide assistance in searching and advising about these resources"

*"We now have the funds previously used for journal subscriptions to invest in improving our library facilities"*

SAMPLE FEEDBACK FROM USERS: - Students/researchers:

"First when I came to the lab (virtual library) I had assistant helping me find the information I needed. Now I can find all the resources I need myself and it is fast and easy to do so.

I mostly use Ebsco and Royal Society to help with my studies in chemistry."

"Some databases show all resources but not all are available for me to use"

"I use Ebsco and Elsevier a lot. One problem is that sometimes when using databases I can only access the abstract."

"I attended Database training by librarians and it has helped me to identify specific and reliable sources of information"

"Previous to training in the library, I used only Google and not always scientific sources for my study."

"Databases available are relevant to my studies in agriculture and my study has improved with the changes brought about by my training in the library. Now I mostly use Ebsco and Agora"

"I have attended training facilitated by PERii and it has really helped me with my studies {microbiology} such as with searching and preparing bibliography.*"*

SAMPLE FEEDBACK FROM ICT STAFF – Director and Technician

"The change which has taken place over the past 4 years has been transformational, we now have computers, access to resources and fast reliable connection".

"Difference is significant"

"The training has helped with configuration and management of bandwidth and monitoring the network"

"Training on open source has been new for me and very good. Difficulty is in incorporating into our CISCO network"

"This was my first time to help with facilitating and I am confident to train others."

The above feedback is generally reflective of discussions during the review visit with library staff and users of the library. Whilst all staff had, many of the users interviewed had not participated in organized training. However they had received guidance from library staff in accessing or evaluating the available databases and were very happy with the information available and the facilities, including connectivity speeds. The increased confidence in using and evaluating the resources, plus for some in sharing this learning, is a very clear and positive outcome. All respondents also commented on the positive change in relation to the infrastructure and availability of resources, especially during the past 2 years. Most common requests were for off campus access plus more computer terminals.

4.2 Objective 2: Strengthening the publication of research

Assessment on achievement of objective	Satisfactorily achieved identified objective. Ongoing work required to foster development of research.
Assessment by institutions with 1 low and 5 high	50% at Level 5 (Excellent) 50% at Level 4 (Very Good)

4.2.1 Related activity and outputs:

Figure 5 Participants of the 2011 LAMJOL workshop

Due to advances in technology and specifically in the area of research publication at INASP, the

creation of a Journal Online (JOL) project designated to Latin America was the mechanism selected to achieve this objective. Similar to other successfully created JOLs in Africa and Asia, it was set up using the Open Journal System (OJS) and with the title indicating region "LAMJOL"(Latin American Journal Online) http://www.lamjol.info/. The associated planning and activities commenced virtually, followed by the first face-to-face training hosted in

Nicaragua in 2010. Training was subsequently hosted in Honduras during the first half of 2011. As well as providing a platform for publishing online, this project aims to cultivate a wider interest in local research output and foster improvements in the quality of publications. It is anticipated that this will lead to inclusion in other regional and international databases such as Latindex and Scopus.

Through communications within the Latin American PERii network, and in an effort to increase Honduran publications indexed and their visibility, Honduras participated in the Latindex conference held in Nicaragua in 2010. Following this and subsequent meeting and discussions, UNAH is now the National Latindex Center, and has the responsibility of uploading data regarding national journals in the Latindex Directory (http://www.latindex.org).

Details of workshops and activities supporting publication and dissemination of research are listed under Section 5 – Table 2.

4.2.2 Outcomes, impact and review evidence

Whilst commencement on this element of the project was slightly delayed with outcomes yet to be established, there is already evidence of impact.

- Five journals are participating and meeting requirements for inclusion in LAMJOL:
  - Ceiba
  - Revista Ciencia y Tecnología
  - FHIA. Programa de Hortalizas
  - Poblacion y Desarrollo: Argonautas y Caminantes
  - Synapsys
- Three of these five journals have been included in the Latindex Catalogue, a Database with stringent mandatory requirements for inclusion. http://www.latindex.org, and referenced on other web sites eg. http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/latin-america-and-the-caribbean/honduras/
- In order to continue building capacity amongst national editors on the use of OJS, software that the LAMJOL platform uses, a training Journal for editors to practice on is available on the platform.
- In addition and a sign of their commitment to this component, the Honduran Coordination Team is preparing their own Spanish language manual on the use of OJS.
- Follow on workshops and promotional activities already planned aimed at increasing number and quality of journals participating in LAMJOL and providing guidance on running, preparation and publication of a journal
- As direct result of online access, there has been increased recognition of the journals and associated positive impact on the editor and journal contributors.
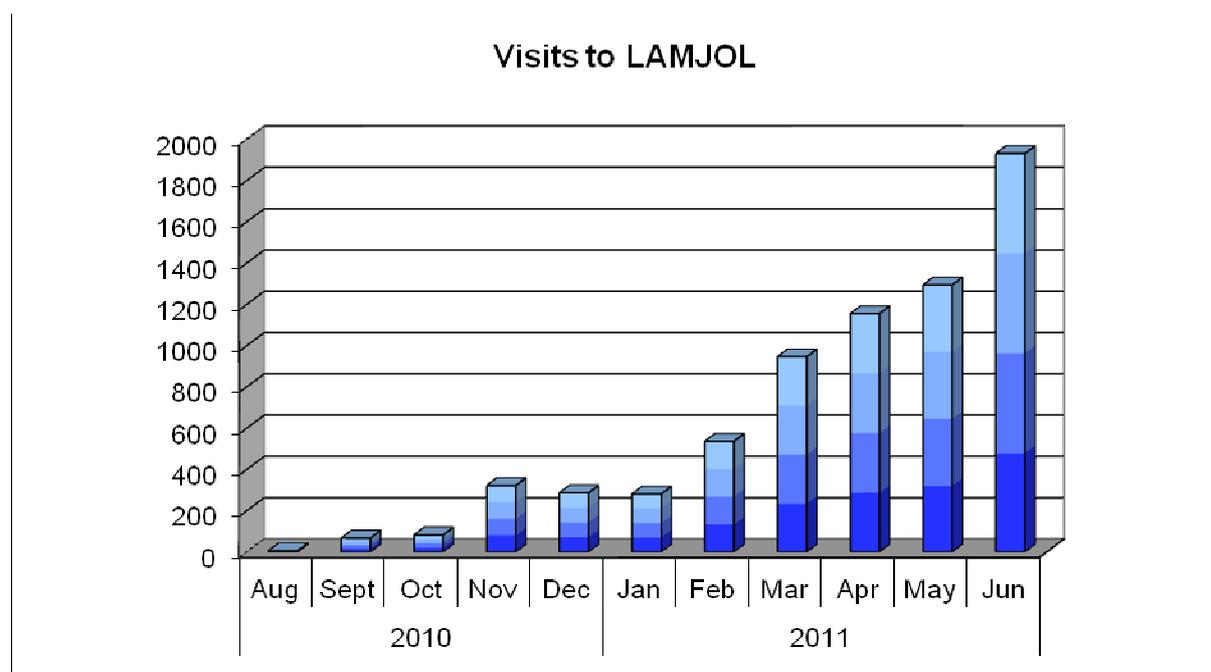

Figure 6 Visits to LAMJOL (2010-2011)

In addition, evidence of impact can be seen by looking at quantitative data such as the number of users visiting LAMJOL site (Fig 6) up from a monthly figure of 6 in August 2010 to 1,931 by June 2011. We can also observe changes in the quality of participating journals. For example by comparing a previous edition with a current edition of the journal, "Poblacion y Desarrollo" , there are at least 15 changes introduced by the editor (http://www.lamjol.info/index.php/PDAC), changes she has directly attributed to her participation in the LAMJOL project. These include:

- Online publication
- Higher level of interest nationally and internationally
- ISSN added
- Editor's details inserted and institutional details at end facilitating article submission
- Resume added
- Key words introduced
- Bi-lingual abstract
- Referencing conforming to international standards (eg. Revista Poblacion y Desarrollo: Argonautas y Caminantes, Vol 6, No. 6, 2010 when previously only indicating No.5)
- Applying editing standards such as following recommendation on article length and layout

LAMJOL workshop participants indicated how useful this project was with 12 of the 13 respondents identifying significant changes it had enabled, many on the ability to increase and accelerate sharing their journal. Both journal editors interviewed as part of the final review, noted how impressed they are with the support from PERii in Honduras and how online LAMJOL access has already widened their network. Along with the technical ability developed, especially evident was the pleasure when journal came online as well as the international interest this has generated. For example this heightened visibility has already resulted in an invitation and presentation of findings by one of the journal contributors at a meeting in Mexico.   Whilst recognize still room for improvement, there is now a sense of pride and confidence that their publication is of a comparable quality to that of their peers.

Figure 7 Ceiba's editors

Figure 8 Población y desarrollo's editors

It is too early to determine impact on research output as this will take time and this project could only ever be one of the contributing factors. Current internationally recognised bibliometric data shows national output from Honduras as very low. However even if low, the trend during the time of the project is upward for number of documents published and as a comparable % of the region's output. International collaboration, predominantly with the United States, is highest in 2009. Although over the last decade agricultural output is highest, medicine, at 36.9%, is the discipline where we see by far the greatest concentration of output during recent years. Citations do not

feature in bibliometric data until a few years after article publication, this figure is included here as a base reference for future studies. Data in Table 1 covering 2008-2010 contains only output meeting the Database's prescribed criteria and not the total output of Honduran research.

Year	Documents	Citable Documents	Cites	% International Collaboration	% Region
2008	37	36	249	89,19	0,05
2009	53	52	152	96,23	0,07
2010	66	63	87	93,94	0,08

Table 1 Honduras research output- SCImago Journal & Country Rank.

Sample Feedback from Journal Editors

"The publishing workshops supported national publication, allowing access to Latin American databases such as LATINDEX, and spaces that enable the visibility of the research being conducted at the Faculty of Medical Sciences which has motivated researchers to continue working on this activity. Also, sharing experiences with publishers from other countries and staff with extensive experience in the editorial phase allows improvement to the quality of national publications"

"A health sector initiative created in 2008 "Honduran Association of Science Editors (AHECI)", with the knowledge and relationships gained through the project (PERii) can be strengthened ..... for enhancing the regional work."

Areas for development, as identified by respondents during this review, include engagement of more journal editors, development of writing skills programmes and incentives to encourage publication and production of research.

4.3 Enhancing UNAH library staff capacity

Assessment on achievement of objective	Satisfactorily achieved. Positive indications of sustaining onward transfer and personal development of skills.
Assessment by institutions with 1 low and 5 high	75.0% at Level 5 (Excellent); 25.0% at Level 4 (Very Good);

4.3.1 Related activity and outputs:

Many of the training activities listed under Section 5 on Capacity Development, have enhanced skills of the library staff. Developing skills not only for application in the library but also more widely, for instance in facilitation of training for colleagues and students. The original participants trained have either gone on to deliver or assist with delivery of a range of training activities at their own institutions. In addition the coordination team have enhanced their skills through their involvement in the planning and implementation of activities, writing reports, financial management, presenting at conferences, negotiating services and liaising with various stakeholders and partners.

- In 2009 activities commenced in all of UNAH's regional centres on the introduction of a new library management system – Altair, a system using format MARC 21 (Machine-Readable Cataloguing). The migration of all databases from the old library system Micro ISIS to Altair was completed in 2010. A team of Altair trainers presented workshops on the use of MARC 21 in August 2009 with a follow-up in 2010 for all librarians in the Atlantic Coast Regional

Centre (CURLA) and librarians of the different Regional Centres of UNAH. Related training activities continued in 2011 with online modules and Altair personnel will again come to deliver training in Honduras during the last quarter of 2011.

- A 3 year mixed medium (virtual/classroom) based postgraduate diploma course, developed by the Universidad de Pinar del Rio in Cuba to meet needs identified within the library community, commenced in 2009 with 15 participants. Aimed at strengthening capacities in information management, this course has been well received and is set for completion end of 2011/early 2012 when certificates will be presented.

- In an effort to address a recognized language barrier in accessing much of the online resources, English language training was provided for a group of librarians.

- A librarian from CURLA participated, along with representatives from other countries, at an international visit to a model library in Colombia. He has fulfilled the main aim of this visit by returning to share learning with colleagues in Honduras.

- In March, 2011 the first E-library Congress was held in Honduras. Its main theme on *Research and e-library*, was designed for librarians, researchers and editors of local journals. Due to the benefits of ICT and with the support of the UNAH's Technology Platform, as well as national speakers who shared their knowledge and experiences, the participation of international speakers through videoconferencing was possible. Following online through DEGT's live channel, participants came from a number of countries including Dominican Republic, Bolivia, Mexico and Guatemala; as well as from Honduras.

Figure 9 MARC 21 training

Figure 10 Participants of the E-library Congress

4.3.2 Outcomes, impact and review evidence

When combined with the improved infrastructure, cascading of training through institutional and national activities has allowed onward transfer of skills and benefits.

- In addition to individual assistance, coordination team and member libraries conduct regular training for their user population.

- As a result of his visit to the model library in Colombia, a CURLA Librarian went on to develop and deliver a series of training workshops for colleagues in Honduras.

- Application of training components. For example monitoring usage of databases; using open source software to help monitor or configure network or OJS to publish journal online; and EndNote for creation of bibliography.

- Library staff member assigned to designated PC Station (PC purchased with project funding) to facilitate and assist with the uploading of online tutorials, modules and information on behalf of teaching and academic staff.

4.4 Developing and strengthening the Honduran inter-library network

Assessment on achievement of objective	Satisfactorily achieved. Strong network created within Honduras plus with library professionals internationally.
Assessment by institutions with 1 low and 5 high	43.0% at Level 5 (Excellent); 43.0% at Level 4 (Very Good); and 14.0% at Level 2 (Fair);

4.4.1 Related activity and outputs:

Many of the activities have helped to develop a culture of professional librarianship and a strong network has emerged during the life of this national project. Regular communication between the PERii coordination team and the participating PERii institutions has proven effective and a mutually respectful and supportive relationship has developed.

- Needs and plans have been discussed with problems resolved quickly as they arise, especially important in relation to the management of electronic resources and in matching training to the needs of the librarians and users.
- Regular stakeholder meetings. Selection on subscribed databases is collaboratively agreed and discussion on formation of the library consortium has involved representatives from each institution.
- Training on monitoring and evaluating e-resource access and usage has allowed evidence based selection of resources and provided useful data at an institutional and national level.
- Almost all training activities are attended by members of UNAH's regional centers and the wider network. Courses such as one on using the Dewey Decimal System develop relationships as well as skills. In addition plans are already well advanced so that this course, as others, will be available online through the newly launched UNAH Virtual Campus platform.
- Participation in longer courses of learning, such as the English language training and the post graduate certificate of librarianship, has provided an avenue for ongoing open interaction and experience sharing
- The first E-library Congress focusing on *Research and e-library* was hosted at UNAH, fostering closer communication and allowing for wider participation and interaction with countries in the region and internationally.
- Aimed at improving bandwidth management and usage in the PERii-Honduras associated institutions, the first workshop for the ICT library community was held at UNAH. All attending were very appreciative and enthusiastic and a follow-up workshop is planned for late 2011. Requests and discussion on possibility of creating a local network.
- Creation of consortia necessitates close working relationship and agreement on common goals.
- Participation in international and regional library focused activities has increased awareness and provided learning opportunities.

4.4.2 Outcomes, impact and review evidence.

Development of new relationships and strengthening of inter-library network has been facilitated through:

- Activities implemented involving library representatives from large number of institutions.
- Availability of online courses and modules for all member institutions
- Commitment to common aims and interests.

An addition by one institution, who ranked it as excellent, referred specifically to the contribution the project had made in strengthening inter-agency and university researcher communication and support.

Whilst early to establish lasting impact, the indication, based on observation and feedback, suggests that this interaction is set to continue. Not only because of outstanding components such as formation of a library consortium, but because relationships have been strengthened and there is a sense of pride in what has been achieved together as part of a network and how this in turn has enhanced their individual institutions.

4.5 Developing a national library consortium

Assessment on achievement of objective	Not completely achieved but in progress. Discussions and meeting have taken place involving each of the current member institutions and proposal document drafted by the librarians. Involvement of the institutional financial authorities and senior administration required to ratify.
Assessment by institutions with 1 low and 5 high	33.0% at Level 5 (Excellent); 50.0% at Level 4 (Very Good) 17.0% at Level 3 (Good)

Figure 12 Meeting for Selection of resources

Figure 11 Working group on library consortium development

4.5.1 Related activities and output:

- In August 2010 the first Library Consortium Development workshop was implemented, attended by 21 librarians from 10 different institutions. Subsequent discussions have taken place and a follow-up workshop is scheduled for late November 2011. In order that they have a clear idea of the purpose, cost sharing models and operation of the consortium, this event is targeting financial authority representatives from each of the PERii member institutions.
- Two PERii team members participated at the pre-IFLA satellite conference in Guatemala as panel members on the consortium focused session

4.5.2 Outcomes, impact and review evidence

Creation of the consortium is not as advanced as anticipated in the project plan. On reflection it would seem to be a failing both in terms of planning and in the implementation schedule. It was essential firstly to establish a good working and trusting relationship, and to demonstrate the effectiveness of the project and of the project team in enabling positive outcomes. As a necessary basis for its formation, then development of the consortium could only effectively commence in year 2 of the project. The limited time remaining combined with the complexity involved in formation of an official body involving private and public universities and necessitating financial commitment have all contributed to outcomes not being fully completed.

Next steps are already in place. Having developed the draft consortium proposal document, the librarians now plan to present this to the university authorities. Also plans are in place to involve the financial authorities from the member institutions so they are convinced of the value of a consortium and understand the financial implications.

Library staff spoken with during visits to both public and private institutions, all stated their commitment and support for the consortium concept. Issues such as cost sharing models are important and the aim is for the stakeholders to all agree on an acceptable format.

4.6 Developing stronger researcher-focused services

Assessment on achievement of objective	Satisfactorily achieved to the extent anticipated through this specific project. Other avenues to extend these services remain to be developed or built upon.
Assessment by institutions with 1 low and 5 high	50.0% at Level 5 (Excellent), 37.5% at Level 4 (Very Good), and 12.5% at Level 3 (Good)

4.6.1 Related activity and outputs:

Significant for advancement in research, is the online access provided to high quality journals and resources. The promotional awareness activities have allowed for target users to know about the available resources and improvements in ICT services have made them accessible. Creation of the Institutional Repository will provide a rich source of easily accessible information. Capacity enhancing events attended by representatives from Honduras include a workshop on scientific writing hosted in Nicaragua. This is an area of interest to many students and a similar event is scheduled to take place in Honduras early in 2012.

Participation in an international scientometric congress and bibliometric seminar hosted in Cuba is helping to create a new avenue of research for Honduras and development of capacity to provide useful analysis for research and development in the future. A study on PERii countries in Latin America available from www.inasp.info/bibliometrics provides a base for further studies on output of Honduras.

Interaction between the coordinating team and institutions has provided opportunity for discussion on the needs of researchers. Enhancing librarian language skills and ability to evaluate the resources, has facilitated improved services provided to users.

A new UNAH wide service recently launched has enabled remote access to electronic resources through the virtual library and users can download the full text articles from anywhere using unique password to access the site at http://bibliovirtual.unah.edu.hn.

The creation of a new collection which will have specialized information in bioethics and related themes is planned for 2012.

4.6.2 Outcomes, impact and review evidence

The reference services provided to researchers continues to be strengthened. Evidence of this includes the systematic increase in the usage statistics of electronic resources as well as the increased e-mail delivery of full text articles. The improving quality of journals is encouraging new contributors and articles of a higher quality. Bibliography training has improved ease and quality of output, as evidenced by the feedback of research students, librarians and editors interviewed during this review. Services facilitating 24 hour and off campus access are significant developments as a recent UK based RIN study found *"Readers use e-journals well into the night and over the weekend"* and suggested this as high as 25% of overall use.

4.7 Expanding the availability of Honduran resources online

Assessment on achievement of objective	Partially achieved through introduction of LAMJOL and inclusion in Latindex and will be completed when IR becomes fully functional.
Assessment by institutions with 1 low and 5 high	62.5% at Level 5 (Excellent); 37.5% at Level 4 (Very Good)

4.7.1 Related activity and outputs:
- Even though the preservation of the national bibliographic heritage depends on digitizing Honduran content, no institution had taken on this task. High equipment cost was a main barrier and also created delay for UNAH's acquisition of the equipment necessary to create an Institutional Repository (IR). However online access to the IR is currently at the implementation stage with technicians working on development and completion date set for February 2012.
  In July 2011 technical and administrative training on the software was presented and subsequently a web page created https://www.gestiondoc.unah.edu.hn:8443/contentspace/ More training is scheduled for later in 2011. UNAH are planning to provide a digitisation service to other national institutions and this should offset part of the ongoing maintenance costs.
- In an effort to increase the number of Honduran publications indexed and their visibility, UNAH has taken on the role of National Latindex Center for Honduras. As such, they have responsibility of uploading data regarding all national journals in the Latindex Directory (http://www.latindex.org). In addition UNAH evaluates these national journals to establish if they fulfill a minimum 85% of the prescribed mandatory criteria necessary for inclusion in the Latindex Catalogue.

- The creation of LAMJOL has provided a platform making Honduran journals available online http://www.lamjol.info/. In addition to research articles, this has facilitated the promotion of local art online through contribution by local artists.
- A number of promotional activities have been undertaken and items produced to raise awareness of the resources available.
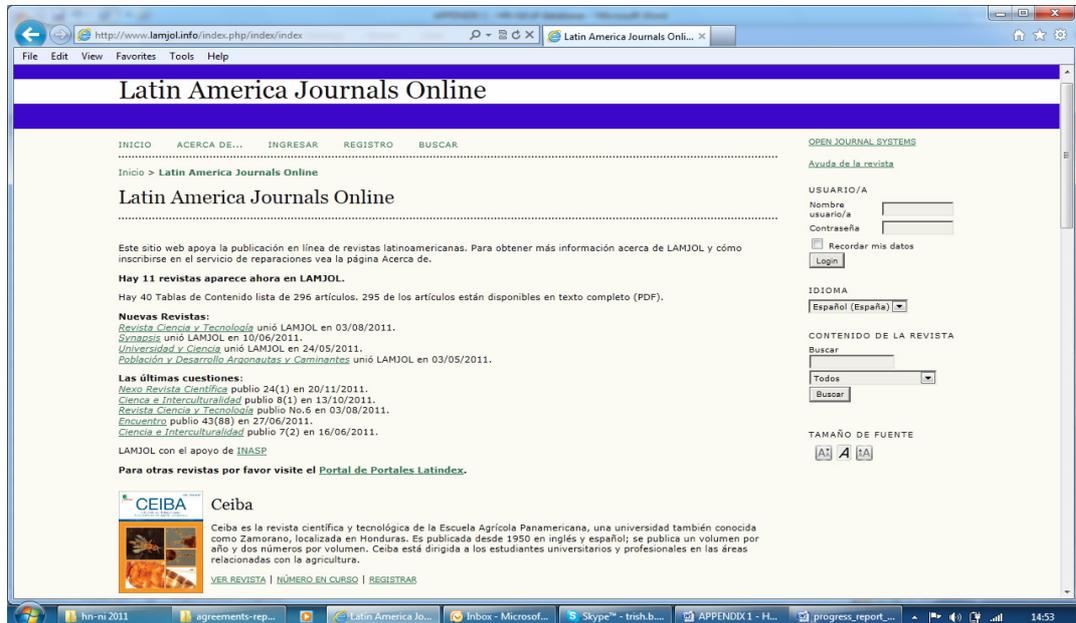
Figure 13 LAMJOL Homepage

4.7.2 Outcomes, impact and review evidence

It is too early to establish outcomes for this particular objective, especially as the main component, the IR, is yet to be made fully functional. However the ground work has been completed and will result in a very high amount of local content becoming available online. As well as capacity enhancement, activities promoting the new services and resources available have been implemented and the important awareness created.

"One of the short-term goals at the Faculty of Medical Sciences is the strengthening of research and publication, so the work done in the editorial phase of the project through PERII continue and contacts that were made in the workshops we attended remain. Therefore we consider that the group editor and researchers are motivated to pursue and achieve position in databases for their publications, nationally and internationally." Journal Editor

Related information:
IR content available from https://www.gestiondoc.unah.edu.hn:8443/contentspace/
Latindex Directory at (http://www.latindex.org)
LAMJOL content available from http://www.lamjol.info/
 Fig.6 provides statistics on visits to LAMJOL.
http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/latin-america-and-the-caribbean/honduras/

5. Capacity and Infrastructural Development

5.1 Capacity

Training events by type (2008-2011)

Legend:
- E-Resources
- Research creation
- Research publication, dissemination
- Library auto
- Promotion
- M and E - resources
- BMO
- Consortia
- Language
- LIS
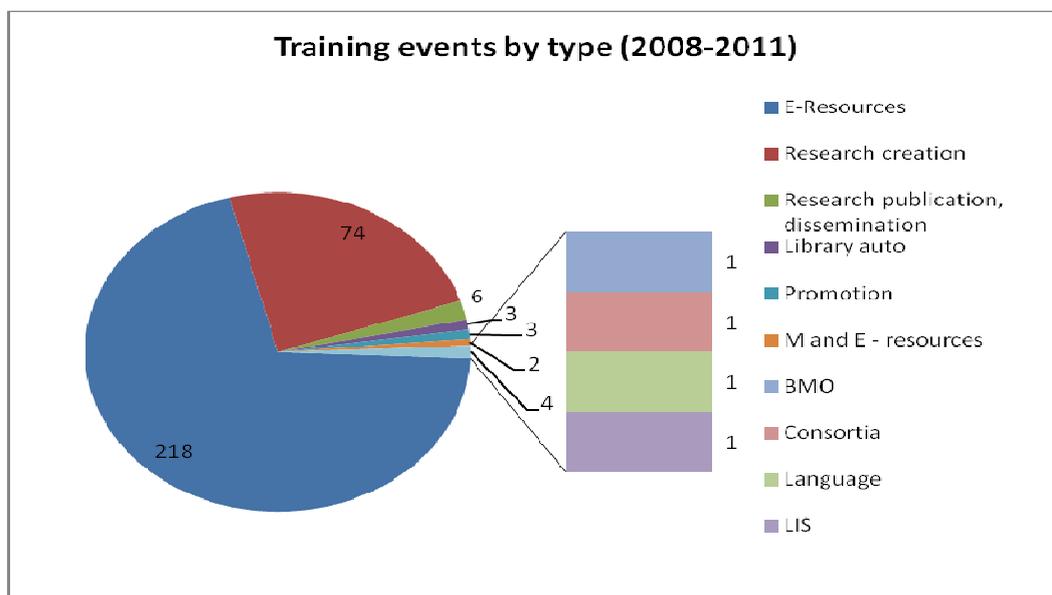
Figure 14 Training Activities by Type

Capacity development has featured very strongly across all project components and the impact of this is expected to last long past the end date of 30 June 2011. The Honduran coordination team has worked diligently on the provision of end user training; either arranging for participation in externally facilitated activities, national and international, or in facilitating locally led training activities. In order to present a comprehensive picture and illustrate how these have developed over the course of the project, Table 2 lists the activities by year and Fig.14 by type. Relevant conferences and international events attended or organised by representatives from Honduran team are noted at end of Table 2 and illustrated in Fig.15. Not included are the many follow on and associated training activities organised and implemented by each of the participating institutions.

As central to the project, it is no surprise to have the concentration of training invested in electronic resources (E-Resources). This focus of effort has resulted in the positive impact recorded in Section 4.1 on the related objective - *supporting access to online research information*. The evidence based assessment was collaborated by the independent institutional assessment of 100% achievement at the top level. Many of the research creation activities have focused on the topics of citation and bibliography and these, like the majority of activities listed, are set to continue.

Training type	Activity/Workshop description	Year	No. of events	No. of participants	Male	Female
E-resources	Tools, strategies for searching and retrieval of online information	2011	50	1,001	301	700
E-resources	Using and managing online databases	2011	49	836	251	585
Promotion	Sensitization and methodology of PERii-Honduras	2011	1	3	2	1
Tech-Library platform	Use of library system Altair – online training	2011	1	19	5	14
Research publication, dissemination	Use of OJS software in the process of editing and publishing articles on the platform LAMJOL, international facilitated	2011	1	22	8	14
Research publication, dissemination	Use of OJS software in the process of editing and publishing articles on the platform LAMJOL - Local facilitated	2011	1	30	6	24
Research publication, dissemination	Quality criteria for scientific journals	2011	1	8	5	3
E-resources	Tools, strategies for searching and retrieval of online information	2010	26	431	130	301
E-resources	Using and managing online databases*	2010	25	528	159	369
Research creation	Use of bibliographic managers as a tool to support the writing of academic documents	2010	18	208	62	146
E-resources – consortia	Library Consortium Development workshop (plus 3 follow on meetings)	2010	1	21	5	16
E-resources	Using and managing EBSCO platform	2010	3	72	18	54
M and E	Monitoring and evaluation of electronic resources usage	2010	1	20	7	13
Promotion	Sensitisation and methodology of PERii-Honduras***	2010	1	8	3	5
Research publication, dissemination	Latindex workshop for Central American journal editors.	2010	1	12	6	6
Research publication, dissemination	LAMJOL workshop	2010	1	10	7	3
Research publication, dissemination	Follow-up meeting with national editors	2010	1	16	10	6
Library auto	Altair and MARC21 national training on new system	2010	1	28	5	23
BMO	Bandwidth Management and optimisation	2010	1	14	13	1
Library auto	Altair and MARC21 initial training on new system	2009	1	25	2	23
E-resources	Using and managing online databases*	2009	65	1,302	391	911
Research creation	Pilot workshop on the use of bibliographic managers as a tool to support the writing of academic documents	2009	1	24	9	15
Research \creation	Use of bibliographic managers as a tool to support the writing of academic documents	2009	55	1,117	335	782
M and E	Introduction to monitoring and evaluating electronic resource usage statistics**	2009	1	16	5	11
Promotion	Sensitisation and methodology of PERii-Honduras***	2009	1	12	4	8
Language	English Language training (11 month	2008-	1	35	8	27

	course) (tbc see 2008 rpt under Access 13 and research creation 35 noted	09				
LIS	Library Information Science PG Diploma (3 year programme)	2008-2011	1	25	6	19
	TOTAL		**310**	**5,843**	**4080**	**1763**

PROJECT RELATED INTERNATIONAL AND NATIONAL CONFERENCES/SEMINARS

Dominico Republic	Participacion en XVII Reunion Tecnica Annual Latindex	2011	1	1		1
Guatemala	Pre-IFLA Satellite Meeting	2011	1	2		2
Panamá	Latindex	2011	1	1		1
Malawi	PERii SC meeting	2011	1	1		1
Honduras	E-library Congress on Research and e-library – int.participation	2011	1	205	64	141
Cuba	Scietometric Congress & Bibliometric Seminar	2010	2	1		1
UK	PERii SC meeting	2010	1	2	1	1
Nicaragua	Taller para editores Latindex	2010	inc above			
Nicaragua	LAMJOL (combined HN/NI project launch and training no.1)	2010	inc above			
Colombia	"Tools 2.0 applied to library services" and "Information Literacy	2010	1	1		1
Nicaragua	Participacion en la XVI Reunion Tecnica Annual Latindex	2010	1	1		1
Nicaragua	Use and management of the HINARI, AGORA and OARE databases'	2009	1	1		1
Nicaragua	MEERU	2009	1	2		2
Bangladesh	PERii SC meeting	2009	1	1		1
Nicaragua	PERii Latin America network development (Bo/Cu/Hn/Ni)	2008	1	1		1
UK	PERii SC meeting	2008	1	2		2
México	Visit to some models library in Colima	2008	1	3	2	1
El Salvador	Visit to some models library in San Salvador	2008	1	3		3
Cuba	Visit to some models library in Pinar del Rio and La Habana	2008	1	3		3
Cuba	Participation in Congreso Internacional de Informacion: INFO 2008	2008	1	3		3
Canada	Online training "Dirección y liderazgo en bibliotecas académicas"	2008	1	16	5	11
Costa Rica	Visit model libraries San Jose	2008	1	18	3	15
El Salvador	Search and evaluating quality information on health and network in Virtual Health Library	2008	1	2		2
	TOTAL		**22**	**270**	**75**	**195**

Table 2 Training activities 2008-2011

Participation in international activities has resulted in not only raising awareness of issues related to supporting research but also in developing strong links to continue building on and participation in networks. The close links formed with Nicaragua and Cuba for instance have allowed sharing of many opportunities including combining training.
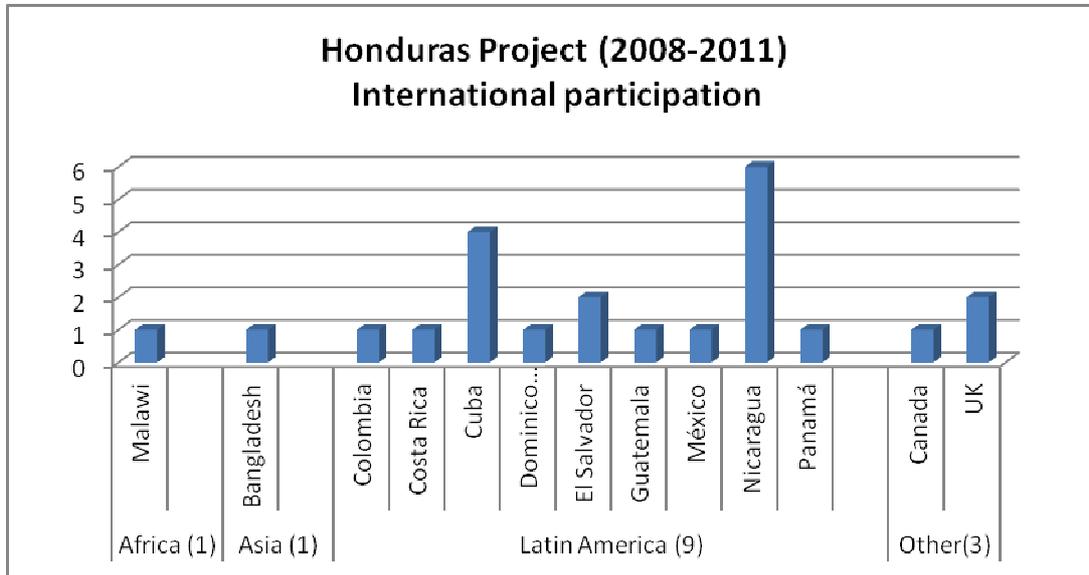

Figure 15 International activity

5.2 Infrastructure

This section provides details on the development and improvement to the UNAH labs and ICT over the three year duration of the project. This enhancement of the infrastructure allowed delivery of the project components and achievement of objectives, resulting in improved services for the academic community. Annex 4 of this report provides the complete inventory of all acquisitions during the same period.

Lab	Description	Location
Virtual Library	This lab was provided with a multimedia projector as well as 25 computers. This lab is used to deliver workshops and also to provide information searching services in electronic resources.	UNAH, Tegucigalpa
General Collection (Library)	This section of the Central Library was provided with 5 computers for administrative work in Altair.	UNAH, Tegucigalpa
Honduran Collection (Library)	This section of the Central Library was provided with 3 computers in order to improve the search service in electronic resources.	UNAH, Tegucigalpa
Periodicals Collection (Library)	This section of the Central Library was provided with 3 in order to improve the search service in electronic resources.	UNAH, Tegucigalpa
Reference Collection (Library)	This section of the Central Library was provided with 1 computer for administrative works in Altair.	UNAH, Tegucigalpa
Medical Library	It was provided with 3 computers in order to improve the search service in electronic resources	Medicine Faculty, Tegucigalpa
UTIV (Library)	It was provided with 3 computers in order to improve the services that Library offer to those users with special capacities	UNAH, Tegucigalpa
Regional Center of Comayagua	It was provided with 1 computer for administrative works in Altair	Library, Comayagua
Regional Center of Juticalpa	It was provided with 1 computer for administrative works in Altair	Library, Juticalpa
Regional Center of Choluteca	It was provided with 1 computer for administrative works in Altair	Library, Choluteca
Regional Center of Copan	It was provided with 1 computer for administrative works in Altair	Library, Copan

Table 3 Infrastructure development

Additionally, the library was provided with furniture as follows:
- The Virtual Library lab furniture was completely renewed with modern and adequate furniture for the nature of the lab.
- Other labs provided with furniture include: UTIV, in Central Library, Medicine Library, in Medicine Faculty, and the ICT Teaching lab

- The reading room in the General Collection of the Central Library, Tegucigalpa, was provided with furniture, in order to give users a comfortable environment where they can study. Also the help desk furniture was renewed.
- The Honduran Collection, Periodicals Collection, and Medicine Library also were provided with furniture.
- The Regional Centers in San Pedro Sula and La Ceiba were both provided with technical equipment in order to gain access to the internet. This access allowed them to implement the services of electronic resources provision in their libraries.

6. Project coordination and financial management

6.1 Coordination:

The strong participation and coordinating work between the team and all involved in the project has resulted in the implementation of the planned activities. Close communication between the PERii Honduras team and INASP through regular email and Skype meetings together with annual personal meetings ensured that any uncertainty was clarified, problems resolved and opportunities maximized in a timely manner. Along with financial support, the Sida contact person provided advice and guidance. Annual project reports allowed for regular reflection as well as establishing the progress or omissions of the period covered.

The commitment and integral part played by the Honduran team should not be underestimated in the success of this project. This is set to continue and the positive approach and good working relationship between the team members and with project stakeholders in Honduras was evident during the recent review visit to Honduras.

6.2 Finance:

Overall the financial element went to plan despite some delays in transfer and changes to budget. Whilst they did not impact negatively on the overall project, some practical issues in relation to finance emerged during this project and are noted under budget item Section 7.

7. Implementation partners – self review, key learning and change enabled

As noted under coordination above, this was a successful partnership which has resulted in the implementation of the planned project. During the project, regular time has been devoted to reflection which has helped assess progress and achievements or failings. To continue this learning, a major part of the review, carried out by the coordination team along with reviewer, sought to identify change this project facilitated along with key learning to help inform further similar activities.

In an effort to establish what lessons can be learned, a separate document has been prepared containing recommendations based on combining the overall findings from this and a similar Nicaragua project.

7.1 Partners: main role and how partnership worked

Sida: The financial support of Sida allowed the project to become a reality. The combined experience of working internationally and in the region helped Sida in identifying not only a need but also a practical and context appropriate project. A supportive attitude and guidance, for example on potential evaluation mechanisms in verifying attainment of identified goals, proved very useful.

PERii: Sharing experience starting with involvement at the planning stages through to completion of each of the project components. PERii has as part of its role that of finance manager, supporting implementation of activities, shared review and reporting, and exploring with partners solutions as challenges encountered and helping identify appropriate opportunities.

UNAH: The senior administration in initiating, approving and supporting implementation of the project. UNAH provided a team of personnel capable of implementing the project components and who could command the level of support required from participating institutions. Authorities gave their backing by directing the academic research units to actively participate in the process. The coordination team based at UNAH had the central role in directing implementation of this national level project. The varied skills team members brought to the project, for instance some in finance and others in teaching, contributed significantly. They planned, directed and supported implementation throughout the project.

Working together as partners:
Discussion and analysis on how the partnerships worked was again very positive:

- UNAH noted that this partnership was a good experience. Working together was easy and especially referred to the facilities and amenities PERii obtained as very supportive in the successful development of the planned activities. The level of experience and advice available from partners was appreciated and provided reassurances and guidance. Additionally involvement in the PERii network exposed Honduras to an international environment where they could learn and share knowledge and build networks.
- INASP commented on the positive approach and professionalism of each partner, making the work pleasant rather than challenging. Having a clear plan and defined role to work with was helpful and avoided any ambiguity which can sometimes arise in partnerships. Involved role of PERii facilitated a better and more in-depth understanding of the local environment and a shared understanding.

Figure 16 Honduras Coordination Team

7.2 Key Learning

This project has the potential to impart many lessons. Unfortunately not easy to replicate but timing and people feature strongly. Timing for the education and research communities to be ready and receptive to a programme focusing on accessing, creating and sharing of online information. Timing in the coordination of these components so that the necessary infrastructure and skills needed were in place to enable access when the resources were made available. Alongside timing in importance,

was the collaboratively developed plan and a committed and professional team to effectively lead implementation.

A positive indicator of sustainability is the enhanced capacity developed and the extent to which this has equipped local personnel to continue building on the work they have already undertaken. The coordination team and institutional representatives commented favorably on the approach and the sense of ownership, reflective self-analysis and transparency this model had fostered. However even with financial support from UNAH, covering subscription costs will be challenging. Given the volatile economic climate and the constant political and socio-economic uncertainty, this will continue to be an issue for any project when ongoing funding is a requirement.

> *"I think yes, there will be continuity of the planned activities, because the project has set the stage for cooperative work and promoted and encouraged at an individual and institutional level; both the library personnel and users as a whole can look for alternatives that allow development of products and innovative information services."* Library Director

Lessons Learned:

- Involvement of all partners from planning stage onwards allowing knowledge on what project entailed and an impetus to achieve the agreed goals.
- Clear project plan for a finite period to aid direction and with agreed funding.
- Adoption of holistic rather than fragmented approach; recognition of importance of library increased with development of facilities/availability of resources combined with the knowledge of staff
- Dedicated project coordinator/team has led to strong working relationships between the countries and partners. Communication has been frequent and has helped in the development of these relationships. (Choosing the right person/people for the role has been key to success).
- Whilst this team rose to the challenge, the need to balance achievable and overly ambitious goals is evident. Feedback from this project team *"Initially the extent of national level activities to be completed in the given time frame seemed like an impossible goal to achieve. Overcoming the barriers and achieving proposed goals is a matter of great personal satisfaction and a positive motivational lesson to continue working with the project regardless of the difficulties encountered in the process."*
- Involvement in the PERii network exposed Honduras to an international environment where they could learn and share knowledge and build networks.
- Development of capacity and confidence of the library and research community through activities. Also of the coordination team members. For example, now confident to approach other donor agencies for future funding; two team members not previously presented training now competent facilitators.
- 'Fit' between the activities contained in the project plans and those within PERii has meant that systems already in place can be utilised (without the need to develop new ones just for these projects)
- Projects which have activities which overlap with those in PERii has meant that the research community in Honduras can benefit from the knowledge and experience of the wider INASP and PERii network. Both countries have experienced good levels of support from the other PERii Latin American countries as well as colleagues in Africa and Asia.

- Choice of institution/organisation where the project is coordinated from has ensured that the reach of activities is as wide as possible. UNAH has a remit to work on a national scale and this has helped to develop a strong community of professionals from a variety of institutions - key to the sustainability of the work in Honduras.

Key drawbacks or problem areas of the approach

- Sustainability issues - limited time for spending large amount has potential to not succeed in long term.
- Time allowance for some activities inadequate.
- Coordination of activities supported by funding agencies – improving mechanism for this in place internationally not as evident at the more localised level or in specific activity area.

Suggestions based on experience if similar projects in future

- **Project plan** is crucial to the success/failure
    - Realistic start up time to be allowed for project development and implementation start date, delay can result in loss of momentum or in initial people involved no longer available. Bureaucratic channels and the required level of authority to be considerations.
    - As technology advancement is rapid, changes in what can/should be done to achieve objective to be flexible.
    - Whenever possible to have feedback on details of plan from the relevant experts before finalising plan.
- **Budget**
    - Clarity from beginning on the financial requirements, especially confirmation of account details and authorisation so as to avoid unnecessary delays.
    - Contingency included to allow for currency exchange variations OR all funds in US$ only. In this project there were 3 currencies and as well as cost of changing currencies, this can increase opportunity for error in administration.
        - In the case of foreign currency the amount can be more than the reduction would indicate. In order to have assurance of the amount available rather than dependence on the variable exchange rate, a contract is often entered into with a financial company based on the anticipated agreed budget amount. The penalty when the full amount is not subsequently received can be high. In this case an approx $15k shortfall became $17.5k.
    - Funds to be held and accounted for by recipient country unless justifiable concerns.
    - Adherence to scheduled payment. To avoid potential problem, funds for journal subscriptions to be received at the beginning of year so available to make the mandatory advance payment to publishers.
    - Budget allocations contained within initial agreement signed by the country and INASP should remain fixed unless exceptional circumstances. Any reductions in planned disbursements could impact negatively on project outcomes.
    - Stagger amount for subscriptions so commencing with less funds to cover reduced number of subscriptions. Allocations throughout the project were high, and sustainability in this area is likely to prove problematic.

- o Budget accuracy in estimating cost was very good apart from underestimation on hardware for the digitization project. Method used to estimate costs is recommended for future projects.

- **People**
  - o Choosing or ensuring involvement/support of the right people for the particular project - to work, support or advocate in country and with funders.
  - o Ideally involvement of the project coordinators from the start (when developing the project proposal) but if not then clear plan of responsibilities
  - o The team to have between them the mix of skills required for management of the project. The mix of team's skills worked well but the team suggests addition of an IT specialist.
  - o As based on cascading methodology the initial trainers in series are very important as are the nominees chosen to carry on the training
  - o Despite evident benefits, some stakeholder groups can be resistant to a project or elements of a project. The key is to anticipate this and look for ways to engage these groups in order to maximise results.

7.3   Change enabled

Apart from one still in progress, due to underestimation on effort and time required for completion, the project objectives have been implemented within budget and to an acceptable standard. Changes enabled as a result of this project include:

- national access to broad range of high quality databases
- skills and confidence of library staff enhanced
- infrastructure developed within the library facilities
- creation of new or stronger networks between and within stakeholder groups and individuals
- behavior of researchers and research activities at an institutional level
- increased chance of success in producing and publishing research
  - o creation of online facility for sharing local research and knowledge (IR and LAMJOL)
  - o writing skills training
  - o heightened awareness of criteria specification requirements for inclusion in journals and datasets
  - o knowledge of opportunities for publishing of research
  - o access to wide range of resources
- working group established to form national level library consortium
- increasing awareness on importance of research and the value of access to online resources by administration, staff and students as well as researchers
- skills and based on project achievements the evidence available to advocate for support to continue and develop on the work of this project plus lead on new projects

8. Conclusions

This project has achieved a lot in three years. The approach adopted has worked well and the learning potential for implementation of other similar projects is significant. The overall consensus is very positive with pride in what has been achieved. Feedback from participating institutions praised the project, confirmed capacity to continue the work and ranked achievement of objectives at the top end of the scale. The logged figures for personal visits to the library labs is recording substantial increases year on year, as is the usage of the databases with downloads up from 9,337 in 2008 to 18,137 by end of 2010. A new system to help promote local research - LAMJOL, has recorded monthly visits increasing this year from 281 in January to 1,931 by June. Many activities have taken place during these 3 years enhancing capacity. The 310 events and 5843 participants trained, 70% of which are female, recorded in this report provides only a snapshot of the story. The potential to continue this development of the library services and support research output is very strong. Even if the consortium is slightly behind schedule, steps have been made towards its development and that of retaining the current availability of high quality databases. Enhanced interaction between the library community and the network allows a space for mutual sharing and discussion. The heightened visibility of the library and the services it offers along with advocacy skills to seek recognition from the university community and authorities omens well for the future.

In conclusion and as a direct result of this project, access to information, production and diffusion of research in higher education and the capacities of librarians, editors, researchers and users of information has been greatly enhanced in Honduras. These components all have a national impact, and contribute towards development of the entire country.