



Review of activities

RESEARCH PROJECTS

Knowledge-based economies (KBE): Inclusive agriculture

Knowledge-based economies was the thematic focus of LIRNEasia's 2010-2012 research cycle. The research concentrated on identifying the existing knowledge and information gaps in the agriculture supply chains (specifically those which are export oriented and have high potential for value addition) and how the supply chains can be made more efficient and inclusive for smallholders. Two supply chains each were studied in three countries; jute and potato in Bangladesh; mango and pomegranate in India; rubber and pineapple in Sri Lanka. In Thailand, a report was done on existing case studies that looked at the successful use of ICTs to overcome the limitations faced by smallholders.

The research showed that the agriculture sector is plagued with structural issues such as small land size which prevent farmers achieving economies of scale and that some of these issues disproportionately affect smallholders, the largest segment of growers in the countries we work in (Table 1).

One such issue identified by the study is the smallholder quality penalty (SQP). The SQP is a financial penalty on the prevailing price imposed on the smallholder by the first-handler due to the uncertainty of produce quality. This allows the first-handler to offset potential losses due to possible perception of lower quality when selling to the next handler downstream. SQP is based on perception and may be partly justified. Smallholders are often resource-constrained and are unable to make the investments necessary to ensure

quality. However, even if the smallholders are able to take the necessary steps to improve quality, the perception of inferior quality produce persists, reducing incentives to invest in the first place. This creates a vicious cycle, depressing investment by smallholders. Evidence of SQP was seen in Bangladesh, India and Sri Lanka.

The research also showed instances of the SQP being overcome through collective action, in the form of farmer societies. The farmer societies were able to control the quality of their produce by ensuring members adhered to the necessary standards and were able to gain more bargaining power, thereby allowing them to get a better price for their produce.

Apart from the above, a number of other issues were identified. Growers from Bangladesh and Sri Lanka were affected by the unavailability of good quality seed material in the jute, potato and pineapple supply chains. The need for post-harvest infrastructure such as food-irradiation facilities for mangoes and cold storage for potatoes was also highlighted in the research reports. The use of ICTs was limited in all supply chains studied except in the case of pomegranate. The study showed that ICTs are predominantly used by the medium and large scale pomegranate farmers who then pass on the information and knowledge to the smallholders.

Project Managers: Sriganesh Lokanathan and Nilusha Kapugama

Table 1: Average landholding size and percentage of smallholdings by country

	Bangladesh (2005)	India (2002)	Sri Lanka (2002)	Thailand (2003)
Average landholding size (ha)	0.6	1.3	0.83	3.2
Percentage of smallholdings of total landholdings	88.5% (<=1ha)	81.8% (<=2ha)	70.5% (<2ha)	64.5% (<=3.2ha)

Bangladesh agricultural sample survey (2005), Indian agricultural census (2001/ 2002), Sri Lanka agricultural census (2002), Thailand agricultural census (2003)

Sriganesh Lokanathan at FAO's Global South-South Development Expo

LIRNEasia's Senior Research Manager, Sriganesh Lokanathan, was amongst the invited speakers at an FAO panel on agriculture, food security and capacity development in Rome in December 2011. The panel session was part of the Global South-South Development Expo 2011, which was held that year at the FAO headquarters in Rome.

High-ranking officials from government and UN agencies as well as academics and practitioners participated in the Expo showcasing solutions for enhancing the capacities of developing countries in food production, agricultural technology and nutrition.

Sriganesh spoke on the role of mobiles in rural development using case studies from India and Sri Lanka. He emphasized the value of public-private partnerships rather than government-only or private-only solutions, in utilizing ICTs for rural development.



Photograph courtesy of FAO/Giulio Napolitano

Seminar for the Lanka Fruit and Vegetable Producers, Processors and Exporters Association

LIRNEasia was invited by the Lanka Fruit and Vegetable Producers, Processors and Exporters Association to conduct a seminar for their members. The event, held at the Ceylon Chamber of Commerce was attended by large, medium and small scale actors of the fruit and vegetable supply chains in Sri Lanka. These included representatives from companies such as Hayleys (HJS condiments), Jagro, Nidro Supply and Serene International.

LIRNEasia presented its findings of the agriculture and knowledge-based economies research which included the role of ICTs in agriculture, need for standards and the importance of traceability for competing in export markets, the information and knowledge gaps in the Sri Lankan pineapple supply chain and the use of communities of practice for sharing information and knowledge.



The seminar provided a forum to discuss about some of the problems faced by the supply chain actors. The discussion focused on the need to reduce the quality penalty suffered by smallholder growers as well as the value of smallholders organizing themselves into farmer societies. The exporters highlighted the need for increasing the supply at acceptable quality levels and competitive prices. The importance of knowledge was recognized by all.

Measuring ICT sector and regulatory performance: Indicators

ICT indicators reported by LIRNEasia since 2006 have proven valuable to policy makers, regulators and operators and in rapid response actions. One of our first products, mobile benchmarks, was discontinued after the International Telecommunication Union (ITU) started reporting on mobile prices as baskets (the methodology¹ LIRNEasia adopted from the OECD) as opposed to costs of three minute calls.

LIRNEasia continues to report the following annually:

- Broadband prices for specified retail packages including the annual cost for 100km of a 2Mbps Domestic Private Leased Circuit (DPLC)
- Broadband quality of service experience (QoSE), based on the AshokaTissa methodology which measures the following performance dimensions; upload and download speeds, round-trip time (RTT), jitter, packet loss and network availability (The methodology² was developed by LIRNEasia and IIT-Madras in the previous grant period)
- International voice tariffs (fixed and mobile) from and to South Asian Association for Regional Cooperation (SAARC) countries and to selected countries in Southeast Asia, East Asia, Australasia, Europe, North America, South America, Africa and the Middle East
- International roaming tariffs for incoming and outgoing voice (to home and visiting countries) and Short Message Service (SMS); the home country is within the SAARC and ASEAN (Association of Southeast Asian Nations) regions and the visiting countries are within regions specified above

ICT Sector Performance Reviews (SPRs) were conducted in South Asian and Southeast Asian countries. SPRs are a comprehensive evaluation of the ICT sector and include a Telecom Regulatory Environment (TRE) assessment³. The mobile-centric growth in phone access continues in all countries. However, broadband adoption is lagging. The necessity for applications that bring utility or entertainment value is therefore vital to encourage use of broadband. Apart from creating an environment conducive to mobile applications development, the key challenges in the region are still around spectrum (ensuring sufficient spectrum is made available at the right time through transparent and predictable mechanisms) and license renewal (ensuring that the numerous mobile licenses that are expiring in the next several years are renewed in a manner that creates the least uncertainty). The increasing importance of domestic and international backhaul is also highlighted in some reports.

Project Manager: Helani Galpaya and Shazna Zuhyle

Nirmali Sivapragasam, postgraduate student at the Lee Kuan Yew School of Public Policy

“I credit the many opportunities I was given at LIRNEasia to make presentations at conferences and to publish in journals, as having directly influenced my decision to apply to the Lee Kuan Yew School of Public Policy of National University of Singapore and be offered a full scholarship by it.”

¹ <http://lirneasia.net/wp-content/uploads/2008/07/preliminary-methodology-for-mobile-benchmarking-mar-071.pdf>

² <http://www.lirneasia.net/wp-content/uploads/2008/03/broadband-quality-test-plan1.pdf>

³ Except for the Maldives, Bhutan and Afghanistan where only Sector Performance Reviews were carried out

Shazna Zuhyle presents LIRNEasia research at the ITU World Telecom Indicators meeting

A presentation on LIRNEasia's broadband quality of service (QoSE) methodology was made at the International Telecommunication Union (ITU) World Telecom Indicators (WTI) meeting held in Mauritius, 7-9 December 2011. Measuring broadband quality across multiple countries in a comparable manner is a challenge faced by many. Regulators and policy makers are now increasingly engaging in broadband quality measures. As such it was a key topic discussed at the WTI meeting. The presentation addressed the issues a user may face while accessing the Internet and the quality indicators that can better measure the online experience. It also included LIRNEasia's test results and approaches that can be taken for such analysis. The Mauritius ICT Authority (ICTA) is interested in creating a directive on QoSE measures to be implemented by the broadband service providers of



Mauritius. LIRNEasia has been contacted in this regard and is providing guidance to ICTA. The AT Tester (the software LIRNEasia developed in collaboration with the Indian Institute of Technology Madras) is being revamped and is scheduled to be implemented by ICTA and Bhutan InfoComm & Media Authority (BICMA). The Communication Authority of Maldives (CAM) is also considering implementation.

Assisting with organizational improvements at BICMA

In 2001, Rohan Samarajiva spent time in Bhutan helping the government lay the foundation for the telecom regulatory agency. They followed his recommendations for the most part and achieved good results. Bhutan's regulatory agency, now called Bhutan InfoComm and Media Authority (BICMA), works closely with LIRNEasia. When BICMA began planning a new building, the question of an organizational overhaul also came up. In 2010, Dilini Wijeweera spent time in Bhutan developing recommendations on organizational changes and related design parameters for the building.

As a result of her work, BICMA obtained approval to shift the proposed location to a more conducive one. The design parameters issued by BICMA were also improved. But the most difficult element was the proposals on organizational change. During the May 2011 visit by LIRNEasia to Thimphu, Dilini and Rohan spent several hours in intense discussion with all the staff at BICMA on the proposals that had been made. There is no way to tell how successful this intervention was. Unlike changing a policy, changing an organization takes time.

Pacific ICT Regulatory Resource Centre (PIRRC)

Moves to establish a regional ICT center in the Pacific began in the mid-2000s. With interest shown by the World Bank, Ministers of ICT whose countries belong to the Pacific Islands Forum agreed in 2009 to establish a regional regulatory resource center. This came to fruition in November 2011, when the PIRRC was formally inaugurated at the main campus of the University of the South Pacific in Suva, Fiji. LIRNEasia, as a consultant for World Bank, was contracted to manage the PIRRC on the Bank's behalf. Muhammad Aslam Hayat, Senior Policy Fellow, was posted to Fiji as the PIRRC's first Director. The Center is funded by the World Bank, with some of its programs under Asian Development Bank funding. Since November 2011, Aslam has been very busy with recruiting staff for the Center. The Center's website www.pirrc.org was launched within a month and includes pages on basic regulatory information about member countries, ICT indicators for the island countries, news, blog, roster of experts, forum and important ICT events.

Rohan Samarajiva and Aslam Hayat also led a training workshop for regulators in the Pacific who have become members of PIRRC. Topics discussed varied from the regulatory web survey, the indicators database, and key principles of regulation to challenges of broadband for small Pacific nations. The Center has issued a white paper on international best practices to handle international grey traffic. It conducted a benchmarking survey of websites of national regulatory authorities in the Pacific. It also showcased two benchmarking reports on international direct dialing and mobile roaming within Pacific island countries.

From the beginning of 2012, the PIRRC Director has been on the road, visiting some of the Pacific island countries. Such visits afforded Aslam the opportunity to meet all key stakeholders and partners, and gain a better understanding



of the ICT status of each member country. Member countries on the other hand were able to learn and understand the workings of PIRRC and how they can utilize the many services it offers.

The PIRRC's expertise has also been sought in ICT forums in Fiji and the Pacific, as well as in draft regulations and policies that required expert commentaries and critique. This was true with regard to Fiji's draft national ICT policy, and International Telecommunications Union's (ITU's) model cybercrime policy and legislation. In addition to presentations at PIRRC's training workshops, the Center has participated at several forums in Fiji, Norfolk and in all the countries the Director had visited.

Project Director: Muhammad Aslam Hayat

Teleuse at the bottom of the pyramid (Teleuse@BOP4)

Teleuse at the bottom of the pyramid (BOP) is a series of demand-side studies of ICT use among the BOP. Teleuse@BOP4 builds on three previous studies. The present study seeks to understand if and how mobile phones are being used for productive purposes by the BOP, especially within the agriculture sector. The study was conducted in Bangladesh, Pakistan, India, Sri Lanka, Indonesia (Java) and Thailand using quantitative and qualitative methods. The quantitative study constituted a representative survey of telecom users among 10,154 BOP respondents. Additionally, a non-representative sample of 952 growers (smallholders) and micro entrepreneurs from the agriculture sector from India, Bangladesh, Sri Lanka and Thailand were also surveyed to complement the Teleuse@BOP4 research and the KBE

supply chain studies. Qualitative protocols including focus group discussions, mini-ethnographies and home visits were conducted among over 100 subjects to further investigate findings from the surveys.

The survey also showed that though use of mobile phones for voice are extremely high (as was the case in previous surveys), awareness of 'more-than-voice services' (MTV) in all countries continues to be poor. However awareness of entertainment related services and competition polls is relatively high, especially in Sri Lanka. Percentage of BOP using MTV however has fallen from 2008. The qualitative findings also show that convenience of use, experiential value, economic value and the relevance of information can determine uptake of MTV services.

Table 2: Key survey findings from Teleuse@BOP4 (2011)

	Bangladesh	Pakistan	India	Sri Lanka	Java	Thailand
(% of BOP teleusers)						
Used a phone in the week preceding the survey	87	89	78	94	82	96
Mobile ownership- individual	49	65	37	71	68	89
Internet use	1	2	2	10	21	21
Mobile phone use (% of BOP mobile owners)						
Prepaid	100	100	100	95	100	96
Postpaid	-	-	-	5	-	4
Send/ receive SMS	19	38	23	55	89	37
Take photos/video	19	7	8	14	26	19
Play games	27	21	18	11	31	16
Listen to radio	13	15	12	17	26	18
Listen to music	25	5	15	8	26	30
Multiple SIM ownership	18	9	11	17	12	11
Use phone at least once a week, for financial, business or work (% of BOP phone owners)	48	23	34	33	64	23



the main sources of information (after themselves) throughout the crop cycle. The interest in market prices only peaked at the time of harvesting and selling the produce. Similar to the representative survey, the micro entrepreneur survey data also showed that for both growers and non-growers, mobile phones were the most accessible form of ICT. Producers were interested in potential buyers and non-producers were interested in sources of

agricultural produce, indicating a need for platforms that connected buyers and sellers.

Project Managers: Ayesha Zainudeen and Ranjula Senaratna Perera

The results of the survey on micro entrepreneurs in the agriculture sector show that the information required by growers varies significantly at different stages of the crop cycle. Information requirements were highest in the growing and selling stages. Farmers considered other farmers as

Nirmita Narasimhan visits Sri Lanka to discuss ICT access and inclusion for persons with disabilities



Nirmita Narasimhan, a lawyer and Program Manager at the Center for Internet and Society (CIS) in Bangalore, India visited Sri Lanka at LIRNEasia's invitation in April 2011. At the time, Nirmita was working on policy research and advocacy related to intellectual property rights reform and technology access for persons with disabilities. During her short visit

to Sri Lanka, Nirmita had meetings with the public sector (Telecom Regulatory Commission, the ICT Agency) and private companies (Jinasena Training and Rehabilitation Trust) about accessibility for people with disabilities.

Her interactions with these organizations helped her confirm the view that Sri Lankans with disabilities faced the same problems as their Indian counterparts, *"My meetings with the regulator and other agencies confirmed for me that persons with disabilities in Sri Lanka and India are facing similar problems. A severe challenge for persons with disabilities is to make policy makers and developers aware of their needs and new developments in technology so that appropriate initiatives are taken which are low cost, available in local languages, and scalable"*. In her report she also stressed the need to get the private sector involved in initiatives to increase accessibility in order to provide solutions, choice and competition.

During her short visit, Nirmita also gave a colloquium at LIRNEasia titled *"ICT access and inclusion for persons with disabilities: challenges and opportunities"*.

10 days in December 2011 for a digitally connected organization

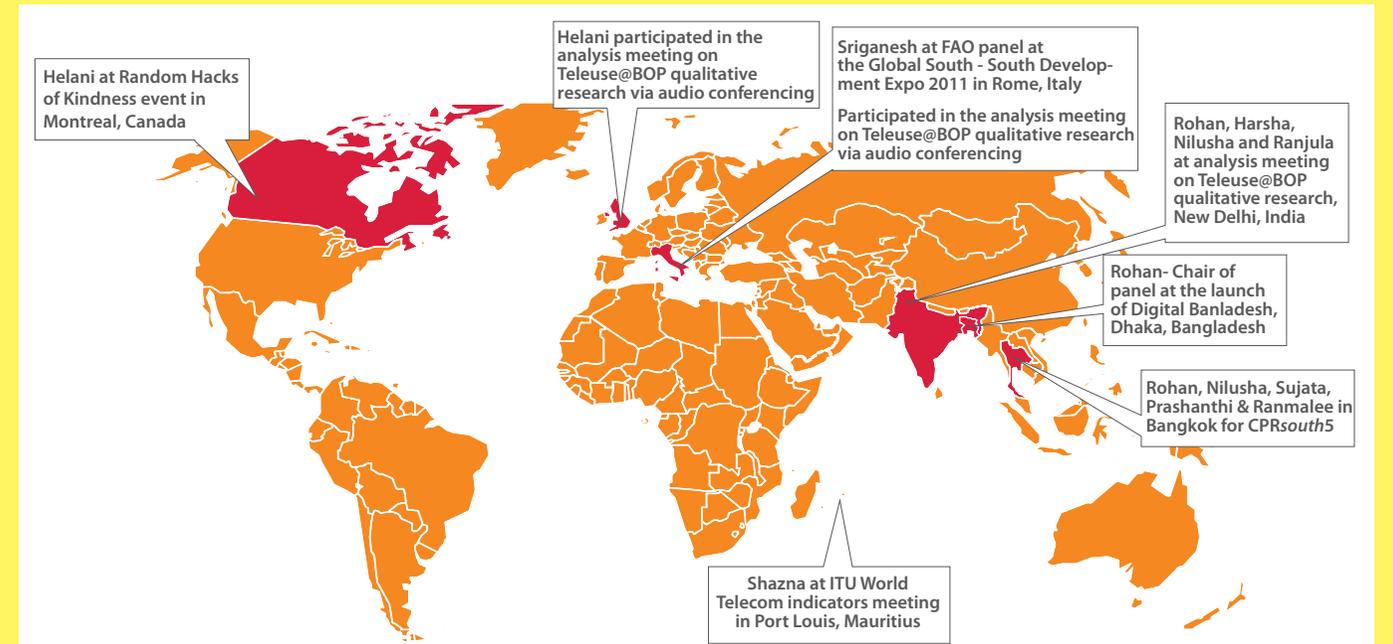
December 2011 was a busy month for LIRNEasia. The team attended six events in the first week of December. Those who could not attend in person, participated in meetings virtually.

The week started with at the launch of Digital Bangladesh where Rohan Samarajiva chaired a session on broadband access. The initiative hoped to increase ICT literacy in Bangladesh, provide government services over e-platforms and create service industry jobs for the wave of young people entering the job market.

The results of the Teleuse@BOP qualitative research were being discussed and synthesized at a workshop in New Delhi on 5-6 December. Rohan, Harsha de Silva, Nilusha Kapugama and Ranjula Senaratna Perera were present for this. Being a digitally connected organization, the spatial dispersion did not stop some of the team members from participating in events.

Helani Galpaya and Sriganesh Lokanthan, who took part in the field work, joined in through audio conferencing. Helani had just returned to London from Montreal after taking part in the Random Hacks of Kindness (RHoK) where she was in the company of 80+ software developers who had volunteered to develop ICT solutions to development problems. Sriganesh was in Rome speaking on the role of mobiles in rural development using case studies from Sri Lanka and India at a panel at the Global South-South Development Expo 2011 at the FAO headquarters in Rome.

Immediately after the Delhi workshop, Rohan and Nilusha joined Sujata, Prashanthi and Ranmalee in Bangkok for the CPRsouth5 conference. In the same week, Shazna Zuhlye was in Mauritius presenting LIRNEasia's broadband quality of service experience (QoSE) testing results at the annual ITU World Telecom Indicators meeting in Port Louis, Mauritius.



CAPACITY-BUILDING

LIRNEAsia's involvement in capacity-building comes in different forms; conducting training courses, teaching and internships

CPRsouth

Through the Communication Policy Research south (CPRsouth) conferences, LIRNEAsia aims to develop Asia-Pacific based policy intellectuals on ICT policy regulation among junior to mid-level scholars.

The sixth (CPRsouth6) conference and tutorials were held in Bangkok, Thailand from 9-10 December 2011. The event was co-organized by the faculty of Communication Arts of the Chulalongkorn University. The conference was attended by 78 participants from 23 countries where 20 research papers were presented.

Abhisit Vejjajiva, the former Prime Minister and the current leader of the opposition gave the key note speech where he spoke about the role of policy intellectuals in Thai media policy and regulation. The dinner speech was delivered

by Wangay Dorji, who spoke about his experiences as the Telecom Division Head of the Bhutan InfoComm and Media Authority (BICMA). In keeping with the conference theme "From Research to Policy", senior scholars and policy makers discussed their experiences in taking their research into the policy process and making use of research in making policies, respectively.

The CPRsouth tutorials brought together 30 young scholars from 14 countries where, over a period of two days, they received training on a range of topics including how to conduct quantitative and qualitative research and how to effectively communicate. In addition to the taught sessions, the young scholars discussed their research proposals with a senior scholar and received feedback.



Other LIRNE.NET events

Rohan Samarajiva and Helani Galpaya were invited to lecture and review papers at the CPRAfrica conference and tutorials organized by Research ICT Africa. CPRAfrica was held from 15–19 April 2011 in Nairobi, Kenya. Rohan was also a panelist in the opening session on "Connectivity and Convergence - Regional Perspectives".

Helani was invited to lecture at the Young Scholar tutorials that preceded the annual ACORN-REDECOM conference held this time in Lima, Peru in May 2011.

Internships

Don Rodney Junio, a senior research analyst at Technology Research Project Corporate joined LIRNEAsia in December 2011 for a six month internship.

Why did you decide to do an internship at LIRNEAsia?

LIRNEAsia has a solid reputation of producing high quality research output in the field of ICT and telecom policy topics that I have a genuine interest in. When I saw LIRNEAsia's call for interns posted on its website, I knew I just had to grab this opportunity.

What did you do during your internship?

I wrote two papers on broadband policies in Asia-Pacific; one was accepted at the Russian Summer School on Institutional Analysis 2012 and the other was accepted at the CPRsouth7 conference. I also attended a few colloquia and participated in LIRNEAsia's journal club meetings.

In between reading and writing reports, I managed to squeeze in a few travels exploring Sri Lanka's beautiful countryside. All in all, it was a rewarding six month experience for me and I can't believe time quickly passed by!

What are your next plans?

I will rejoin Technology Research Project Corporate and continue doing research on issues surrounding the ICT and telecom policy space in Asia-Pacific.



How has LIRNEAsia helped you in your research goals?

My experience at LIRNEAsia cemented my desire to be involved in the ongoing conversations on ICT and telecom policies in Asia-Pacific especially in my country the Philippines.

ADVOCACY AND DISSEMINATION

Serious and systematic attention to the problem of moving research findings to policy and regulatory practice has been a signature of LIRNEasia's work. Key to our approach has been the development of project-specific communication strategies and flexibly and opportunistically communicating to stakeholders. We have sought to break out of the straitjacket of project funding by intervening on topics whenever policy windows open.

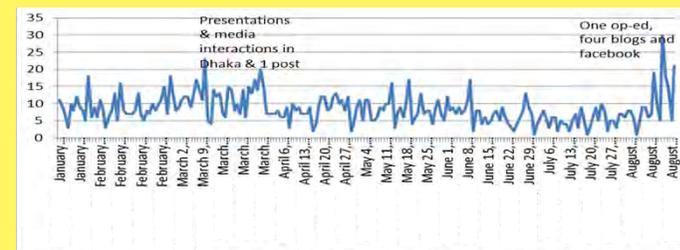
Rapid response

Based on the idea of the teachable moment, LIRNEasia responds quickly to specific requests for advice by governments or other entities in the region.

Rohan Samarajiva (Chair and CEO of LIRNEasia) responded to Government of India's request for comments on a draft

national telecommunications policy. Rohan commented on a number of issues including international backhaul, broadband and universal service obligation fund among others. More could have been said, but the response chose to focus on a few areas where the impact would be the greatest and LIRNEasia had a comparative advantage.

Figure 4: Visits from Dhaka, Bangladesh, to LIRNEasia website



Source: Google analytics

draft guidelines were published. The final amounts paid by the Bangladesh operators were not very different from those set by auction in Pakistan several years ago, and which were referred to in LIRNEasia interventions. The ratio between payments from largest operator and the smallest of the four up for renewal was 7:1 in December 2010; at end point it was roughly 5:1 (same license; more or less same amount of spectrum)

Harsha de Silva (Consultant Lead Economist) made a submission in response to the Bangladesh Telecommunication Regulatory Commission's (BTRC's) call for comments on a draft regulatory and licensing guidelines on renewal of mobile telecommunication services in Bangladesh in February 2011. The submission focused on a few important issues, relating to economic efficiency, transparency and good governance. LIRNEasia questioned the seemingly arbitrary justification used to set the upfront lump-sum license renewal fees. In a follow-up to this intervention Harsha and Rohan wrote op-ed pieces which were published in the Daily Star of Bangladesh in June and August 2011 respectively.

The LIRNEasia website saw an increase in visits from Dhaka, Bangladesh after the August op-ed and as a result of the blog posts on license renewal in Bangladesh.

By the end of August, the government settled on a total of BDT 75.6 billion (USD 1 billion, roughly) as fees from the four operators as spectrum charges, a 54% decline from the proposed total amount of BDT 140 billion (USD 2 billion) when

Media coverage

Media are an indirect and supporting means of reaching LIRNEasia's target audiences (policymakers, regulators and industry leaders). Below is a list of *selected* media coverage of LIRNEasia activities received over the financial year, 2011-12. In total, LIRNEasia received at least 87 pieces of coverage via print, online and TV. For a comprehensive list of coverage from 2004 to date (including web links, where applicable), please visit <http://lirneasia.net/about/media-coverage/>.

Twenty five years after Kantale: Have we learned?
The Daily Mirror (Sri Lanka), 6 April 2011

Today, it is cheaper to make a call to the US than to your SAARC neighbors
Voice & Data (India), 20 April 2011

BD's performance in telecom sector below average
The Financial express (Bangladesh), 13 May 2011

BICMA facilities better Internet services
Bhutan Observer (Bhutan), 20 May 2011

Pakistan ranked top for best regulatory regime
Daily Times (Pakistan), 16 July 2011

India best in telecom tariff regulation, low on spectrum issues
The Economic Times (India), 17 July 2011

Making pineapple a winning Sri Lankan export crop
The Sunday Times (Sri Lanka), 30 October 2011

Need highlighted to bridge digital divide
Fiji Sun (Fiji), 10 November 2011

Low call charges within each network major reason for owning multiple-SIM
Republica (Nepal), 13 December 2011

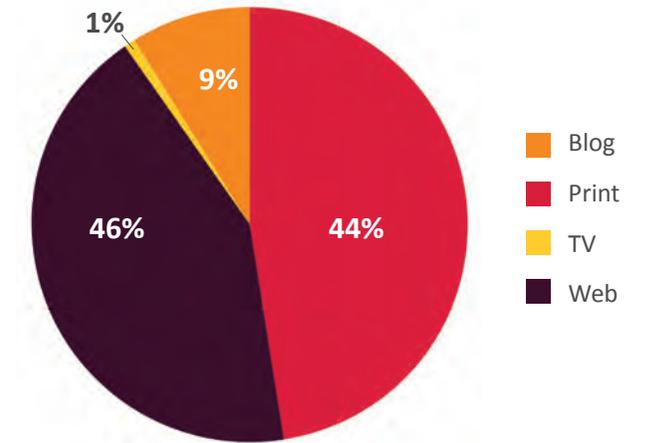


Figure 5: Coverage by media type (%), 2011-12

Political vision a must for policy implementation
The Daily Star (Bangladesh), 15 December 2011

Phones a bare essential for bottom of pyramid: Study
The Financial Express (Thailand), 15 December 2011

More poor people own mobile phones, but productive use still a far cry
The Hindu Business Line (India), 19 December 2011

How the poor use cell-phones
The Nation (Thailand), 14 January 2012

Steps urged to control dengue
The News (Pakistan), 20 January 2012

Experts call for national eHealth strategy
The Express Tribune (Pakistan), 22 January 2012

Horticulture sector suffers due to poor market linkages
The Hindu (India), 12 March 2012

Figure 6: Media coverage (print and web/blog) by country, 2011-12

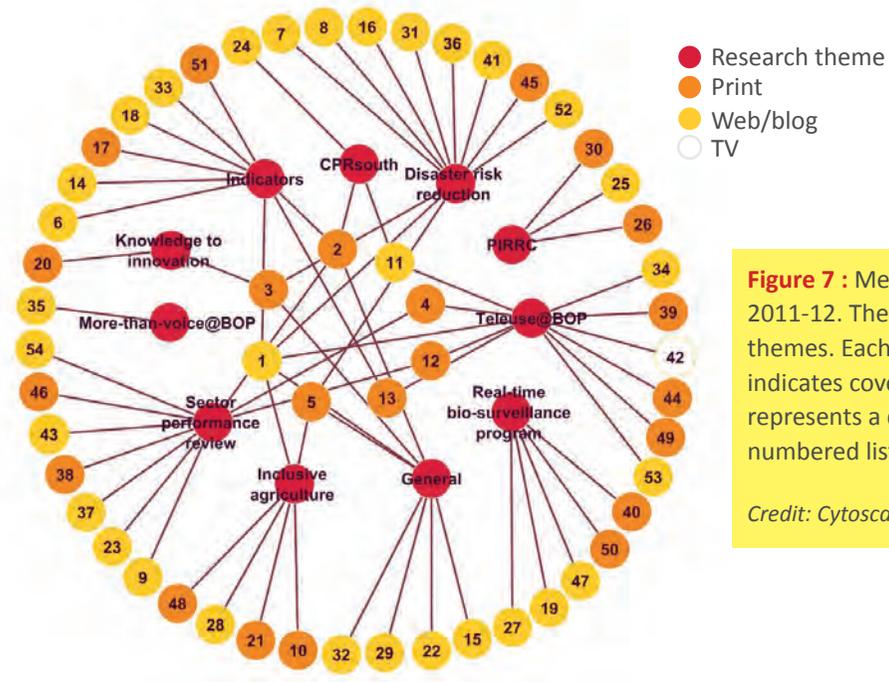
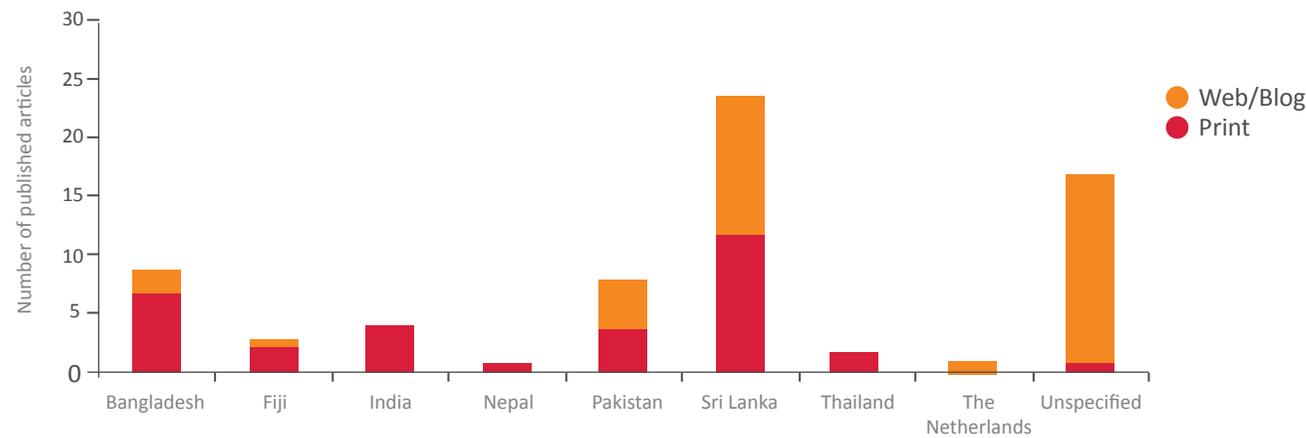


Figure 7 : Media coverage received by research theme, 2011-12. The magenta subject nodes indicate research themes. Each line extending from the subject node indicates coverage (print, web/blog and TV). Each number represents a different publication (see Table 3 for a numbered list of publishers)

Credit: Cytoscape, <http://cytoscape.org>

Table 3: Media that carried LIRNEasia stories, 2011-12

ID	Publication, ranked by frequency	Location
1	Lanka Business Online	Sri Lanka
2	The Daily Star	Bangladesh
3	The Sunday Leader	Sri Lanka
4	Daily Times	Pakistan
5	The Sunday Times	Sri Lanka
6	Indi.ca	Unspecified
7	Moving Images, Moving People	Sri Lanka
8	Next Generation Infrastructure	Unspecified
9	Pro Pakistani	Pakistan
10	Sunday Observer	Sri Lanka
11	Telecentre.org	Unspecified
12	The Financial Express	Thailand
13	The Nation	Sri Lanka
14	Total telecom	Unspecified
15	AlphaTrade.com	Unspecified
16	Asian Tribune	Unspecified
17	Bhutan Observer	Bhutan
18	Capacity magazine	Unspecified
19	CDAC Network	Unspecified
20	Daily Mirror	Sri Lanka
21	Daily News	Sri Lanka
22	Discount India Fares	Unspecified
23	Economist	Pakistan
24	Faculty of Communication arts, Chulalongkorn University	Thailand
25	Fiji Government Online Portal	Fiji
26	Fiji Sun	Fiji
27	Freedom Fone	Unspecified

ID	Publication, ranked by frequency	Location
28	Fresh Plaza	Unspecified
29	HiTek Magazine	Unspecified
30	ICT boost	Fiji
31	International Strategy for Disaster Reduction	Unspecified
32	IT News Online	Unspecified
33	Lanka Independent	Sri Lanka
34	newsfirst.lk	Sri Lanka
35	OpenPR	Unspecified
36	PreventionWeb	Unspecified
37	Priyo	Bangladesh
38	Ravaya	Sri Lanka
39	Republica	Nepal
40	Searchlight South Asia	Unspecified
41	Sinhale Hot News	Sri Lanka
42	Sirasa TV News First	Sri Lanka
43	Telecompaper	The Netherlands
44	The Bottom Line	Sri Lanka
45	The Daily Mirror	Sri Lanka
46	The Economic Times	India
47	The Express Tribune	Pakistan
48	The Hindu	India
49	The Hindu Business Line	India
50	The News	Pakistan
51	Voice & Data	India
52	Window to Nature	Sri Lanka
53	Wireless Catalog	Bangladesh
54	Yahoo News	Unspecified

Workshop on actionable research from LIRNEasia: Mobile and broadband

LIRNEasia, at the invitation of the Bhutan InfoCom and Media Authority (BICMA), presented a selection of its research, relevant to Bhutan in Thimpu on 9-10 May 2011. The audience included representatives from several Ministries, the Bhutanese private sector (including telecom operators) as well as donor agencies.

LIRNEasia presented findings from its health, agriculture, disaster management and broadband quality of service experience (QoSE) research. The findings on the Broadband QoSE garnered the most interest. The results showed poor connectivity among Bhutan's Internet Service Providers (ISPs). The results initiated a discussion about the need for a national Internet exchange in Bhutan.

The health ministry officials were particularly interested in the scalability of the real-time bio-surveillance project (RTBP) which effectively used a mobile application and bio-surveillance algorithms to enable early disease detection. The economic analysis showed that the project was indeed scalable for Bhutan at a monthly cost of USD 0.025 per citizen.

The event was also used to launch the least cost frontier (LCF) tool by BICMA on their website. The tool enables the users to compare between available broadband packages from different operators and choose one that is most appropriate for them in terms of affordability and use.

Conferences and workshops

Below is a *selected* list of conferences and workshops that LIRNEasia researchers have participated in.

CPRafrica conference

15-19 April 2011, Nairobi, Kenya

Workshop on 21st Century Media: New frontiers, new barriers

3 May 2011, Colombo, Sri Lanka

Workshop on actionable research from LIRNEasia: Mobile and broadband

9-10 May 2011, Thimphu, Bhutan

2011 WSIS Forum

17 May 2011, Geneva, Switzerland

11th APT Policy and Regulatory Forum

17-19 May 2011, Hanoi, Vietnam

ACORN-REDECOM Conference 2011

19-20 May 2011, Lima, Peru

CommunicAsia 2011

21-24 June 2011, Singapore

Asia-Pacific Business Forum

26 July 2011, Bangkok, Thailand

Future Gov Forum

20 July 2011, Colombo, Sri Lanka

Workshop on Regulatory Framework for Emerging Telecom Environment

7 September 2011, New Delhi, India

eAsia 2011

3 December 2011, Dhaka, Bangladesh

Global South-South Development Expo 2011

6 December 2011, Rome, Italy

International Telecommunication Union (ITU) World Telecom Indicators (WTI) meeting

7-9 December 2011, Port Louis, Mauritius

LIRNEasia organized panel "Broadband Bottlenecks in Asia at the Regional International Telecommunications Society India Conference 2012

22-24 February 2012, New Delhi, India

Fifth International Conference on Information and Communication Technologies and Development (ICTD2012)

12-15 March 2012, Atlanta, USA

Research outputs

Below is a list of *selected* journal articles, conference proceedings and reports by LIRNEasia researchers.

Agüero, A., de Silva, H. & Kang, J. (2011). Bottom of the pyramid expenditure patterns on mobile services in selected emerging Asian countries. *Information Technology and International Development*, 7(3) Mobile Telephony Special Issue, 19-32.

de Silva, H., Ratnadiwakara, D. & Zainudeen, A. (2011). Social influence in mobile phone adoption: Evidence from the bottom of the pyramid in emerging Asia. *Information Technology and International Development*, 7(3) Mobile Telephony Special Issue, 1-18.

Galpaya, H. & Zuhyle, S. (2011). South Asian broadband service quality: Diagnosing the bottlenecks. *Proceedings of the Telecommunications Policy Research Conference, Arlington, USA.*

Kapugama, N., Lokanathan, S. & Senaratna Perera, R. (2011). Improving farmer services by understanding their information needs. *Proceedings of the 6th Communication Policy Research south conference, Bangkok, Thailand.*

Nikomborirak, D. & Pongsukcharoenkul, N. (2012). Towards a knowledge based economy: Case studies of the use of ICTs in enhancing agricultural value chains in Thailand. http://lirneasia.net/wp-content/uploads/2010/07/thai.vc_.pdf

Rao, L. & Malik, P. (2011). Study of the mango and pomegranate value chain in India. http://lirneasia.net/wp-content/uploads/2010/07/India.VC_.pdf

Samarajiva, R. (2011). Mobile at the bottom of the pyramid: Informing policy from the demand side (Guest editor's introduction). *Information Technology and International Development*, 7(3) Mobile Telephony Special Issue, iii-vii.

Sivapragasam, N., Agüero, A. & de Silva, H. (2011). The potential of mobile remittances for the bottom of the

pyramid: Findings from emerging Asia", *info*, 13 (3), 91 – 109.

Sivapragasam, N. & Kang, J. (2011). The future of the public payphone: Findings from a study on telecom use at the bottom of the pyramid in South and Southeast Asia. *Information Technology and International Development*, 7(3) Mobile Telephony Special Issue, 33-44.

Zainudeen, A. & Ratnadiwakara, D. (2011). Are the poor stuck in voice? Conditions for adoption of more-than-voice mobile services. *Information Technology and International Development*, 7(3) Mobile Telephony Special Issue, 45-59.

Zainudeen, A., Samarajiva, R. & Sivapragasam, N. (2011). CellBazaar: Enabling m-Commerce in Bangladesh. *Information Technology and International Development*, 7(3) Mobile Telephony Special Issue, 61-76.

Zuhyle, S. & Gamage, R. (2011). International voice tariffs: Disparities and recommendations for convergence in South Asia. *Proceedings of the ACORN- REDECOM conference, Peru.*

Special ITID issue presenting Teleuse@BOP findings

Although LIRNEasia's Teleuse@BOP demand-side survey results have gained much media attention and have been communicated to policy makers, not a lot of effort was put into scholarly publication, other than in our 2008 book and a few academic publications. However in 2011, an entire issue was devoted to analyses of Teleuse@BOP in the leading journal in the ICT for development (ICT4D) field, *Information Technology and International Development*. All the papers went through peer review. Past and present interns, as well as LIRNEasia alumni worked with LIRNEasia researchers to complete the analysis. LIRNEasia was very pleased to be able to work with ITID on this project since it allowed the combination of open access and rigorous peer review.

