

# GLOBAL INFORMATION SOCIETY WATCH 2018

## *Community Networks*



ASSOCIATION FOR PROGRESSIVE COMMUNICATIONS (APC)  
AND INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC)

# Global Information Society Watch

## 2018



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International Development Research Centre  
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This work was carried out with the aid of a grant from the International Development Research Centre (IDRC), Ottawa, Canada, as part of the APC project “Community access networks: How to connect the next billion to the Internet”. More information at: <https://www.apc.org/en/project/local-access-networks-can-unconnected-connect-themselves>  
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Financial support provided by



*This edition of GISWatch came into being alongside a brand new baby boy. Welcome to the world, Ronan Diga!*

Published by APC  
2018

Printed in USA

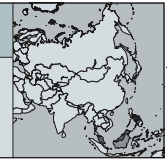
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Global Information Society Watch 2018 web and e-book  
ISBN 978-92-95113-06-0  
APC-201810-CIPP-R-EN-DIGITAL-296

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# INDONESIA AND MALAYSIA

SMART PARTNERSHIPS AND PARTICIPATORY ENGAGEMENT:  
A COMMUNITY NETWORK FOR INDIGENOUS BORNEO



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## Introduction

Orthodox state-sponsored development often inadvertently damages the cultures and lifestyles of indigenous peoples, as well as plundering their natural resources, despoiling their environment and sometimes moving them into new forms of poverty where none previously existed. Opposition to such initiatives can be misinterpreted as opposition to development, which indigenous representatives counter with calls for development that is indigenised – addressing their needs as they express them and fulfilling their aspirations rather than those of outsiders.

Information and communications technologies (ICTs) have been convincingly demonstrated to offer opportunities for indigenised development when introduced within processes that take full account of the local socioeconomic context. The outcome is to empower indigenous communities to devise and implement development activities of their own design. Furthermore, many of the core characteristics of ICTs are conducive to the promotion and implementation of indigenised development. This report describes how a cash-strapped but resourceful grassroots indigenous organisation mobilised a diverse set of smart partnerships to create a cascading set of community networks and other information solutions at the local level.<sup>1</sup> It discusses how the organisation went on to deploy innovative participatory methods of public engagement to devise uses for the networks that address the specifics of the communities' development needs as people with unique cultures, traditions and lifestyles and as guardians of Asia's last great rainforest.

## Policy, economic and political background

Borneo is divided into 73% Indonesia and 26% Malaysia, with the remainder comprising Brunei. While both Malaysia and Indonesia have ICT policies

that target wider access to the internet – with Malaysia achieving 77% of households with internet access and Indonesia 25% – rural access lags well behind national averages and in the remote and isolated areas of Borneo it lags even further behind.<sup>2</sup> However, the government of Malaysia is promoting high-speed internet, with particular attention to rural access through universal service provision initiatives. These include the establishment of “1Malaysia Internet Centres”. Internet centres are common across Indonesia, and in rural villages are typically government or donor-funded. Mobile phone usage has expanded rapidly across Borneo and is now reaching even the most remote communities.

Against the background of state sponsorship of rural telecommunications, local ICT networks consisting of infrastructure that is owned by the community are rare. Among the barriers, especially in rural areas, are affordability, insufficient skills and awareness and cultural acceptance, as well as the lack of content and services in local languages. By promoting ICTs as fundamental tools for national development, both governments open themselves to questions about the implications for their rural, indigenous and other underserved populations. While the response has been to slowly roll out some form of shared subsidised access, this has not always been accompanied by robust measures to ensure that such access translates into socio-economic inclusion or anything else that recipient communities would regard as development that is relevant to their needs.

## FORMADAT and its community ICT networks

FORMADAT is a trans-boundary grassroots initiative that works to increase awareness and understanding of the communities of the highlands of Borneo – to maintain their cultural traditions, build local capacity, and encourage sustainable development in the Heart of Borneo without risking the degradation of the quality of the social and natural environment. The Heart of Borneo is a conservation area designated under an international agreement initiated by

1 The term “community ICT network” is used in this report to distinguish it from other (non-physical) forms of network.

2 ITU. (2017). *Measuring the Information Society Report 2017*. [https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2017/MISR2017\\_Volume2.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2017/MISR2017_Volume2.pdf)

the World Wide Fund for Nature (WWF) to protect a 220,000 km<sup>2</sup> forested region on Borneo island that is known as Asia's last great rainforest (see Figure 1). FORMADAT is a formally registered society in Indonesia and Malaysia, made up of the rural indigenous communities that occupy part of the Heart of Borneo.

FORMADAT comprises members of the following marginalised ethnic groups: Lundayeh/Lun Bawang, Kelabit and Sa'ban residing in Bario, Ba'kelalan, Long Semadoh and Long Pasia in Malaysia, and the Krayan and Krayan Selatan districts of Indonesia. This population amounts to approximately 12,500 individuals. FORMADAT won the United Nations Development Programme's (UNDP's) 2015 Equator Prize for reducing poverty through sustaining biodiversity, emphasising community empowerment and cultivating innovative partnerships for local climate solutions.<sup>3</sup>

FORMADAT's community ICT networks have grown over the years with the growth of the organisation and with the expansion of its set of supportive partners (see Table 1). They began in 2005 with the multi-award-winning eBario telecentre project, which later expanded to incorporate a telecentre in Ba'kelalan and Malaysia's first community radio station in Bario. eBario project staff, supported by WWF, later assisted with the establishment of a telecentre in Long Bawan, Indonesia. The next expansion included a telecentre in Long Lamai, Malaysia, the home of a remote Penan community. Although not formally a member of FORMADAT, this telecentre and the community participate in a range of joint activities with FORMADAT that are supported by ICTs. Most recently, the government of Malaysia has established public telecentres in both Bario and Long Pasia which also provide access to ICTs for the resident members of FORMADAT.

FORMADAT is an indigenous community organisation that draws support from several partners. As a founding member, the Kelabit community of Bario promoted the use of ICTs towards the advancement of its and the organisation's goals based on their many years of experience with the eBario project. This was instituted by researchers at the Institute of Social Informatics and Technological Innovations (ISITI) at Universiti Malaysia Sarawak (UNIMAS), who also helped with the establishment of community-operated telecentres in Long Lamai and Ba'kelalan before they were handed to the community. Ultimately, FORMADAT and UNIMAS agreed on a memorandum to promote joint action research

FIGURE 1.

### The Heart of Borneo and FORMADAT communities



and project development that utilises the ICT networks to advance the goals of sustainable development and environmental protection in the Heart of Borneo. Alongside the growth of FORMADAT's ICT networks, the organisation conducts networking and knowledge-sharing activities to promote their use towards endogenous indigenised development – the animation of development along a bottom-up trajectory, involving the search for development resources and mechanisms that focus on the local territory and which address the specific needs of the indigenous residents.

The early components of what became the FORMADAT ICT networks were established before the organisation was formed but the initiative grew as the various stakeholders collaborated with each other in pursuit of the same goal of endogenous development in the highlands of the Heart of Borneo. The assertion by WWF that the lifestyles and knowledge of the indigenous residents of areas that are the most vulnerable to climate change – such as rainforests – are critical for a better understanding of both its impacts as well as possible mitigation measures increased the importance of efforts to preserve the lifestyles of the FORMADAT members and added impetus to their use of their ICT networks to achieve such outcomes.

As a result of the widely publicised successes of the eBario project, the other FORMADAT communities were alerted to the potential for positive outcomes from similar projects for themselves. Accordingly, they were highly motivated towards participating in the establishment and operation of their own ICT installations, which facilitated

3 WWF-Malaysia. (2015, 15 October). FORMADAT wins UNDP's Equator Prize 2015. [www.wwf.org.my/?20465/FORMADAT-wins-UNDPs-Equator-Prize-2015](http://www.wwf.org.my/?20465/FORMADAT-wins-UNDPs-Equator-Prize-2015)

the recruitment of volunteers and also helped in mobilising community engagement towards the identification of suitable ICT applications that would be capable of contributing towards their well-being. Nevertheless, there were still significant

challenges, not the least being the logistical aspects relating to the remoteness of the locations, but more significant was the imperative for establishing trust between the implementation teams and the communities.

**TABLE 1.**

**The FORMADAT ICT community networks**

Location	ICT components	Community	Ownership and management	Partners	Status and impact
eBario, Sarawak, Malaysia	Telecentre: computers, VSAT <sup>1</sup> internet access, telephone, solar power	1,000 Kelabit residents	eBario Sdn Bhd, a social enterprise promoting ICTs for community development. Run by volunteers.	UNIMAS <sup>2</sup> IDRC <sup>3</sup> MIMOS <sup>4</sup> MCMC <sup>5</sup>	Opened by UNIMAS in 2001 and handed over to the community in 2005. Having achieved its objectives of raising awareness and skills and stimulating local development, rebranded in 2016 as a knowledge centre and community museum.
Bario 1Malaysia Internet Centre	Computers, internet access and Wi-Fi	1,000 Kelabit residents	MCMC with a locally employed manager.	MCMC	Opened 2016. Raising ICT skills for e-learning, social media, entrepreneurship, multimedia, and life-long learning.
Radio Bario, Sarawak, Malaysia	Low-power 50-watt FM transmitter	1,000 Kelabit residents	eBario Sdn Bhd. Run by female volunteers.	IFAD <sup>6</sup> RadioActive (UK)	Went on-air October 2011 and still operational, broadcasting twice daily to residents living within a range of 15-25 km. Delivers local news in the Kelabit language.
eBario, Sarawak, Malaysia	VSAT for internet access and Wi-Fi	1,000 Kelabit residents and 5,000+ diaspora	eBario Sdn Bhd	OmniAccess S.L. (Spain)	Provides internet access for ground-station testing to be used for data streaming and digital broadcasting of Radio Bario.
Ba'kelalan, Sarawak, Malaysia	Telecentre: computers, VSAT internet access, Wi-Fi, telephone, solar power	2,500 Lun Bawang residents	UNIMAS and the community. Run by volunteers.	UNIMAS MIMOS MCMC	Opened by UNIMAS in December 2010. Raising awareness and skills and stimulating local development.
E-Krayan Telecentre, Long Bawan, East Kalimantan, Indonesia	Computers, VSAT internet access	3,800 Lundaye residents	Managed by FORMADAT Krayan.	eBario WWF-Indonesia German government (BMZ-FiT)	Opened in April, 2011. Provides ICT access for residents, local schools, government officials, visitors, and the health centre. Supports promotion of local products and ecotourism.
eLamai, Long Lamai, Sarawak, Malaysia	Computers, VSAT internet access, Wi-Fi, telephone, solar power	600 Penan residents	UNIMAS and the community. Run by volunteers.	UNIMAS Information Society Innovation Fund Asia	Opened in 2009. Raises awareness and skills promoting health, ecotourism, highlighting local development issues, and documenting aspects of local culture.
Long Pasia, 1Malaysia Internet Centre, Sabah, Malaysia	Computers, internet access and Wi-Fi	500 Lun Bawang/ Lun Dayeh residents	MCMC with a locally employed manager.	MCMC	Opened in 2017. Raising ICT skills for e-learning, social media, entrepreneurship, multimedia, and life-long learning.

1) Very small aperture terminal. 2) Universiti Malaysia Sarawak. 3)International Development Research Centre (Canada). 4) Agency of Malaysia's Ministry of Science, Technology and Innovation for Applied Research and Development in ICTs. 5) Malaysian Communications and Multimedia Commission. 6) International Fund for Agricultural Development.

The eBario telecentre research project has been widely acclaimed, winning multiple awards for its innovative approach to localised development for rural and remote communities. As a result, it is possible to claim considerable influence over Malaysian government policy for accelerating the provision of subsidised internet access to its underserved rural population. The application for a licence for Radio Bario lead directly to the government liberalising its policy to allow community broadcasting. With the formation of FORMADAT, WWF became aware of the impact of these initiatives and championed the establishment of the telecentre in Long Bawan, Indonesia. Subsequently, seeing the convergence of each other's goals, WWF-Malaysia and Indonesia have entered into a formal partnership with UNIMAS and FORMADAT to conduct joint action research around the theme of ICTs for endogenous and indigenised development among the communities in the Heart of Borneo. Simultaneously, the government has extended its 1Malaysia programme for public internet centres into the area, stimulated – it can be argued – by the achievements of the previous implementations. Additionally, Malaysian telecommunications operators have extended their mobile phone networks into the area, recognising the potential market among the now technology-aware communities and their desire for improved communications.

Against this background of technology diffusion, and arising from their studies of the impact it could have, UNIMAS researchers quickly understood that desirable results stem from how the technology is used and that communities would benefit from facilitated processes to define uses of technology that would contribute to their specific needs and aspirations.<sup>4</sup> By adopting a process of participatory engagement for mutual learning, they were able to jointly develop an agenda that defined applications capable of achieving this. One important component of this is the eBorneo Knowledge Fair (eBKF), which began in 2007 in Bario and has been held every other year since then, moving to Ba'kelalan in 2015. The fair is an immersive experience in rural telecommunications for local development – for researchers, government officials, policy makers, private sector representatives and development professionals. The event features the innovative

use of technologies for localised development and it offers opportunities for knowledge exchange and sharing between community members and various other stakeholders. eBKF is organised as an “un-conference” – structured and led by the people attending it. Instead of passive listening, all attendees are encouraged to participate. eBKF features open discussions, workshops and “walk-shops” (in which participants are taken on a walk around the village to illustrate the topic they are discussing) rather than individual speakers giving talks.

The result has been a range of implementations that demonstrate improvements in education, health, enterprise development, social interactions and cultural preservation, all of which are greatly welcomed by the participating communities. Women have benefited particularly from additional incomes through the promotion of community-based ecotourism, which has expanded considerably and which generates jobs that they typically perform.<sup>5</sup>

## Conclusion

Overall, research findings suggest that the community ICT networks and their associated activities for engagement with their users have empowered communities towards development that they welcome by giving them voice, stimulating involvement in public debates that affect them, and enabling more equal participation in the information age and digital economy policies that the respective governments are advancing. The major lessons are that i) smart partnerships can create win-win opportunities for communities to acquire otherwise unaffordable technology resources, and ii) while the technology is essential, alone it is insufficient, requiring associated activities for public engagement in order to generate positive outcomes that are relevant to local needs. Insofar as the networks have been able to stimulate locally derived development, they can be seen to have achieved positive results.

However, with regard to the wider context of regional and national development, the participating communities are still experiencing tension between what is regarded as development by them and how it is defined by national authorities and public bodies. Accordingly, there is now a pressing need to influence national policy making in both countries towards the concept of endogenous and indigenised development that can be fostered with ICTs

4 Bala, P., Harris, R. W., & Songan, P. (2004). eBario Project: In Search of a Methodology to Provide Access to Information Communications Technologies for Rural Communities in Malaysia. In S. Marshall, W. Taylor, & Y. Xinghuo (Eds.), *Using Community Informatics to Transform Regions*. IGI Publishing. <https://www.igi-global.com/book/using-community-informatics-transform-regions/1022>

5 Harris, R. W. (2009). Tourism in Bario, Sarawak, Malaysia: A Case Study of Pro-poor Community-based Tourism Integrated into Community Development. *Asia Pacific Journal of Tourism Research*, 14(2), 125-135. <https://doi.org/10.1080/10941660902847179>

in accordance with the principles of environmental protection and sustainable development. In this regard, despite the commitments to preserving the Heart of Borneo, it remains unclear that such policies have been internalised within national development programmes, and it is this that makes up the greatest challenge to ensuring that ICTs achieve their optimum contribution to development.

### **Action steps**

The following recommendations can be made when setting up a community network:

- Find partners who are willing to learn and share their knowledge and resources.

- Focus on turning access to technology into relevant use by communities by seeking answers from them.
- Accelerate the diffusion of access to technologies and acknowledge the long-term necessity for subsidies.
- Extend universal service provision fund eligibility to qualified community-based organisations.
- Promote development policies that acknowledge the imperative for indigenised development.



## Community Networks

THE 43 COUNTRY REPORTS included in this year's Global Information Society Watch (GISWatch) capture the different experiences and approaches in setting up community networks across the globe. They show that key ideas, such as participatory governance systems, community ownership and skills transfer, as well as the "do-it-yourself" spirit that drives community networks in many different contexts, are characteristics that lend them a shared purpose and approach.

The country reports are framed by eight thematic reports that deal with critical issues such as the regulatory framework necessary to support community networks, sustainability, local content, feminist infrastructure and community networks, and the importance of being aware of "community stories" and the power structures embedded in those stories.

GLOBAL INFORMATION SOCIETY WATCH

2018 Report

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