GLOBAL INFORMATION SOCIETY WATCH 2021-2022

Digital futures for a post-pandemic world

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Organising for sustainable connectivity: Centring communities in crisis

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Introduction

COVID-19, like many crises, has revealed foundational flaws in our global systems of governance. In the West, the governments of wealthier countries have hoarded vaccines, refused to waive intellectual property rights, enforced unjust travel bans, and failed to fund resilient public health care. In many other regions of the world, governments are unable to protect and defend rights, are under-resourced and overwhelmed by debt, and are systemically bound[1] to the logics of colonial extractivism.[2]

For many people living with the realities of crisis on a daily basis, the systems that govern our world have largely failed, and governments have not lived up to their responsibilities as duty bearers. Instead, our collective planetary resilience increasingly relies on community-led action and solidarity.[3]

In crises, safe and resilient communications infrastructure becomes ever more critical for communities to respond effectively and collectively care for each other, ourselves and the planet. Communities currently living with climate catastrophe cannot afford to wait for external actors to bring about meaningful and sustainable connectivity; they must be able to connect themselves.[4]

This report explores historical, ongoing and emerging work across the APC network to organise for meaningful and sustainable connectivity, centring communities in crisis. APC values and uplifts the power of connected communities working through decentralised action – it is at this level that the core of a sustainable response to any future crisis such as COVID-19 needs to be built.

Feminist, circular and community-led: APC perspectives on sustainable connectivity

APC's strategic priority to contribute to environmental justice and preservation of the earth[5] emphasises the need to address the negative environmental impacts of digital infrastructure, while also supporting the strategic use of digital technologies for environmental monitoring. These twin challenges are framed by APC's commitment to working towards a feminist internet[6] "in which women and people of diverse sexualities and genders are able to access and enjoy a free and open internet to exercise agency and autonomy, build collective power, strengthen movements, and transform power relations for gender and sexual justice."

Over the past three years, APC's Environmental Sustainability Working Group has engaged our network in the discourse of environmental justice, advocated for internet governance actors to address the environmental impacts of the internet,[7] developed an evolving guide to a circular economy of digital devices,[8] supported the ongoing development of a feminist principle of the internet on the environment,[9] and implemented a pilot grant using

1   Schalk, O. (2022, 4 July). Documents show how Ottawa intervened in Tanzania to benefit Canadian mining firms. *Canadian Dimension*. https://canadiandimension.com/articles/view/documents-show-how-ottawa-intervened-in-tanzania-to-benefit-canadian-mining-firm

2   Niang, A. (2019, 17 August). The colonial origins of extractivism in Africa. *Al Jazeera*. https://www.aljazeera.com/opinions/2019/8/17/the-colonial-origins-of-extractivism-in-africa

3   Carstensen, N., Mudhar, M, & Schurmann Munksgaard, F. (2021). 'Let communities do their work': the role of mutual aid and self-help groups in the Covid-19 pandemic response. *Disasters, 45*(Suppl 1). https://doi.org/10.1111/disa.12515

4   https://www.apc.org/en/project/connecting-unconnected-supporting-community-networks-and-other-community-based-connectivity

5   https://www.apc.org/en/strategicpriorities2020_2023#6

6   https://www.apc.org/en/strategicpriorities2020_2023#3

7   https://www.intgovforum.org/multilingual/content/igf-2020-pre-event-32-environmental-justice-and-an-anti-extractive-internet-impacting-policy

8   https://circulartech.apc.org

9   Radloff, J. (2022, 2 September). Towards a new feminist principle of the internet on the environment: Two new publications now available in English. *APC*. https://www.apc.org/en/news/towards-new-feminist-principle-internet-environment-two-new-publications-now-available-english

participatory approaches to project design, facilitation and assessment.

As we move forward, APC's collective action for environmental justice and preservation of the earth is grounded by the local action of members, partners, allies and staff, and ongoing insight into the possibilities for feminist, circular and community-led connectivity that serves environmental justice.

Africa

In Africa, where meaningful connectivity is an ongoing struggle for many communities, APC members have taken diverse approaches in response to the twin challenges of digital exclusion and environmental injustice.

Arid Lands Information Network (ALIN) was first conceived in 1987 at a cross-regional workshop in Benin to facilitate an exchange of ideas to improve agricultural practices in regions experiencing water scarcity. Over the past 30 years it has evolved from a project of Oxfam in Senegal to a regional network headquartered in Kenya. In 2007, ALIN began a new project to set up community Maarifa Centres (Knowledge Centres) with information and communications technology (ICT) equipment and training programmes designed to ensure that all community members can access the information, skills and technologies that they need.[10]

In Cameroon, PROTEGE QV has been working since 1995 to promote and support individual and collective initiatives to protect the environment and improve the well-being of communities. PROTEGE QV has implemented projects to support, inform and empower local communities in response to changing climates, including designing and developing more efficient cookstoves and developing resource kits that can be used by community radios in Cameroon.[11]

In Nigeria, APC members are working with communities to use technology strategically for environmental sustainability and address the environmental impacts of e-waste. The Centre for Information Technology and Development (CITAD) joined the APC Environmental Sustainability Working Group in 2019 and has been an active contributor to the APC guide to a circular economy of digital devices. CITAD has emphasised the need for regional action in response to the illegal import of e-waste into Africa, and in 2021, CITAD developed a case study on mobile repair in Nigeria.[12]

In rural communities of Nigeria, Fantsuam Foundation has implemented several environmental initiatives, using repaired and recycled computers and renewable energy sources, and supporting knowledge exchange for climate adaptation and food security.[13]

In 2022, the Media Awareness and Justice Initiative (MAJI) officially joined the APC network as an organisational member, operating in the Niger Delta region. MAJI's Soot Mapping project[14] aims to support a sustainable community network through the use of citizen science methodologies and free/libre open source software technology to address air pollution in the region.[15]

In Mankosi, in the Eastern Cape of South Africa, APC member Zenzeleni Networks is operating a Solar Learning Lab with the help of Computer Aid, an APC member located in the UK. Computer Aid first launched the Solar Learning Lab initiative in 2011. The joint project between Zenzeleni Networks and Computer Aid includes a documented process to learn and evaluate the outcomes of deploying solar-powered learning lab infrastructure with community networks.[16]

Asia

In Asia, where communities are already experiencing some of the worst effects of the climate catastrophe, and where e-waste is growing faster than in any other region worldwide, APC members are nurturing partnerships and coalitions to foster meaningful connectivity and climate adaptation.

Digital Empowerment Foundation (DEF), based in India, has long focused on grounded action for digital inclusion and environmental sustainability. In 2009, DEF and APC developed a baseline study of e-waste in India, analysing global, regional and national policy contexts. The report also explored civil

10 APCNews. (2009, 10 June). "Cybercafé in a container": Rural Kenya's mobile internet stations. *APC*. https://www.apc.org/en/news/cybercafe-container-rural-kenyas-mobile-internet-s

11 https://www.apc.org/en/greenit_apc_initiatives#mozTocId622594

12 Ya'u, Y. Z. (2021). GSM Repairers Association: Building capacity and creating opportunities for mobile repairers in Nigeria. In A. Finlay (Ed.), *A guide to the circular economy of digital devices*. APC. https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/case-study-gsm-repairers-association-building-capacity-and-creating-opportunities-for-mobile-repairers-in-nigeria

13 https://www.apc.org/en/greenit_apc_initiatives#mozTocId622594

14 https://datacab.org/soot-mapping-project

15 Prado, D. (2022, 13 September). Seeding change: Communities mobilise open data to challenge oil industry pollution in Nigeria. *APC*. https://www.apc.org/en/node/38246

16 Espinosa, A. (2021). Computer Aid's Solar Learning Lab: Sustainable, scalable and adaptable to local needs. In A. Finlay (Ed.), *A guide to the circular economy of digital devices*. APC. https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/case-study-computer-aids-solar-learning-lab-sustainable-scalable-and-adaptable-to-local-needs

society initiatives to address e-waste, and highlighted the need for multistakeholder engagement and networking. In 2020-2021, DEF co-led the development of APC's guide to a circular economy of digital devices, contributing case studies and policy analysis from the region.[17]

From Taiwan, Open Culture Foundation (OCF) is collaborating with groups around the world to help local communities install and operate open source environmental sensors. OCF launched Civic Sense[18] in 2021 and is collaborating with several APC members in the project, including MAJI in Nigeria and the Society for the Promotion of Alternative Computing and Employment, Kerala (SPACE Kerala) in India. SPACE Kerala is working to improve water quality monitoring in the Nallathanni River in Munnar, partnering with the local community to operate and maintain water boxes provided through the OCF Civic Sense project.[19]

In Bangladesh, APC members have developed research and undertaken advocacy to address the impacts of electronic waste. In 2021, Voices for Interactive Choice and Empowerment (VOICE) convened an event in Dhaka to discuss e-waste management and environmental sustainability in Bangladesh, bringing together government representatives, leaders of environmental movements, NGOs, teachers and journalists. Speakers at the event emphasised the need for collaboration and public-private partnerships to support repair, recycling and e-waste management.[20]

The Americas

In Latin America and the Caribbean, social movements and community-led resistance to extractive practices are grounding the work of the APC network to support meaningful and sustainable connectivity.

In the Amazon rainforest, many communities cannot rely on broadband or even mobile internet access to communicate across distances. As illegal logging, deforestation and mining threaten ecosystems, these communities must find ways to communicate safely in order to monitor and defend the forest against extractivism.[21] Recognising this need, APC member Rhizomatica is working with isolated communities in Latin America to set up digital communication systems based on high frequency (HF) shortwave radio. The High-frequency Emergency and Rural Multimedia Exchange System (HERMES) developed by Rhizomatica is capable of connecting communities across hundreds of kilometres, creating secure exchange points to send and receive information.[22]

In Central America, Sulá Batsú is supporting women leaders engaging in sustainable entrepreneurship, building digital business models "that are not predatory and extractivist."[23] Sulá Batsú has offered workshops on e-waste, extraction of minerals and energy consumption for digital technologies, and facilitated ongoing conversations to support women entrepreneurs to actively engage with these issues and address emerging threats and challenges.

In Colombia, Colnodo has emphasised environmental sustainability as a cross-cutting priority since its foundation, and for more than 20 years it has operated the Red de Desarrollo Sostenible (Sustainable Development Network), originally an initiative of the United Nations Development Programme (UNDP) and the Colombian Ministry of Environment. Colnodo has also been involved in coordinating the publication of environmental data with the Environmental Observatory for Bogotá and the Bogotá River. In addition, Colnodo actively participated in the development of APC's guide to a circular economy of digital devices and contributed a case study that explores the management of e-waste in Colombia through the Computadores para Educar (Computers for Schools) initiative.[24]

Nodo TAU, based in Rosario in Argentina, has worked to repair and reuse donated computers for almost 20 years as part of their commitment to digital inclusion. In 2003, Nodo TAU began working with local organisations to set up a network of

17 Kazi, S., & Pratap, T. (2021). Transitioning to the circular economy in the South Asia region: A phased policy approach for Bangladesh, India, Sri Lanka and Pakistan. In A. Finlay (Ed.), *A guide to the circular economy of digital devices*. APC. https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/case-study-transitioning-to-the-circular-economy-in-the-south-asia-region-a-phased-policy-approach-for-bangladesh-india-sri-lanka-and-pakistan

18 https://ocf.tw/en/p/civicsense

19 Ibid.

20 Staravis. (2021, 6 July). Demand for implementation of e-waste management rules in Bangladesh. *VOICE*. https://voicebd.org/2021/07/06/demand-for-implementation-of-e-waste-management-rules-in-bangladesh

21 Bloom, P., & Brock, N. (2020). Digital communications to build autonomy and combat ecocide. In A. Finlay (Ed.), *Global Information Society Watch 2020: Technology, the environment and a sustainable world*. APC. https://www.giswatch.org/index.php/node/6227

22 Romano, M. (2022, 11 August). Seeding change: Rhizomatica's high frequency radio showcases the power of communication in remote regions of the Amazon. *APC*. https://www.apc.org/en/node/38186

23 APCNews. (2022). Seeding change: Environmental sustainability and the need to strengthen female leadership. *APC*. https://www.apc.org/en/node/37911

24 Casasbuenas, J. (2021). Computadores para Educar: Ensuring circularity through managing e-waste properly in a computers-for-schools initiative. In A. Finlay (Ed.), *A guide to the circular economy of digital devices*. APC. https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/case-study-computadores-para-educar-ensuring-circularity-through-managing-e-waste-properly-in-a-computers-for-schools-initiative

telecentres, using donated computer equipment. As the project developed, Nodo TAU began to receive large donations of computers that could not be repaired, and in 2008 they joined a project to set up an e-waste management plant in Rosario.[25] In 2021, Colnodo and Nodo TAU collaborated to develop an online Moodle course in Spanish on ICTs and the environment, and are preparing to expand the course in the future.[26]

In Brazil, APC member Intervozes is working with Coordenação Nacional de Comunidades Negras Rurais Quilombolas (CONAQ) and Movimento de Mulheres Trabalhadoras Rurais do Nordeste (MMTR-NE) to build solidarity networks through collective mapping and conceptualising of ICTs by quilombola and rural communities in northeastern Brazil. Intervozes is also working with Indigenous communities in the Guarani territories in São Paulo to build protocols for internet use and improve access.[27] In other regions of the country, another APC member in Brazil, Nupef, is partnering with local communities to design and deploy community-based internet infrastructure and community networks that help these communities defend their territories against extractivism and fight for their rights.[28]

Europe

In Europe, where internet penetration is among the highest on the planet, and where the European Union is seen as a leader in legislative and regulatory responses to environmental harm, the APC network is working with local communities to repair and transform infrastructure to work for the planet.

In Catalunya, APC member Pangea is harnessing the power of networked action through eReuse.org, a project and community that promotes and facilitates local autonomous open platforms to repair, refurbish and reuse electronics.[29] The eReuse initiative first began in 2013, launching a campaign for computer donations in 2015. Since then, the eReuse network has processed more than 10,000 computers, which has benefited families, schools, public facilities and NGOs, and supported local social inclusion and participation.

In Eastern Europe, BlueLink Foundation has continued to focus on climate and environmental issues in the region, including projects to improve communication and learning between journalists and scientists and fostering policy change to bring Bulgarian legislation in line with European climate legislation. In 2021, BlueLink joined APC staff and consultants in the development of four issues briefs on climate justice and digital rights,[30] including a brief exploring the interplay between environmental and internet governance, inspired by BlueLink's experience with regional bodies and policy processes.

In the UK, APC founding member GreenNet[31] has increasingly focused on reducing the environmental harms of internet service provision, responding to growing requests for environmentally conscious web design.

Cross-cutting priorities for technology and the planet

APC's Environmental Sustainability Working Group has identified four cross-cutting priorities for sustainable connectivity:

1. Centering the sovereignty and rights of Indigenous peoples and traditional communities

Indigenous peoples and traditional communities have the right to make decisions about if and how ICTs are used in their communities, and to defend against ICT development that threatens their rights and the rights of nature. APC supports Indigenous data sovereignty – the rights of Indigenous people to govern the collection, ownership and application of data.

2. Supporting digital safety and care, rooted in communities of practice

Holistic digital safety and care are growing priorities for environmental justice movements. The

25 Roveri, F. (2021). Planta de Gestión de Residuos Informáticos: The long and challenging road in setting up an e-waste recycling plant in Argentina. In A. Finlay (Ed.), *A guide to the circular economy of digital devices*. APC. https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/case-study-planta-de-gestion-de-residuos-informaticos-the-long-and-challenging-road-in-setting-up-an-e-waste-recycling-plant-in-argentina

26 Red de Desarrollo Sostenible. (2021, 19 February). Usando las Tecnologías de Información y Comunicación – TIC para el cuidado ambiental. https://rds.org.co/es/novedades/usando-las-tecnologias-de-informacion-y-comunicacion-tic-para-el-cuidado-ambiental-2

27 Intervozes, CONAQ, & MMTR/NE. (2021, 5 October). Lived experience and connection: Networks of knowledge produced by Black and rural women through the Territórios Livres, Tecnologias Livres project. *APC*. https://www.apc.org/en/news/lived-experience-and-connection-networks-knowledge-produced-black-and-rural-women-through

28 APCNews. (2021). Seeding change: Nupef works with community networks to support the right to communication of traditional communities in Brazil. *APC*. https://www.apc.org/en/node/37531

29 Navarro, L. (2021). eReuse: Building reuse circuits for social inclusion. In A. Finlay (Ed.), *A guide to the circular economy of digital devices*. APC. https://circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/case-study-ereuse-building-reuse-circuits-for-social-inclusion

30 APC. (2022). *At the interstice of digital rights and environmental justice: Four issue briefs to inform funding*. Ford Foundation, Ariadne and Mozilla Foundation. https://www.apc.org/en/node/38149

31 https://www.greennet.org.uk

global pandemic has forced many community organisers to adapt to working with and through digital technologies, often with little support for secure communications. APC's research suggests many environmental organisations and movements do not have digital safety policies and practices in place.

3. Integrating work towards social and economic justice and digital inclusion

The APC network supports initiatives to repair, refurbish and redistribute digital devices, working closely with community networks and local social enterprises for digital inclusion. At the same time, APC is working with partners to understand the impacts of extractivism and manufacturing on the health of ecosystems and human labour.

4. Working against environmental injustice in the governance of digital technologies

Individuals and communities that are affected by racism, exclusion, discrimination and inequality are disproportionately impacted by ecosystem degradation, pollution and disaster. APC centres these voices and experiences in our research and advocacy, and supports APC members working with communities to provide meaningful and sustainable connectivity.

Conclusion

The COVID-19 pandemic has exposed stark realities in the failures of governments and corporations to prevent, address and remedy the violation of human rights and the rights of nature.[32] In our global information society, meaningful connectivity continues to be an enormous challenge for many communities, and demands for "transition minerals" and "green technologies" pose huge risks for our already fragile ecosystems. The APC Environmental Sustainability Working Group acknowledges that there is no one-size-fits-all solution for building a sustainable internet. We are committed to centring communities in crisis and organising through joint action and learning for sustainable connectivity in all its complexity.

32 Office of the High Commissioner for Human Rights. (2022, 23 March). COVID-19 and human rights https://www.ohchr.org/en/stories/2020/03/covid-19-and-human-rights

DIGITAL FUTURES FOR A POST-PANDEMIC WORLD

Through the lens of the COVID-19 pandemic, this edition of Global Information Society Watch (GISWatch) highlights the different and complex ways in which democracy and human rights are at risk across the globe, and illustrates how fundamental meaningful internet access is to sustainable development.

It includes a series of thematic reports, dealing with, among others, emerging issues in advocacy for access, platformisation, tech colonisation and the dominance of the private sector, internet regulation and governance, privacy and data, new trends in funding internet advocacy, and building a post-pandemic feminist agenda. Alongside these, 36 country and regional reports, the majority from the global South, all offer some indication of how we can begin mapping a shifted terrain.

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