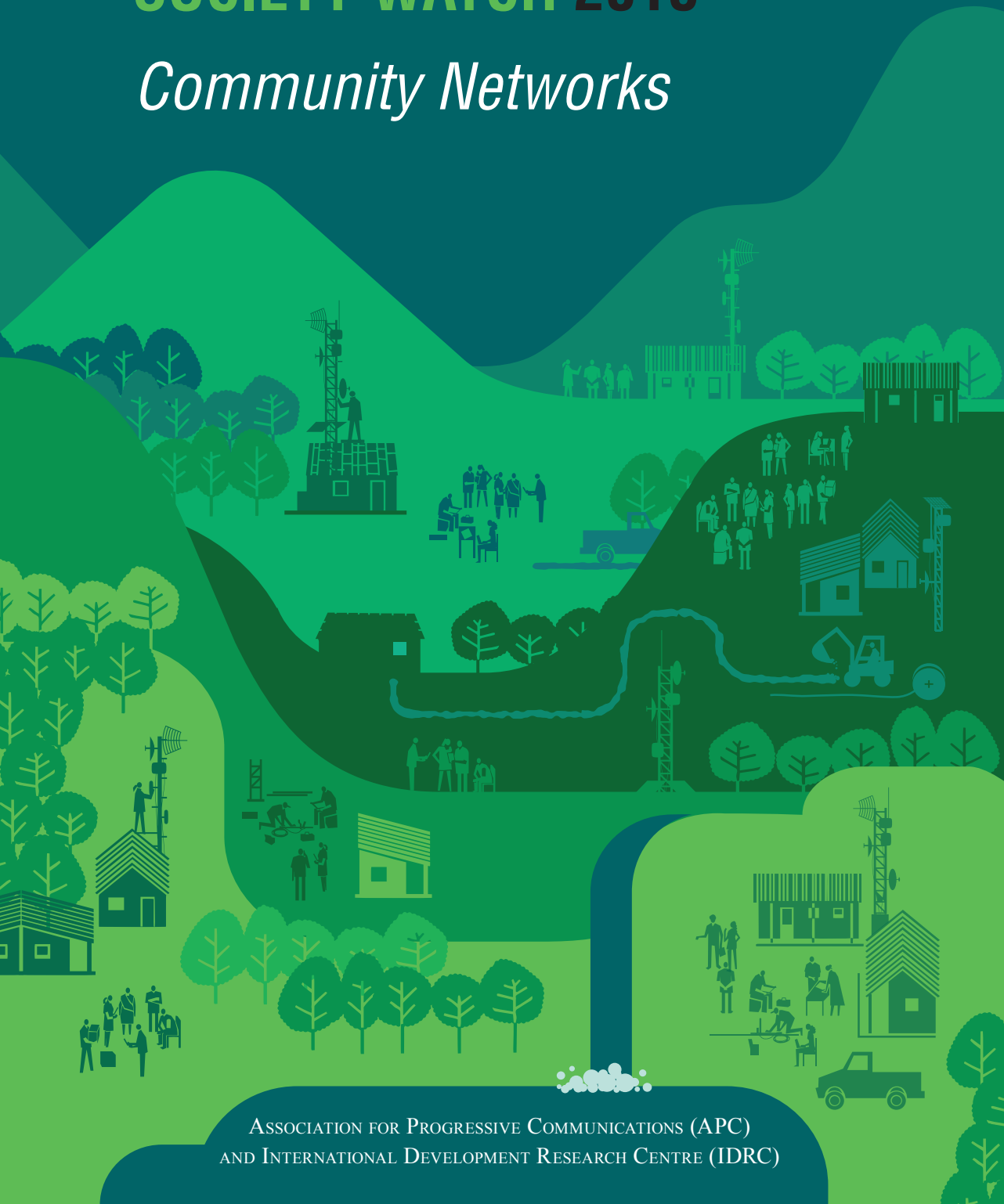


# GLOBAL INFORMATION SOCIETY WATCH **2018**

## *Community Networks*



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

# Global Information Society Watch

## 2018



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

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# Legal framework for community networks in Latin America

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## Introduction

Although community networks are not a recent phenomenon in Latin America,<sup>1</sup> they have very little regulatory oversight in the region, given that most of the legislation has focused on addressing the behaviour of large service providers and the markets in which they operate.

The development of regulations that facilitate the coverage of areas not yet served by internet providers necessarily involves the creation of a regulatory framework that provides certainty and access to the infrastructure required by community networks to function. This is because up until now, community networks have been the only sustainable model for connectivity in underserved areas in the region.

This report provides a starting point for the creation of a regulatory framework for community networks. We start from the basis that the best regulation is that which only appears where it is necessary, since over-regulation can constitute an obstacle to the growth of any industry and to the achievement of the objectives it intends to serve.<sup>2</sup> While new regulations are necessary, the report shows that the existing legal framework in the region can be drawn on when it comes to issues such as spectrum allocation, essential infrastructure or, where appropriate, the licences that community networks require. Although this report is based on Latin American examples and experience, its logic can probably be applied in any country.

## Legal nature of community networks

Considering their network architectures, business models, operating and organisational models and purposes, community networks have a specific legal character that finds its place in existing categories of regulation, regardless of whether or not there is a specific category called “community network” in the legislation of a given country.

The legal nature of a network allows us to establish the parameters with respect to which it must be regulated, whether or not it needs to have a licence and, if applicable, the characteristics that such a licence should have.

In order to establish the legal nature of a network, it is necessary to understand its architecture, its form of organisation and its purposes. This allows us to consider the legal categories that already exist and that are applicable to it.

In general, community networks can be grouped for legal purposes into three categories: those that can be categorised as self-provisioning networks, those providing services, and mixed or hybrid systems. There may be subdivisions of these categories, but while these may be useful in establishing regulatory particularities,<sup>3</sup> they are not essential when defining the legal nature of community networks.

The subcategories are also defined according to criteria that are important for each country. For example, for one country it may be relevant to establish a distinction between state-owned and commercial networks, while for another this distinction may not be necessary. Because of these particularities, we only discuss the three categories mentioned above in this report.

## Self-provisioning networks

This type of network is made up of communities or organised groups that decide to share a telecommunications service through their own network;

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1 See Galperin, H., & Girard, B. (2007). Microtelcos in Latin America and the Caribbean. In H. Galperin & J. Mariscal (Eds.), *Digital Poverty: Latin American and Caribbean Perspectives*. IDRC. <https://www.idrc.ca/en/book/digital-poverty-latin-american-and-caribbean-perspectives>

2 The Telecommunications Regulation Handbook published by the International Telecommunication Union (ITU) in 2011 clearly defines the objectives of telecommunications regulation, and explains that it is not about regulating just to regulate, but to meet four basic objectives: to increase access to technology and services, avoid market failure, foster effective competition and protect consumer interests. The Handbook is available at: <https://www.itu.int/pub/D-PREF-TRH.1-2011>

3 An interesting study that describes the different organisational models of different community networks is Navarro L. et al. (2017). *Report on the Governance Instruments and their Application to CNs (v2)*, produced as part of the EU-funded netCommons project. [https://www.netcommons.eu/sites/default/files/d1.4\\_cn-governance\\_v1.0-2017-12-30.pdf](https://www.netcommons.eu/sites/default/files/d1.4_cn-governance_v1.0-2017-12-30.pdf)

they have a non-profit purpose and they build or share common infrastructure.

This type of network can use free or licensed spectrum; its interconnection is generally through another network, through which they connect with the internet.<sup>4</sup> Legally they might form a non-profit association or consumer cooperative, just to name a few of the possible governance models.

Examples of these networks are the Quintana-Libre network started by AlterMundi<sup>5</sup> in Argentina and Telecomunicaciones Indígenas Comunitarias (TIC A.C.)<sup>6</sup> in Mexico. QuintanaLibre is a community mesh network that provides internet services in remote areas of the Córdoba region and TIC A.C. is a cellular telephony community network operated by indigenous communities in the state of Oaxaca, Mexico.

Because of their characteristics, the networks are private networks, since they only serve their members and do not normally manage direct interconnection links.<sup>7</sup> In a way we can say that they are similar to a switch in an office building. Basically, they receive services from one or more provider, and redistribute them inside their network, sharing the costs. In the case of AlterMundi, these are internet services, and in the case of TIC A.C., cellphone services.

Most countries make allowances for private networks that do not require licensing in their legislation, as long as they are fixed networks or use free-use spectrum for their wireless links.

When this type of network uses licensed spectrum, it is necessary to request a licence or permit, depending on the existing regulations. At this point it becomes essential to distinguish these networks not only in terms of their legal nature, but in terms

of their purpose; otherwise there would be no difference between how we treat a private network of a commercial company, a public-private network, and a private network set up by a marginalised community and serving an area that no other service provider is interested in.

In these cases it is necessary to establish a specific modality that recognises the purposes of the network and even the type of community that requests it. In some countries this is already the case: in Mexico a social sector licence exists with two variations, one for “community” groups and one for “indigenous communities”. Both of them can be granted access to spectrum without being subject to an auction.

The lack of recognition of the social purpose of a community network, as happens in countries that have the auction as the only model to assign licences, significantly limits the possibilities of access to the spectrum for community networks. This can constitute a barrier to competition and, at the same time, deprive communities of several human rights.

In summary, we can say that if a community network meets the following characteristics, it does not require a licence (depending on the specific laws of each country, of course):

- It operates as a self-provisioning network.
- In the case of telephone networks, it does not have direct interconnection, and only redistributes an access service.
- It uses free-use spectrum.

However, if a network complies with a) and b) but uses licensed spectrum, then it will require a licence. In these cases it is necessary for the country to have specific legislation in place considering the purposes of the network and the areas in which it intends to operate. This could even mean obtaining a different licensing scheme for primary use (where protection from interference is guaranteed) or secondary use (where protection from interference is not guaranteed), depending on whether or not the spectrum has been allocated to another provider.

### ***Networks that provide services to third parties***

There are networks that have a telecommunications infrastructure constituted as a common good, but can provide services to third parties that are not necessarily owners/members of the network. This small difference makes them providers of telecommunications services and depending on the legislation, and whether or not they use licensed spectrum, they require some type of licence.

4 When referring to “interconnection” it is necessary to distinguish between telephone networks and internet networks. In the former, when there is interconnection with other networks, it is necessary to provide services to users not belonging to the network, which is why these are no longer self-provisioning. In the case of internet networks, the connection is to a network of networks, and the interconnection does not change the nature of the service.

5 AlterMundi is a civil association based in Argentina that works to promote a new paradigm based on freedom through peer collaboration. AlterMundi explores different manifestations of this collaboration from a technological perspective and with an emphasis on community wireless networks in rural areas and small towns. Through projects such as LibreMesh and LibreRouter, they contribute to a model based on accessible technologies that can be handled by people without prior technological knowledge. See <https://www.altermundi.net> and the Argentina country report in this edition of GISWatch.

6 Telecomunicaciones Indígenas Comunitarias A. C. is a federated network of cellular telephone networks of indigenous communities. It has published a Manual of Community Cellular Telephony that describes its operations (available at: <https://www.redesac.org.mx/telefoniacomunitaria>). See <https://www.tic-ac.org> and the Mexico country report in this edition of GISWatch.

7 <https://en.wikipedia.org/wiki/Interconnection>

Networks that are self-service but perform direct interconnection in telephony also fall into this category, and will require numbering resources, quality of service agreements, and all other obligations that arise from the interconnection of these types of networks.

Examples of this category of community networks are B4RN<sup>8</sup> in the United Kingdom or the telecommunications cooperatives of Argentina. These networks, although they are constituted as community networks (i.e. the infrastructure belongs to a specific community), can provide services to non-members of the network, and therefore we can say that they are public telecommunications networks that provide services to the general public.

It is their purposes which define the particular characteristics of this type of network, not their architecture. That is, their specific legal treatment derives from their form of economic or social organisation, rather than their networking architecture. This way of organising can give them special tax or legal treatment, for example, by being a non-profit association or cooperative.

Although these types of networks require a licence even if they do not use spectrum, in some countries they can benefit from a simplified licensing model or from spectrum reserved for them.

This distinction is normal in the case of radio broadcasting, and a similar principle should apply in telecommunications. For example, if a country recognises special legislation for community broadcasting that is derived from its form of governance and its purposes, when the means of transmission is changed, but not the form of organisation or purposes, the same principles should apply. This is because there is a general principle of law that says: where there is the same reason, there must be the same provision.

If we also take into account that technological convergence allows the provision of different communication services, by establishing an artificial distinction for a certain type of community media, based only on the kind of technology it uses, this could turn into a barrier to the exercise of the right to freedom of expression or a barrier to entry to markets.<sup>9</sup>

There may also be networks with a commercial purpose, but aimed at a specific market segment that is not serviced. In these cases the licensing model can be simplified to facilitate their attention to this segment, such as the simplified licence in Brazil for operators that serve localities of less than 5,000 inhabitants.

Countries such as Mexico and Argentina have a special regime for community or social operators and, in the case of Mexico, spectrum specifically reserved for these purposes. In the case of Mexico, the spectrum segment in the GSM band assigned to social uses is not exclusive, since it can be granted at the same time for social and commercial use – the rural and remote areas are far enough away from commercially viable areas so as not to cause interference.<sup>10</sup>

In summary, we can say that community networks start to look more like commercial telecommunications networks, if they provide services to third parties or, in the case of telephony, if they perform direct telecommunications interconnection.<sup>11</sup>

In these cases, the licensing model may consider the purpose or scheme of a specific organisation and create a specific licence; but unlike the first category, these networks usually require a licence.

### **Mixed networks**

In these cases the network constitutes a separate infrastructure from the services that are provided and has a different legal status compared to a model where there is a service operator: the network becomes a separate entity that is not owned by any operator.

This type of network consists of the aggregation of user nodes into a network, where the users contribute their local infrastructure to create a common infrastructure. There are, in this model, multiple pieces of a network that are added together to form a single one. This is something similar to what is known in civil law as servitude: where private property or goods are also used for the benefit of others, as is the case with the right of way, where the good (in this case a piece of land) remains the property of the owner but he or she must allow passage and not hinder the passage of others across that land.

8 <https://b4rn.org.uk>

9 “Regulation inspired by the principle of neutrality must avoid discriminatory effects among other technologies at the same time as favouring the development of ICTs. Broadly speaking, the regulatory principle of technological neutrality is based on four commitments: non-discrimination, sustainability, efficiency and consumer certainty.” Culler March, C. (2011). El principi de neutralitat tecnològica i de serveis a la UE: la liberalització de l'espectre radioelèctric. *IDP. Revista de Internet, Derecho y Política*, 11. <https://idp.uoc.edu/articles/abstract/10.7238/idp.voi11.1017>

10 Programa Anual de Bandas de Frecuencia 2016, Instituto Federal de Telecomunicaciones, Mexico.

11 To determine if there is interconnection, it is advisable to observe whether the network requires interconnection agreements for the provision of its services, and if the interconnection is made using its own resources or that of another operator.

Its existence in the law is old and still enforced, as is the case with transhumant grazing routes.<sup>12</sup>

This licensing model can exist without a specific entity that owns the network, because it is enough to have a governance agreement for the network. These are interconnection agreements between different owners of nodes or network segments, which can be operators, users, universities, community networks, municipalities, governments, etc.<sup>13</sup> None of them owns the network and therefore nobody operates it in its entirety.

In these cases it depends on the legal nature of each node owner whether the network needs a licence or not. If a user is a telecommunications

service provider, it will require a licence, but if it is a private network, it will not.

## Conclusions

To determine the need for a licence for a community network, you have to consider the network architecture in the first place and the infrastructure it uses (free spectrum, licensed or shared infrastructure). If the network is private and uses free spectrum, it probably does not require a licence.

If it is a public or private network that uses spectrum, its purpose and form of social/legal organisation must be analysed to see if it fits a specific type of licensing scheme.

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<sup>12</sup> See, for example, the chapter on “Ownership, Tenure Regime and Use” in the *White Paper on Transhumance in Spain* by the Ministry of Agriculture, Food and Environment of Spain. It shows how the property regime of transhumant lands is varied, but mainly public, and how the use of the land affects its legal status. [https://www.mapa.gob.es/es/desarrollo-rural/publicaciones/publicaciones-de-desarrollo-rural/LIBRO%20BLANCO%202013\\_tcm30-131212.pdf](https://www.mapa.gob.es/es/desarrollo-rural/publicaciones/publicaciones-de-desarrollo-rural/LIBRO%20BLANCO%202013_tcm30-131212.pdf)

<sup>13</sup> See, for example, the commons approach of guifinet: <https://guifi.net>; for a more in-depth study, see Navarro et al. (2016). A Commons-Oriented Framework for Community Networks. In L. Belli (Ed.), *Community Connectivity: Building the Internet From Scratch. Annual Report of the UN IGF Dynamic Coalition on Community Connectivity*. [https://www.intgovforum.org/multilingual/index.php?q=filedepot\\_download/4391/1163](https://www.intgovforum.org/multilingual/index.php?q=filedepot_download/4391/1163); see also the Catalonia report in this edition of GISWatch.

## 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

[www.GISWatch.org](http://www.GISWatch.org)



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