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*Economic, social and cultural rights
and the internet*



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The digital protection of traditional knowledge: Questions raised by the Traditional Knowledge Digital Library in India¹

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Introduction

The first problem one encounters in studying traditional knowledge (TK) is the extent and meaning of the term itself. No globally accepted definition of TK exists,³ and therefore no clear delineation of its scope. The definition adopted by the World Intellectual Property Organization (WIPO) is that TK is “knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.”⁴ While TK embraces traditional cultural expressions within its ambit, and includes distinctive signs and symbols associated with traditional knowledge,⁵ the scope of this report does not extend to traditional cultural expressions as they necessarily would fall under the purview of copyright law.

Before we frame TK in terms of economic, social and cultural rights (ESCRs), let us understand the phenomenon of biopiracy in a bit more detail using two examples, one connected to the right to food, and the other connected to health. Biopiracy is the use of intellectual property (IP) systems to legitimise

control over biological products and processes that were previously used for centuries in non-industrialised cultures.⁶ The case of neem-related patents, through which bio-prospectors attempted to appropriate the royalty arising from a plant whose medicinal value was already in the public domain, is well documented.⁷ Another case worth noting is that of the “Enola bean”, in which Larry Proctor, a United States (US) citizen, purchased a package of Mexican beans of various colours, separated out the yellow ones, and spent three years selectively breeding the plants. He then named his line “Enola” and obtained patent protection for the bean, its plant, its pollen, and the method of producing it.⁸

This case is far more worrying than the neem case for two reasons.⁹ First, it was a case that had an immediate and tangible impact on the producers of the commodity in that yellow Mexican beans were exported into the United States before the patent was granted, and the assertion of the patent led to significant reductions in bean exports, representing a quantifiable economic loss for bean farmers.¹⁰ Second, the patent was allowed to stand for almost a decade, amounting to half the life of a legitimate patent.¹¹ This represents an incredibly unjust outcome – an invention (“specifically selected yellow

1 This is an edited version of part three of a study that considers the International Covenant on Economic, Social and Cultural Rights (ICESCR) through aspects of intellectual property in India, namely, mobile patents, free and open source software, and India's Traditional Knowledge Digital Library. Through these, it demonstrates the potential of the internet in realising ESCRs. Abraham was a researcher on the Association for Progressive Communications (APC) project “Connecting your rights: Economic, social and cultural rights (ESCRs) and the internet”. For the full version of this case study, see: www.apc.org/en/projects/connecting-your-rights-economic-cultural-and-social

2 Vidushi Marda is a programme officer at the Centre for Internet and Society. Special thanks go out to Aditya Singh Chawla, Parvathy Nair, Raji Gururaj and Balaji Subramaniam who provided research assistance for this paper during their internships with the Centre for Internet and Society.

3 Traditional Knowledge, WIPO. www.wipo.int/tk/en/tk

4 Ibid.

5 WIPO. (2010). *List and Brief Technical Explanation of Various Forms in which Traditional Knowledge May be Found*. www.wipo.int/meetings/en/doc_details.jsp?doc_id=147152

6 Shiva, V. (2001). *Protect or Plunder? Understanding Intellectual Property Rights*. London: Zed Books.

7 See, e.g., Horsburgh Porter, A. (2006, 17 April). Neem: India's tree of life. *BBC news*. bbc.co.uk/2/hi/south_asia/4916044.stm; BBC. (2005, 9 March). India wins landmark patent battle. *BBC news*. bbc.co.uk/2/hi/science/nature/4333627.stm; Hoggan, K. (2000, 11 May). Neem tree patent revoked. *BBC news*. bbc.co.uk/2/hi/science/nature/745028.stm

8 In re POD-NERS, L.L.C., Re-examination No. 90/005,892, US Fed. Cir. 2009. law.justia.com/cases/federal/appellate-courts/cafc/08-1492/08-1492-2011-03-27.html

9 It is also noteworthy for another reason: it is illustrative of the time and effort required to contest claims after a patent has been granted. Proponents of the TKDL would argue that what took a decade in the Enola bean case could have been achieved in a matter of weeks at the application stage by a patent office equipped with such a database.

10 Shashikant, S., & Asghedom, A. (2009, 12 August). The ‘Enola Bean’ dispute: patent failure & lessons for developing countries. *Third World Network*. twn.my/title2/wto.info/2009/twninfo20090811.htm

11 Crouch, D. (2009, 10 July). Mexican Yellow Bean Patent Finally Cooked. *Patently-O*. patentlyo.com/patent/2009/07/mexican-yellow-bean-patent-finally-cooked.html

beans”) arising from traditional knowledge in the public domain (since Mexican farmers had been cultivating and exporting these beans) being monopolised by a private entity illegally for almost a decade.

The differences between TK and other forms of IP are the following:

- With other forms of IP, property rights are afforded to the innovator or creator, whereas communities own TK.
- Other forms of IP are designed as incentive mechanisms for the creation of new property; however, there is no such incentive to create new property with TK.
- IP is also time-bound, whereas TK is held in perpetuity from generation to generation.
- The invention under IP must also satisfy the requirement for novelty and industrial application, whereas TK does not have these requirements.

Although patent law is not tailored to protect TK, it has been used to prevent misappropriation of TK.

The Traditional Knowledge Digital Library

At the turn of the millennium, an expert group found that roughly 2,000 patents linked to India’s TK in medicine were being granted annually around the world.¹² This expert group proposed the establishment of the Traditional Knowledge Digital Library (TKDL)¹³ in order to reduce biopiracy. The TKDL was envisaged as “a home-grown effort to ensure patent offices around the world do not grant patents for applications founded on India’s wealth of TK that has existed for millennia.”¹⁴ In 2001 India launched the initiative, which digitised its wide repository of TK, with the hope of enabling the protection of this knowledge and preventing its misuse.

The TKDL is a digital knowledge repository of Indian traditional knowledge about medicinal plants and formulations, and practices used in Indian systems of medicine. Its knowledge base is primarily derived from Ayurveda, Unani, Siddha and Yoga. These areas are being documented by collating the information on TK from literature existing in local languages such as Sanskrit, Urdu, Arabic, Persian and Tamil in digitised format. These have been made available in five international languages: English, German, Spanish, French and Japanese. While it is clear that the first three systems of medicine

(i.e. Ayurveda, Unani and Siddha) are systems that have a corresponding system of traditional medicines, the framing of Yoga as a system of medicine is unclear as there is no medicine administered to the patient. Increasingly, however, medical procedures are being patented, and the Indian government in August 2015 shortlisted 1,500 yoga asanas to be included in the TKDL to prevent foreign parties from patenting them.¹⁵ This was in response to several yoga-related patents being applied for¹⁶ and granted¹⁷ around the world, notably in the United States.

The TKDL’s appeal lies in the manner in which it approaches attempts to patent TK (the “state of the art”) – it serves to pre-empt the granting of a patent, rather than to contest a patent’s validity after it has been granted. This, it is claimed, reduces the time taken to contest claims from a matter of years to a few weeks.¹⁸

Defining the right

The protection of TK can be primarily placed within Article 15 of the International Covenant on Economic, Social and Cultural Rights (ICESCR). In order to understand the relationship between TK and Article 15, we must first appreciate that TK is also scientific knowledge. There are two ways in which the right of the TK community can be mapped onto Article 15. First, the Article recognises “the right to take part in cultural life”, and second, “to enjoy the benefits from scientific progress and its applications”. This ensures that communities have the right to continue to operationalise and use TK. Further, Article 15 includes the right “to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production”. However, while this is a universal right, in practice it will only happen when national law recognises the property rights of the community, facilitates protection of these rights, takes legal action against infringements, and provides mechanisms for the collection and distribution of royalties. What might not strike the reader as obvious is that the benefits

12 Gupta, V. K. (2011). *Protecting Indian Traditional Knowledge from Biopiracy*. WIPO. www.wipo.int/export/sites/www/meetings/en/2011/wipo_tkdl_de_11/pdf/tkdl_gupta.pdf

13 www.tkdl.res.in/tkdl/langdefault/common/Home.asp?GL=Eng

14 Gupta, V. K. (2011). Op. cit.

15 PTI. (2015, 9 August). Over 1500 yoga asanas shortlisted to thwart patenting by foreign parties. *Indian Express*. indianexpress.com/article/india/india-others/over-1500-yoga-asanas-shortlisted-to-thwart-patenting-by-foreign-parties

16 TNN. (2007, 18 May). US patent on yoga? Indian gurus fume. *Indian Express*. timesofindia.indiatimes.com/india/US-patent-on-yoga-Indian-gurus-fume/articleshow/2058285.cms

17 Lee, T. B. (2013, 13 December). A yoga patent? Here’s why the USPTO approves so many dubious applications. *Washington Post*. <https://www.washingtonpost.com/news/the-switch/wp/2013/12/13/a-yoga-patent-heres-why-the-uspto-approves-so-many-dubious-applications>

18 Press Information Bureau. (2010, 28 April). India Partners with US and UK to Protect Its Traditional Knowledge and Prevent Bio-Piracy. pib.nic.in/newsite/erelease.aspx?relid=61122

of protecting the moral and material interests in the world of TK accrue to the community, while in other forms of IP the rights holder is either an individual or corporation.

Article 11 of the ICESCR is also relevant to TK. It recognises the right of everyone to an adequate standard of living, including adequate food, clothing and housing, and to the continuous improvement of living conditions. Article 11 (2) (a) mandates that states parties to the Covenant take measures to “improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources.”¹⁹ TK is connected to food in multiple ways, such as ecosystem and landscape management, water management, soil conservation, biological control of pests and diseases, ecological agriculture and livestock practices, and plant and animal breeding – and most importantly, with regard to the latter, breeding and preserving varieties of plant and animal species. Suman Sahai, founder of the Gene Campaign,²⁰ helps us understand the connection between food security and traditional knowledge. She argues that farmers are a community of women and men who have not only created several thousand breeds of food and cash crops, but also “identified valuable genes and traits in these crops and maintained them over generations through a highly sophisticated system of crossing and selection.”²¹

There exist a host of international and national norms, both of a general and a specific nature, enunciating the right of indigenous communities to their traditional knowledge. One specific example is the World Health Organization’s approach to Traditional and Complementary Medicine (T&CM). In this, it urges states to “prevent the misappropriation of T&CM by implementing the relevant international instruments in line with the WHO global strategy and plan of action on public health, innovation and intellectual property, adopting or amending national intellectual property legislation, and enacting other defensive protection strategies.”²²

India has signed the Convention on Biological Diversity (CBD), a treaty with 194 parties in total.²³ The CBD provides for the respect, preservation and maintenance of “knowledge, innovation and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity”, and also for encouraging the wider application of such practices while ensuring that the benefits arising from such utilisation are shared equitably with the communities in question.²⁴ Having signed this convention, India has the duty to protect this knowledge without appropriating it, and the TKDL is a means to protect this right.

Such provisions have been included in India’s Biological Diversity Act,²⁵ which was enacted in pursuance of India’s duties under the CBD. Restrictions on the granting of patents for inventions arising from research on biological resources,²⁶ the transfer of biological resources or knowledge,²⁷ and the enforcement of equitable benefit sharing²⁸ aim to serve as effective legal bars to biopiracy and unauthorised use of traditional knowledge.

Successes of the TKDL

Since the inception of the TKDL, in just under two years, and in Europe alone, India has succeeded in using this resource to bring about the cancellation or withdrawal of 36 applications to patents traditionally known as medicinal formulations.

Between 2001 and 2015, out of a total of 189 pharmaceutical applications which include medicines, therapeutics, etc., 21 were granted while 17 were rejected. An additional 30 were deemed withdrawn and another 31 were abandoned. At the time of writing, 90 have their examination still in progress. Out of the 10 applications under cosmetics, seven are under progress while one each has been accepted, rejected and deemed to be withdrawn. There was only one application under agriculture which was rejected. The domain of food had three applications out of which one was rejected, one deemed to be withdrawn and the last one in progress.²⁹

19 www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx

20 genecampaign.org

21 Sahai, S. (1996). Importance of Indigenous Knowledge in IPR. *Economic and Political Weekly*, 31(47).

22 World Health Organization. (2013). WHO Traditional Medicine Strategy 2014-2023. apps.who.int/iris/bitstream/10665/92455/1/9789241506090_eng.pdf?ua=1

23 List of Parties, Convention on Biological Diversity. <https://www.cbd.int/information/parties.shtml>

24 Article 8(j) of the Convention on Biological Diversity. <https://www.cbd.int/convention/text>

25 nbaindia.org/content/25/19/1/act.html

26 Section 6 of the Biological Diversity Act, 2002.

27 Section 20 of the Biological Diversity Act, 2002.

28 Section 21 of the Biological Diversity Act, 2002.

29 www.tkdil.res.in/tkdil/langdefault/Common/ExaminerReport.asp?homepage=sub

India and the US had the maximum number of applications at 75 and 43 respectively. Japan and Korea were third and fourth at 16 and 11 respectively. Most of these applications were in progress, with 12 applications from India being rejected and 17 being abandoned. Only five had been granted to India while three were deemed to be withdrawn; 38 of India's applications and 12 of those from the US are pending. Taiwan and Jordan's only applications were granted while Spain's only application was rejected.³⁰

But do digital databases work as a form of IP protection?

While proponents of the database have been vocal in their vision for its application, it has received criticism on several grounds.

First of all, there is a fair amount of disagreement regarding the best possible means through which TK can be protected.³¹ Indeed, existing literature already features catalogues of international law (both "hard" and "soft"), regional norms and domestic legislation that accord protection to TK within the framework of culture.³² While some believe that data aggregation and record creation is the best means to tackle biopiracy, others propose different approaches,³³ such as negotiating access agreements between indigenous communities and bio-prospectors.³⁴

Secondly, the TKDL has also attracted criticism because of its high level of confidentiality. In response to a right to information application, the Council for Scientific and Industrial Research (CSIR) clarified that the TKDL can only be accessed by foreign patent offices.³⁵ It is not made available to the Indian Patent Office or to CSIR scientists. As per the same response, the decision to make the TKDL confidential was taken during a cabinet meeting in 2006, but there exists no legal instrument that mandates such confidentiality. TK databases in other

countries do not impose access restrictions. The Korean Traditional Knowledge Portal, for example, explicitly states the motivation behind making itself publicly available:

The database is presented on-line through the Korean Traditional Knowledge Portal (KTKP). The reasons for making the database publicly accessible through the KTKP are as follows:

1. To lay the foundation for international protection of Korean traditional knowledge, thereby preventing unauthorized use of patents inside and outside the country.
2. To provide an abundance of information on traditional knowledge and related research, thereby expediting the development of related studies and industries.
3. To provide essential information for patent examinations, thereby enhancing the quality of intellectual property applications for traditional knowledge.³⁶

Similarly, the contents of the China Traditional Medicine Patent Database are also publicly available on the internet.³⁷

Finally, the TKDL has also raised questions of copyright, with claims that it falls foul of the Indian Copyright Act, 1957, since it has digitised works (such as translations or compilations of ancient texts) that are still under copyright without the consent of their authors.³⁸ Responding to the same right to information application discussed above, the CSIR claimed that no consent was required since the traditional knowledge in question was authored many years ago. This is a perplexing position to take, as there is significant skill and labour involved in translating and compiling these ancient texts and putting this knowledge together, which merits copyright protection.³⁹

The need for open knowledge systems

There seems to be no reason to keep a valuable resource such as the TKDL away from the public's reach, especially considering the fact that the entire project was bankrolled by the Indian taxpayer. Restricting access to the TKDL severely limits the benefit that the general public could derive from

30 Ibid.

31 WIPO. (2010). Op. cit., Annex 2.

32 See, e.g., Coombe, R. J. (2005). Protecting Traditional Environmental Knowledge and New Social Movements in the Americas: Intellectual Property, Human Right, or Claims to an Alternative Form of Sustainable Development? *Florida Journal of International Law*, 17(1), 115-136.

33 Swiderska, K. (2006). *Banishing the Biopirates: A New Approach to Protecting Traditional Knowledge*. International Institute for Environment and Development. pubs.iied.org/pdfs/145371IED.pdf

34 Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. (2002). *Review of Existing Intellectual Property Protection of Traditional Knowledge*. WIPO. www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_3/wipo_grtkf_ic_3_17-main1.html

35 Reddy, P. (2012, 29 March). Is the TKDL a 'confidential database' and is it compliant with Indian copyright law? *SpicyIP*. spicyip.com/2012/03/is-tkdl-confidential-database-and-is-it.html

36 *KTKP Introduction*, Korean Traditional Knowledge Portal. www.koreantk.com/en/m_about/about_01.jsp?about=1

37 Brief introduction of China Traditional Medicine (TCM) Patent Database, China TCM Patent Database. 221.122.40.157/tcm_patent/englishversion/help/help.html

38 Op. cit.

39 Reddy, P. (2012, 21 April). The need for an 'independent' review of the TKDL project. *SpicyIP*. spicyip.com/2012/04/need-for-an-independent-review-of-tkdl.html

this knowledge. Even if one were to accept that there exist compelling reasons to keep the data confidential, it is clear that the TKDL, by its very nature, cannot possibly be invulnerable to breach. Problems of access control are endemic to large databases – it has been postulated that large aggregations of secret data are fundamentally impossible because security must be traded off for ease of access in such situations. Thus, “you cannot construct a database with scale, functionality and security because if you design a large system for ease of access it becomes insecure, while if you make it watertight it becomes impossible to use.”⁴⁰ For this reason, governments have been urged to make use of centralised databases only when absolutely necessary.⁴¹ If we accept the premise that centralised databases cannot possibly be both accessible and secure, then we must examine whether the TKDL represents a balanced trade-off between accessibility and confidentiality.

There are three changes that are necessary in this regard:

The need to push for open knowledge

A system like the TKDL constitutes a mechanism for *defensive protection* of TK – it seeks to keep TK in the public domain rather than to exclusively put it in the hands of the community that evolved it. This is similar to the Peer-to-Patent⁴² initiative, which ensures that more eyes are involved in following the process: a crowd-sourced approach to preventing inappropriate appropriation.

The need to address legal barriers

Primarily, the TKDL’s data seems to be far from infallible, with several reports of mistranslations⁴³ and exaggerated claims⁴⁴ made by the CSIR. Apart from this, the most important requirement that the TKDL must fulfil is for its data to meet the legal criteria established for prior art in various jurisdictions. This would entail ensuring that the knowledge is made available with clear evidence of the date of its publication, and the presentation of the knowledge

in a manner that clearly establishes that a patent claim is anticipated by the data contained in the library.⁴⁵ Further, the fundamental challenge faced by any defensive protection mechanism is its vulnerability to differing definitions of prior art in various jurisdictions:

- **European Patent Convention (EPC):** The most TKDL-friendly jurisdictions are those such as the EU. The EPC defines prior art as “everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application”.⁴⁶ Thus, innovations detailed in the works indexed by the TKDL would fall within the definition of prior art, and therefore be unpatentable – assuming, of course, that all the works digitised and translated by the database were publicly available. An overwhelming majority of the TKDL’s self-proclaimed “successes” have been achieved in the EU – around 120 of the 180 “successful outcomes” are against European patent applications.⁴⁷
- **United States:** On the other end of the spectrum is the US definition of prior art. The United States Patent Act provides that a person “shall be entitled to a patent unless (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.”⁴⁸ This effectively excludes protection for any non-published knowledge outside the US. Further, given the restrictive access to the TKDL, it appears that the database would not fall within the definition of a “printed publication”, since it has never been “published” – merely circulated among patent examiners on conditions of non-disclosure. Thus, it appears that there is no legal basis for the TKDL to be cited as evidence of prior art in the US, or other jurisdictions that have similar definitions of prior art.⁴⁹

40 Proposed by Ross J. Anderson, this thumb-rule has come to be known as Anderson’s Rule. See: Porter, H. (2009, 10 August). Nine sacked for breaching core ID card database. *The Guardian*. www.theguardian.com/commentisfree/henryporter/2009/aug/10/id-card-database-breach

41 See, e.g., Anderson, R. et al. (2009). *Database State*. Joseph Rowntree Reform Trust. www.jrrt.org.uk/sites/jrrt.org.uk/files/documents/database-state.pdf

42 www.peertopatent.org

43 Rathi, M. (2012, 20 April). Guest Post – TKDL: A success – Really? *SpicyIP*. spicyip.com/2012/04/guest-post-tkdl-success-really.html

44 Reddy, P. (2012, 19 March). Guest Post: The Traditional Knowledge Digital Library and the EPO. *SpicyIP*. spicyip.com/2012/03/guest-post-traditional-knowledge.html

45 Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. (2003). *Practical Mechanisms for the Defensive Protection of Traditional Knowledge and Genetic Resources within the Patent System*. WIPO. www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_5/wipo_grtkf_ic_5_6.pdf

46 Article 54(2) of the Convention on the Grant of European Patents. <https://www.epo.org/law-practice/legal-texts/epc.html>

47 *Outcomes against bio-piracy*, Traditional Knowledge Digital Library. www.tkdl.res.in/tkdl/langdefault/common/Outcome.asp

48 35 U.S.C. § 102(a).

49 Quinn, G. (2009, 30 November). US Patent Office to Reject Based on Traditional Knowledge. *IPWatchdog*. www.ipwatchdog.com/2009/11/30/us-patent-office-to-reject-based-on-traditional-knowledge/id=7502

The need to address structural barriers

In choosing to characterise itself as an archive of prior art, the TKDL has placed the burden of enforcing TK assertions upon patent examiners around the world. In doing so, it has pigeonholed itself into a doctrine (namely prior art) that has a tendency to go largely unheard in patent examinations. With studies showing that more experienced patent examiners, typically occupying higher positions in the patent office, are less likely to cite examples of prior art in their examinations,⁵⁰ and still other evaluations showing that applicants for patents are extremely unlikely to provide and identify prior art surrounding their claims,⁵¹ it is evident that there are structural imbalances working against the efficacy of the prior art doctrine in preventing illegitimate patent claims. Thus, efforts must be made to counter this imbalance at two levels: first, access to the TKDL must be made as easy as possible; second, the TKDL has to undertake proactive patent monitoring efforts.

Patent monitoring, while an onerous and expensive task, is nevertheless necessary for the success of a defensive system such as the TKDL, especially in those jurisdictions which do not have the legislative framework to enable provisions of the CBD that mandate disclosure of genetic material sources.

Conclusion

For the reasons stated above, the access policy of the TKDL requires significant modification if the database is to reach its true potential for providing accurate, efficient and time-bound protection to TK-based innovations through the use of a centralised database that is wired into a network of interested parties.

TK systems require all the external support they can get in order to protect their mandate. Civil society must engage effectively with the TKDL initiative, encourage the accuracy of its records through research, and stimulate dialogue regarding the key issues discussed in this report. As pointed out by the UN Special Rapporteur on the rights of indigenous people: “Much more needs to be done to understand fully how ... treaties and agreements can undermine or reinforce indigenous peoples’ rights and how they shape the trajectories of national economic development plans.”⁵²

50 Lemley, M. A., & Sampat, B. (2012). Examiner Characteristics and Patent Office Outcomes. *The Review of Economics and Statistics*, 94(3), 817-827. www.mitpressjournals.org/doi/abs/10.1162/REST_a_00194?journalCode=rest

51 Sampat, B. (2010). When do Applicants Search for Prior Art? *The Journal of Law and Economics*, 53(2), 399-416. www.journals.uchicago.edu/doi/abs/10.1086/651959?journalCode=jle

52 Human Rights Council. (2014). Report of the Special Rapporteur on the Rights of Indigenous People. unsr.vtaulicorpuz.org/site/index.php/documents/annual-reports/26-annual-report-hrc-2014

Economic, social and cultural rights and the internet

The 45 country reports gathered here illustrate the link between the internet and economic, social and cultural rights (ESCRs). Some of the topics will be familiar to information and communications technology for development (ICT4D) activists: the right to health, education and culture; the socioeconomic empowerment of women using the internet; the inclusion of rural and indigenous communities in the information society; and the use of ICT to combat the marginalisation of local languages. Others deal with relatively new areas of exploration, such as using 3D printing technology to preserve cultural heritage, creating participatory community networks to capture an “inventory of things” that enables socioeconomic rights, crowdfunding rights, or the negative impact of algorithms on calculating social benefits. Workers’ rights receive some attention, as does the use of the internet during natural disasters.

Ten thematic reports frame the country reports. These deal both with overarching concerns when it comes to ESCRs and the internet – such as institutional frameworks and policy considerations – as well as more specific issues that impact on our rights: the legal justification for online education resources, the plight of migrant domestic workers, the use of digital databases to protect traditional knowledge from biopiracy, digital archiving, and the impact of multilateral trade deals on the international human rights framework.

The reports highlight the institutional and country-level possibilities and challenges that civil society faces in using the internet to enable ESCRs. They also suggest that in a number of instances, individuals, groups and communities are using the internet to enact their socioeconomic and cultural rights in the face of disinterest, inaction or censure by the state.

GLOBAL INFORMATION SOCIETY WATCH

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