

# Enabling and Empowering the Print-Disabled and Visually Impaired: Role of Law, Treaty, Guidelines, and Technology

Subhajit Panda\*, Rupak Chakravarty\*\*

## Abstract

Article 19 of The Universal Declaration of Human Rights (UDHR), proclaimed by the United Nations General Assembly in Paris on 10 December 1948 (General Assembly resolution 217 A) as a common standard of achievements for all peoples and all nations, reads “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.” The International Federation of Library Associations and Institutions (IFLA) has taken the initiative, IFLA/FAIFE (Freedom of Access to Information and Freedom of Expression), to defend and promote the basic human rights defined in Article 19 of the UN’s UDHR. While such movements and initiatives are focused towards the citizens of the world, WIPO’s Marrakesh VIP Treaty (MVT) and the Web Content Accessibility Guidelines (WCAG) cater to the requirements and rights of the persons with vision aberrations and other such bodily deficiencies, which deprives them from accessing information and knowledge, building a steeper and deeper knowledge divide. The present paper examines the relevant articles as mentioned in the MVT, encompassing the ‘Accessible Format Copies’ (AFC) for the visually disadvantaged. The paper also investigates the provision in the Indian Copyright Act. Various tools as technological interventions have also been discussed, including the Web browser screen readers. A brief discussion on the current status and its implications of WCAG have been also given for greater understanding in context with the theme of the paper.

**Keywords:** Marrakesh VIP Treaty (MVT), Indian Copyright Law, Screen Reader, Web Content Accessibility Guidelines (WCAG), Accessible Format Copy (AFC), Alternate Format Material (AFM), Accessible Books Consortium (ABC), Book Famine

## Introduction

Library & Information Science (LIS) is a profession where there are ethical responsibilities on the part of the LIS professionals towards the users and the institution he/she serves. Library service is a noble profession and a librarian is a person who carries this service within some imaginary ethical line of control. It is the responsibility of a library professional to provide access to required information to each user, without any discrimination based on caste, gender, colour, and financial or physical aspect. That means it is the responsibility of a library professional to look after every single user, understand their information needs, and try to fulfil them to their best. Now, users with special disabilities demand more attention than others, so that they can be influenced and motivated to become dependent on himself/herself and get the energy to overcome his/her disability barrier and can fulfil his/her information needs satisfactorily.

However, when it comes to copyright and copyright protected material, accessibility to information is somehow unbalanced for the visually impaired/print disabled persons. The Marrakesh Treaty completely balances human rights and intellectual property rights (IPR) in line with the basic principles of non-discrimination, equal opportunities, equality, full individual growth, and efficient and equitable participation in society (Nayak, 2013). It is an international treaty that makes it easier for visually impaired people to read books, ratified unanimously by the member state of the World Intellectual Property Organization (WIPO) of the United Nations.

\* Assistant Librarian, Central Library, Chandigarh University, Punjab, India. Email: [suvapanda007@gmail.com](mailto:suvapanda007@gmail.com); ORCID ID: 0000-0002-1578-1159

\*\* Professor, Department of Library and Information Science, Panjab University, Chandigarh, India. Email: [rupak@pu.ac.in](mailto:rupak@pu.ac.in); ORCID ID: 0000-0001-5046-1663

This paper mainly focuses on the information access barrier of copyright laws for visually impaired/print disabled persons, the Marrakesh Treaty and exceptions to copyright, and its Indian context.

## Objectives of the Study

- To study the significance and role of the Marrakesh VIP Treaty (MVT).
- To examine the current status of MVT globally.
- To critically examine the role and contribution of WIPO, the Accessible Books Consortium (ABC), and IFLA in strengthening and supporting the MVT movement.
- To examine the current status of MVT in context with Indian Copyright Law.
- To assess the role of libraries in strengthening and supporting the MVT movement.
- To identify Free and Commercial Software Programs (Screen Readers) and other Web Tools for the implementation of MVT in libraries.

## Copyright Law and Fair Use

Copyright law, which grants exclusive rights to the creator of an original work to protect literary, dramatic, musical, artistic, and related works, mandates that permission from its owner or author be obtained to reproduce or use (e.g. copy, reprint, translate, or distribute) a copyrighted work (Selvam & Selvam, 2016). Later, some amendments were taken as a fair use principle that permits limited use of copyrighted material without having to first acquire permission from the copyright holder. There are four factors by which it is considered whether the use of the copyright-protected material has come under fair use or not.

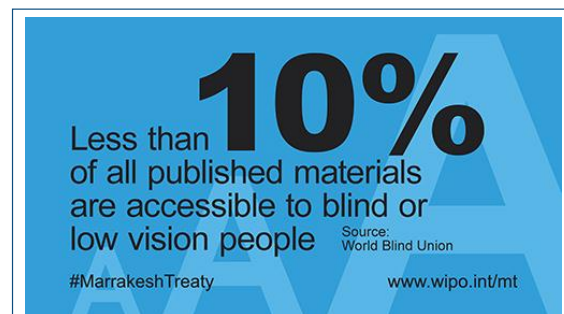
However, it is always to be remembered that there is no hard and fast rule to decide the fair use policy; neither do the factors allow accessibility of copyrighted item as a whole and there is no special exceptions for visually impaired/print disabled persons.

## Disability Exceptions in Copyright

There are many cases where copyright can limit access and use of protected work by people with disabilities. For example, a visually impaired user may need to translate a book's text into a format that is compatible with screen

reading software, a process that requires a complete copy of the original work (Diver & Schafer, 2017). Further, there is a clear conflict between these two sections of law. On the one hand, people with disabilities have a constitutional right to access material, but on the other hand, the author of a copyrighted work has the right to control the copying of their work. So, there should be a necessary provision in making such copyrighted work accessible to people with a particular disability. Therefore, an exception to copyright, particularly for the visually impaired/print disabled segment of the user should be the way to solve this conflict, with certain limitations. This exception in copyright law helps in deciding the nature and degree of content that can be reproduced in an accessible format (Rishika, 2015). There are some criteria which should be considered as a mandatory part of the copyright exception law for making Braille, audio, or large-print copies of books, newspapers, or magazines for visually-impaired persons. Content reproduction is permissible in case there is shortage of commercially available copies. It is mandatory for the organisations to provide details of copyrighted material being used for creating accessible format copies to the copyright owner of the original work.

## The Marrakesh VIP Treaty (MVT)



When we talk about the Copyright exception for the visually impaired/print disabled persons, the Marrakesh VIP Treaty (MVT) is the most useful and internationally accepted one. The foundation to the Marrakesh Treaty was laid down in 1981, when a joint working group was created between the WIPO (World Intellectual Property Organization) and the UNESCO. The treaty was signed on 27.06.2013, and after its ratification by 20 countries, it was enacted on 30 September 2016. MVT ensures access to published copyrighted written works, for people who are blind, visually impaired, or otherwise disabled.

The Treaty imposes two main restrictions/limitations on copyright:

**Table 1: MVT – Permissions & Solutions**

<i>Sr. No.</i>	<i>Access &amp; Exchange</i>	<i>Permissions</i>	<i>Exceptions/Solutions</i>
1.	Accessible Copies of Copyrighted Works	<ul style="list-style-type: none"> <li>• Print-disabled persons can make themselves OR</li> <li>• Done by the Authorised Entities (AEs)</li> </ul>	<ul style="list-style-type: none"> <li>• Copyright holders'/publishers' permission not required</li> <li>• No need to pay royalties</li> </ul>
2.	Cross-Border Exchange of 'Accessible Format Copies'(AFC) OR Alternate Format Materials (AFM)	Allows AEs to facilitate cross-border exchange of AFC/AFM	Deal with global 'Book Famine' to empower people with print disabilities, especially in developing countries, having access only to a small percentage (< 10%) of all books on the market

### Benefits of MVT (WIPO, 2016)

- MVT enhances the access to books, magazines, and other printed materials for the visually impaired/print disabled persons.
- MVT creates a positive influence among them and is accepted globally, including both developing and least developed countries (LDCs).
- MVT improves awareness of the challenges faced by the print-disabled community and persons with disabilities, awareness of policy making, the implementation of additional provisions in context with other laws, and greater access to education.
- MVT empowers VIPs through Accessible Format Copies (AFC)/Alternate Format Material (AFM) to contribute in cultural development, both as consumers and creators.
- MVT increases the availability of AFCs, which will enable educational institutions to serve the disadvantaged, that is visually impaired persons, so that they can enjoy equal access to education.
- MVT facilitates enhanced social inclusion, enables one to become an integral part of the cultural and social life of the print-disabled communities.

- MVT intervenes with poverty alleviation and increased contributions to the national economy through professional development.
- MVT makes the VIPs economically self-sufficient by providing access to learning materials in accessible formats, which generates opportunities for professional growth, allowing beneficiaries to contribute to their local economies.
- The MVT strengthens local publishing industries and increases investment in copyright industries, which are key drivers for economic growth and development.

### MVT Articles

The Marrakesh VIP Treaty contains a total of 22 articles, which thoroughly discuss the provisions to facilitate access to published copyrighted works to visually impaired persons and persons with print disabilities.

Among the 22 Articles, there are some specific ones which are directly linked to the accessibility criteria and exceptions that should be made under the copyright law, its extent, and limitations. These are briefly discussed in Table 2.

**Table 2: Detailed Description of Some Relevant MVT Articles**

<i>Article</i>	<i>Specification</i>	<i>Description</i>
Article 2(a)	Works Covered	<ul style="list-style-type: none"> <li>• Nature: Literary and artistic works (as per the Berne Convention)</li> <li>• Forms: Text, notation and/or related illustrations</li> <li>• Status: Published or otherwise made publicly available in any media</li> </ul>

Article	Specification	Description
Article 2(b)	Accessible Format Copy (AFC) or Alternate Format Materials (AFM)	<ul style="list-style-type: none"> <li>• Ease of Use: Format which beneficiary or recipient with visual impairment or other print disabilities can access and read conveniently</li> <li>• Quality: No deviation in the context, semantics, and integrity of the original work</li> </ul>
Article 2(c)	Authorised Entity	<ul style="list-style-type: none"> <li>• Authorisation: Govt. approved/licensed</li> <li>• Scope: Provides non-profit access to education, instructional training, adaptive reading, or knowledge to recipients</li> <li>• Inclusions: Someone acting on beneficiary's behalf, govt. institution, or non-profit body with similar scope as one of its prime obligations</li> </ul>
Article 3	Beneficiary Persons	<ul style="list-style-type: none"> <li>• Scope: Persons having hindrances with successful reading that interferes with holding a book efficiently, turning pages, or concentrating on the page</li> <li>• Beneficiaries: Blind, visually impaired, dyslexia (deficient in reading) or physical impairment</li> </ul>
Article 4	National Law Limitations and Exceptions Regarding Accessible Format Copies	<ul style="list-style-type: none"> <li>• Obligations: Contracting Parties (CPs)/Signatory Countries</li> <li>• Copyright Law: Facilitates availability of AFC/AFM</li> <li>• Permissions: No permission to be sought from the rights-holder for the creation/production of AFC/AFM by the Authorised Entities (AEs)</li> </ul>
Article 5	Cross-Border Exchange of Accessible Format Copies	<ul style="list-style-type: none"> <li>• Provision: Cross-border exchange of AFCs</li> <li>• Scope: From AE<sub>countryA</sub> to AE<sub>countryB</sub></li> <li>• Directly from AE to beneficiaries in other countries</li> </ul>
Article 6	Importation of Accessible Format Copies (AFC)	<ul style="list-style-type: none"> <li>• Import: In addition to creation, the National law of a Contracting Party (CP) shall also permit the import of an AFC/AFM</li> <li>• Permission: No authorisation of the rights-holder required</li> </ul>
Article 7	Obligations Concerning Technological Measures	<ul style="list-style-type: none"> <li>• Actions: Legal protection of the copyrighted works using technological techniques (implemented by publishers) shall not restrict the rights of the patrons/beneficiaries</li> <li>• Obligations: AEs to ensure that compliance of such legal provisions block the legitimate access to the content created</li> <li>• Circumvention: Legal remedies to be nullified</li> </ul>
Article 8	Respect for Privacy	<ul style="list-style-type: none"> <li>• Non-Discriminatory Protection: While applying the permissions and exceptions, the privacy or secrecy of beneficiary persons shall be protected by the Contracting Parties (CPs) as applicable for the general public/citizens</li> </ul>
Article 9	Cooperation to Facilitate Cross-Border Exchange	<ul style="list-style-type: none"> <li>• Identifying Global AEs: WIPO's Information Access Point facilitates identification and coordination among geographically distributed AEs for the effective cross-border exchange of AFC by sharing information on voluntary basis</li> <li>• Obligation: Contracting Parties</li> </ul>

Source: WIPO-Administered Treaties.

Almost 80 countries have signed the Treaty since its initiation. There are many other countries who accessed and enforced MVT later. The latest countries to access

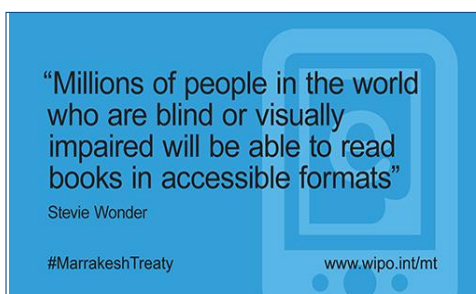
this treaty is New Zealand, Trinidad, and Tobago, on 02-October-2019, and the expected enforcement date is 04-January-2020.



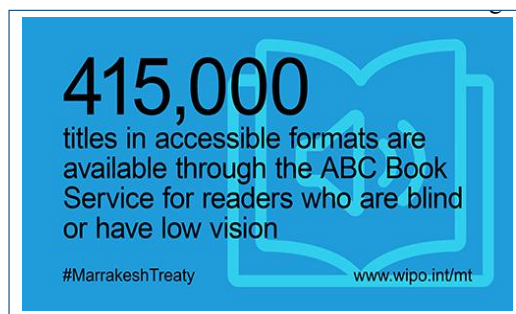
## Accessible Publishing

Accessible publishing is an approach to publishing and book design, whereby books and other texts are made available in alternative formats designed to aid or replace the reading process. Alternative formats that have been developed to aid different people to read include varieties of larger fonts, specialised fonts for certain kinds of reading disabilities, Braille, e-books, and automated Audiobooks and DAISY digital talking books. EPUB3 is considered as the gold standard in the publishing industry for the production of accessible digital books. ‘Ace by DAISY’ is a free open-source software for testing and evaluation of e-books with respect to conformance of the accessibility of the EPUB Accessibility Specification (ABC, n.d.). EPUB3 generates an electronic file for producing accessible digital books, only upon conformance to the “EPUB Accessibility Specification”. Ace by DAISY, the Accessibility Checking Tool can be downloaded freely from the URL:

<https://inclusivepublishing.org/toolbox/accessibility-checker/>. The Windows version is available as Ace by DAISY App.



## Accessible Books Consortium (ABC)



The Marrakesh VIP Treaty (MVT) only provided the theoretical framework for the exchange of books and publications in accessible formats, but it did not actually

transfer them. This needed an action vehicle. Accessible Books Consortium (ABC) was initiated at a global level on June 30, 2014, to realise the principle and philosophy of open access at an operational level through its Global Book Service of searchable online catalogue of books in accessible formats. Authorised Entities (AEs) can order and exchange accessible books across borders through this portal.

On the Fifty-First (24<sup>th</sup> Ordinary) Session of WIPO (Geneva, Sept. 30 to Oct. 9, 2019), the Director General, WIPO, highlighted ABC's three main areas of activity (WIPO, 2019).

- First, the Global Book Service had a catalogue of 540,000 works available in 76 languages, of which 425,000 works were available for free cross-border exchange under the Marrakesh Treaty, i.e. could be exchanged without formalities, and the remaining 100,000 or so works were still subject to formalities for exchange because the relevant countries were not yet party to the Marrakesh Treaty; there were 61 authorised entities in the Global Book Service from around the world who facilitated the exchange of books, with 22 from developing countries.
- Second, Accessible Publishing, which is the promotion among the publishers of born-accessible publications. There are 100 signatories to the ABC Publishers Charter, with the recent signing by a major publisher around the world, Hachette Livre.
- Third, Capacity Building, which involves building capacity in a country to be able to take advantage of the services offered by the ABC and also to take advantage of the provisions of the Marrakesh Treaty. The Director General highlighted various ongoing projects in 13 countries. ABC also focused on capacity building activities to support publication in accessible formats of educational books in local languages. Some 9,300 accessible educational materials had been made available to students at all levels since the launch of the ABC five years before.

The cross-border exchange of accessible books becomes easy for the AEs belonging to countries who have already ratified the MVT and is In Force, as no authorisation is needed from the copyright holder. In case the AEs (one or both) are from the non-signatory countries, the ABC Secretariat needs to obtain the necessary authorisation from the rights-holder for cross-border exchange of accessible books.

ABC has achieved some important milestones during the five years since its initiation. The following statistical table shows its growth in numbers.

**Table 3: ABC Statistics (2018-2019)**

<i>ABC Global Book Service Indicators</i>	<i>January 2014</i>	<i>September 2018 (all Numbers are Cumulative)</i>	<i>September 2019 (All Numbers are Cumulative)</i>	<i>Increase in Percentage (%)</i>	
				<i>Since Jan. 2014</i>	<i>Since Sept. 2018</i>
No. of signatory authorised entities (AEs) participating in the ABC Global Book Service	11	43	61	455%	42%
No. of titles in the ABC Global Book Service catalogue	224,500	365,600	540,000	141%	48%
No. of titles available for cross-border exchange under the MVT (No authorisation needed from the copyright owner)	N/A	35,800	425,000	N/A	1087%
No. of downloaded titles by participating AEs	200	13,000	22,000	10900%	72%
No. of titles where rights were obtained from the copyright owner for cross-border exchange	1,270	26,100	28,500	2144%	9%
No. of loans of ABC titles to print disabled individuals through participating AEs	16,000 (Dec. 2014)	233,000 (Aug. 31, 2018)	293,000 (Aug. 31, 2019)	1731%	26%
No. of educational titles that were produced in national languages in accessible formats through training and technical assistance provided by ABC	N/A	5000	9300	N/A	86%
<i>Inclusive Publishing Indicators</i>	<i>January 2014</i>	<i>September 2018 (All Numbers are Cumulative)</i>	<i>September 2019 (All Numbers are Cumulative)</i>	<i>Increase in Percentage (%)</i>	
				<i>Since Jan. 2014</i>	<i>Since Sept. 2018</i>
No. of signatories – ABC Charter for Accessible Publishing	N/A	16	100	N/A	525%

Source: Fifth Annual Report on ABC/WIPO, Fifty-First (24<sup>th</sup> Ordinary) Session/Geneva, Sept. 30 to Oct. 9, 2019.

### **IFLA Movement in Marrakesh VIP Treaty (MVT)**

Eighty countries have joined Marrakesh since its establishment in Morocco on 28 June 2013, including the European Union as an individual bloc. Its success would allow a growing number of exchanges of accessible format books between countries, allowing significant progress towards the goals of the Treaty. However, if no steps are taken to amend domestic legislation, ratification may be meaningless. IFLA has a firm belief that the right to access and use the knowledge artifacts should come to the print-disabled or libraries supporting them. For this reason, to enforce and spread the treaty more strongly

around the world, the International Federation of Library Associations and Institutions (IFLA) takes certain steps for the benefit of the visually impaired people. Some of its notable movements (Coates, Felsmann & Hackett, 2018) are discussed below:

- IFLA, along with partner organisations, continues to articulate or argue for effective national implementation.
- IFLA generates regular Marrakesh Monitoring Reports to investigate the status of compliance with the MVT (making and sharing of accessible format works) by the respective governments, as articulated in their national legislation fully enables making and sharing of accessible format works.

- IFLA, along with the partner organisations, including EIFL (Electronic Information for Libraries), the World Blind Union (WBU), the University of Toronto, and the Canadian Research Library Association (CRLA), has published a guide, ‘Getting Started’, for librarians willing to adopt the Treaty (EIFL, 2015).
- EIFL has published a highly insightful library guide to Marrakesh.
- WBU actively advocates MVT for its global adoption.
- IFLA has developed a short toolkit for libraries to address the perceived challenges for enabling information access to the deprived.
- More recently, IFLA has also begun to issue monitoring reports on how the Member States of the United Nations are incorporating the Marrakesh Treaty into their national legislation, rendering the Treaty a fact.

On the Fifty-First (24<sup>th</sup> Ordinary) Session of WIPO (Geneva, Sept. 30 to Oct. 9, 2019), the representative of the IFLA commended all countries that had ratified or acceded to the Treaty, that not only underlined the appetite for that particular WIPO instrument, which helped to deliver public goods and overcome market failure, but also made clear WIPO’s unique power through its normative work to provide the legal clarity and impetus necessary for change and to enable cross-border exchanges. IFLA observed that a crushing majority of those countries that were passing legislation were not taking advantage of certain provisions in Articles 4.4 and 4.5 of the Treaty that were against its spirit, and were extending its benefits to people with other disabilities as much as possible. IFLA thus commended the work of the ABC and its Global Book Service, which was setting the pace for broader efforts to promote the sharing of books for the benefit of people with print disabilities across borders (WIPO, 2018).

**Table 4: Marrakesh Treaty Implementation (IFLA Monitoring Report) (August, 2019 Update)**

Increase in Percentage (%)	Status	Can Libraries Use MVT Rights Without					Can Libraries Use Exceptions to Serve People with Dyslexia?	Are People with Other Disabilities Included?
		Paying Remuneration for Books?	Paying Remuneration for Audio Books?	Needing to Check on Commercial Availability?	A Registration Obligation?	Additional Record Keeping Requirements?		
Australia	Ratified, national law amended	Yes	Yes	Yes*	Yes	Yes	Yes	Yes
France	EU ratified, national law adopted	Yes	Yes	Yes	No	No	Yes	Yes
India	Ratified, no national reform	No	No	Unclear	No**	Unclear	Yes	Yes
Russia	Ratified, national law amended	Yes***	Yes***	Unclear (Yes)	No	Unclear	Unclear (No)	No
United Kingdom	EU ratified, national law adopted	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United States	Ratified, national law amended	Yes	Yes	Yes	Yes	Yes	Yes	No

\*Yes, but with incentives provided to do so.

\*\*The beneficiary or authorised entity must apply to the copyright board for the right to do this.

\*\*\*Yes, but lending only, not distribution.

## Marrakesh VIP Treaty (MVT) in India

“Every country should have the widest possible copyright exception permitting the conversion of books and other cultural material into accessible formats for persons with disabilities” (Nirmita Narasimhan, Centre for Internet and Society, India).

Every year, just 1-7 per cent of the millions of books released worldwide are made available to the world’s 285 million blind and visually impaired people, 90 per cent of whom live in low-income environments in developing countries. According to the World Health Organization (WHO), India has more than 63 million visually impaired people, some eight million of whom are blind.

**Table 5: India & MVT**

	<i>Signature</i>	<i>Instrument</i>	<i>Effective</i>
India	30-April-2014	Ratification: June 24, 2014	30-September-2016

Source: WIPO-Administered Treaties/MVT/Contracting Parties.

The ratification of at least 20 states was required for the treaty to enter into effect, which was achieved on 30 June 2016 with the 20<sup>th</sup> ratification. Thus, MVT came into force on 30 September 2016. The first country to ratify the Marrakesh Treaty was India (PIB, 2014) when it signed the Treaty on 30 June 2014, and handed over the Instrument of Ratification to the then Director-General of WIPO at a ceremony held at WIPO Headquarters during the 28<sup>th</sup> Session of the SCCR (Standing Committee on Copyright and Related Rights). The ratification will enable Indian Authorised Entities (IAEs) to import AFCs without any legal barrier. More benefit can be relinquished as imported copies can be translated into an accessible format and the same can be exported in Indian languages. The IAEs include organisations working for the benefit of VIPs and the blind, like educational institutions and libraries. Till 1<sup>st</sup> January 2020, 80 WIPO member states have signed the MVT and 88 countries have ratified it.

## Marrakesh Treaty in Harmony with Indian Copyright Act

On May 17, 2012, the Indian Parliament introduced a rather liberal disability-friendly copyright exception. In the Indian Copyright (Amendment) Act, 2012, there

are two sections, namely §52(1)(zb) and §31(B), which enabled the MVT enforcement in India. More specifically, §52(1)(zb) was introduced to permit the conversion of a copyrighted work to any accessible format, so long as the converter operated on a non-profit basis and ensured that the converted formats were only accessed by persons with disabilities. In case the conversion and distribution were done for profit, the concerned entity would have to apply for a compulsory license under §31(B) (Zero Project, MHRD, n.d.).

The relevant exception envisaging provision is reproduced as under (Indian Copyright Amendment Act, 2012):

### Fair Use Rights for the Disabled/Exempts from Infringement [§52(1)(zb)]

“The adaptation, reproduction, issue of copies or communication to the public of any work in any accessible format, by

- any person to facilitate persons with disability access to works including sharing with any person with disability of such accessible format for private or personal use, educational purpose or research; or
- any organisation working for the benefit of the persons with disabilities in case the normal format prevents the enjoyment of such works by such persons:

*“Provided that the copies of the works in such accessible format are made available to the persons with disabilities on a non-profit basis but to recover only the cost of production: Provided further that the organisation shall ensure that the copies of works in such accessible format are used by persons with disabilities and takes reasonable steps to prevent its entry into ordinary channels of business.”*

### Compulsory Licence for the Benefit of Disabled [§31(B)]

- Any person working for the benefit of persons with disability on a profit basis or for business may apply to the Copyright Board, in such form and manner and accompanied by such fee as may be prescribed, for a compulsory licence to publish any work in which copyright subsists for the benefit of such persons, in a case to which clause (zb) of sub-section (i) of section 52 does not apply and the Copyright



Board shall dispose of such application as expeditiously as possible and endeavour shall be made to dispose of such application within a period of two months from the date of receipt of the application.

- The Copyright Board may, on receipt of an application under sub-section (i), inquire, or direct such inquiry as it considers necessary to establish the credentials of the applicant and satisfy itself that the application has been made in good faith.
- If the Copyright Board is satisfied, after giving to the owners of rights in the work a reasonable opportunity of being heard and after holding such inquiry as it may deem necessary, that a compulsory licence needs to be issued to make the work available to the disabled, it may direct the Registrar of Copyrights to grant to the applicant such a licence to publish the work.
- Every compulsory licence issued under this section shall specify the means and format of publication, the period during which the compulsory licence may be exercised and, in the case of issue of copies, the number of copies that may be issued including the rate or royalty:

*“Provided that where the Copyright Board has issued such a compulsory licence it may, on a further application and after giving reasonable opportunity to the owners of rights, extend the period of such compulsory licence and allow the issue of more copies as it may deem fit.”*

In short, the amendment envisaged three broad kinds of activities:

- Conversions by the disabled person for his/her own use and for sharing with others in the community;
- Conversions by third parties (individuals or organisations) working on behalf of the print-disabled on a non-profit basis;
- Conversions by ‘for profit’ organisations under a certain and compulsory license issued by the Government or Registrar of Copyrights of the country.

## DAISY Forum of India

DAISY Forum of India (DFI) is a consortium of Indian non-profit organisations engaged in producing books

and reading materials in accessible formats for people who are unable to read the standard print. India’s DAISY platform envisages a world in which print-disabled people have fair access to information and expertise in their own language without delay or additional expense (DAISY India, (n.d.)). Indian DAISY Forum member organisations create and manage Electronic Talking Books, Braille, or e-text libraries. Books created in any of the preferred formats and in any part of the country, e.g. DAISY Audio, eBook, Braille, and Large Print are available to the common people. The DAISY Forum of India also integrated with ‘Bookshare’, the world’s largest online library for the print disabled, where one user can get access to the collection of both Indian and International publications.

Sugamya Pustakalaya is a collaborative effort of the Daisy Forum of India, TCS (Tata Consultancy Service), the NIEPVD (National Institute for Empowerment of Persons with Visual Disabilities), and the Government of India to end the book famine faced by people with print disabilities. The online page of Sugamya Pustakalaya is created and supported by Access Infinity, a platform of Tata Consultancy Services, which gives it an easy-to-navigate search interface.

**Table 6: Collection Statistics of Sugamya Pustakalaya**

Total number of books available for download	345295
Total books in all libraries in Daisy India Library	16395
Total formats in all libraries in Daisy India Library	7
Total languages in all libraries in Daisy India Library	16

Source: DFI/Library/Sugamya Pustakalaya.

The National Mission on Libraries (NML), which has been set up by the Ministry of Culture, Government of India, on 4<sup>th</sup> May, 2012, in pursuance of the National Knowledge Commission (NKC), recommends sustained attention for the development of the Libraries and Information Science Sector; it also recommends screen reader access to its website in compliance with the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0 level AA for the visually impaired or print

disabled persons. Further, it makes people aware of the various types of screen readers, both commercial (like JAWS) and free ones (like NVDA), with their respective external links (NML, 2014).

## Libraries and the Marrakesh VIP Treaty

The World Blind Union (WBU) was the first organisation at the global level that submitted the draft of the MVT treaty to WIPO. IFLA and library-centric organisations played a significant role in the adoption of the Treaty (Sutori, n.d.). The member states of the WIPO obtained feedback and suggestions regarding the provisions of the Treaty from the stakeholders, including associations

working for the social benefits of the visually-impaired, as well as library associations. Library professionals are expected to contribute significantly towards the realisation of MVT by ensuring ways to maximise the benefits of the Treaty. In this context, it can be said that libraries can play a vital role in addressing the issues and challenges of the global Book Famine for empowering people with print disabilities.

The Marrakesh Treaty supports library services in a number of ways. Once a country implements the MVT into their national copyright law, it transforms library services for people with print disabilities. The following are some notable implications where the MVT treaty helped the libraries serve people with print disabilities.

**Table 7: Implications of MVT Treaty in Libraries**

Sr. No.	Areas	Scope & Status	Applicable On	Impact
1.	Libraries as Authorised Entities (AEs)	Not-for-profit or govt.-recognised, for-profit entity, serving the print-disabled	Entitled to enjoy the privileges and rights as per the provisions in the MVT without permission from the copyright-holders & publishers	Enable them to serve patrons with a print disability successfully
2.	Legal Restriction	None	Creation and Dissemination of AFCs with rights to: produce supply import and export (cross-border) store catalogue the work	Enhanced availability, by direct supply, of the reading material for print-disabled readers or to someone acting on their behalf, such as a caregiver; immediate realisation
3.	Resource Sharing	Local, regional, and national, as well as international level	Better coordination in the production of works. Supply/Receive AFCs from: – another library – or institution in the country or – in another country signatory to the MVT (Article 6)	Aims to reduce duplication of time, effort, and valuable resources in conversion of content multiple times by different CEs
4.	Obligations	None	To provide AFCs	Right to implement the MVT provisions as mentioned in 2 (above), but not bound
5.	Published as well as Unpublished Works	Digital repositories and pre-print servers	Both Gold & Green Open Access (OA)	Expanding the benefits of scholarly publications, often otherwise paid, through OA to the print-disabled engaged in higher education and research

Sr. No.	Areas	Scope & Status	Applicable On	Impact
6.	Audio-visual Works	Audio-visual (a/v) works such as films are NOT covered Textual works embedded in a/v works, such as an educational multimedia DVD, are COVERED		
7.	Recommendations	A library can produce an accessible format copy of a work (AFCs) Library guidelines should include best practices for determining beneficiaries' eligibility Proper care procedures for producing and distributing AFCs Prevent unauthorised use		

## Web Content Accessibility Guidelines (WCAG)

The Web Content Accessibility Guidelines (WCAG) is an internationally recognised standard developed by the World Wide Web Consortium (W3C). The WCAG standard establishes guidelines for making the Web content more accessible to individuals with impairments. Visual, auditory, physical, oral, cognitive, language, learning, and neurological disorders all fall under the umbrella of accessibility. Even though these standards cover a wide range of topics, they are unable to meet the needs of persons with a wide range of disabilities, degrees, and combinations of disabilities. These standards also make Web material more useable for older people with changing abilities as a result of ageing, and they frequently increase usability for all users.

The WCAG standard specifies how mainstream websites (Internet and Intranet) and other digital content, such as electronic documents, mobile interfaces, and related Web technologies, should behave to make them accessible to individuals with disabilities. It accomplishes this by establishing requirements that make interfaces and their content perceivable, operable, understandable, and robust. Web and digital content designers, developers, and testers are the major target audience for this standard. Having the requirements defined allows a secondary target audience, public procurement policymakers, to reference these standards in their activities. Using these guidelines as a guide gives service providers and users a common vocabulary and understanding of what is considered "accessible".

On May 5, 1999, the World Wide Web Consortium (W3C) released WCAG 1.0. There were 14 criteria in total, ranging from the requirement for equivalent content to Web-based clarification and simplicity. There

were one to ten checkpoints for each guideline. WCAG 2.0 was released on December 11, 2008, and WCAG 2.1 was released on June 5, 2018. Content that complies with WCAG 2.1 is likewise compliant with WCAG 2.0. A website that complies with WCAG 2.1 should also comply with policies that reference WCAG 2.0. Existing standards include WCAG 2.0 and WCAG 2.1. WCAG 2.1 is not a replacement WCAG 2.0. The usage of the most recent version of WCAG is encouraged by the W3C.

### Universal Acceptance of WCAG

WCAG offers an actionable platform for open websites and apps to be developed or remediated. It is not abstract, but concrete and technical, and is accompanied by documentation that defines methods and techniques that are considered to pass or fail the checkpoint's minimum accessibility standards. WCAG is divided into four guiding principles that include perceivable, operable, understandable, and robust Web content.

Developed for content creators, developers of content authoring tools, accessibility testers, and developers of test tools, and anyone who wants to understand how digital experiences can be accessed, WCAG is used worldwide.

### Tools to Implement MVT Effectively: Software Solutions

To make published works accessible to the visually impaired/print disabled person is not the final step to implementing MVT properly; making them accessible in a format that is supportable for those people (visually impaired/print disabled) is the main challenge here. To do so, the best available solution is the Screen Reader Software Programs. Article 7 of MVT gives the provision for using screen-reading text-to-speech software and

ensures that the publishers provide some exceptions on the use of a digital padlock on a digital book and other electronic media, which inadvertently block legitimate access to the print disabled people.

“A screen reader is a technology that helps people who have difficulties seeing to access and interact with digital content, like websites or applications via audio or touch. The main users of screen readers are people who are blind or have very limited vision” (AbilityNet, Feb., 2019). Screen readers are useful software programs that also assist people who are visually impaired or blind in operating applications, drafting papers, sending emails, surfing the Web, and doing much more with a computer. There are many screen reader software available nowadays. Some of these are freely available and others require paid subscription. The functionalities of these software are more or less the same. Some of their general functions are discussed here:

- Read or spell a word.
- Read a line or full screen of text.
- Find a string of text on the screen.
- Announce the location of the computer’s cursor or focused item.
- Locate text displayed in a certain colour.

- Read pre-designated parts of the screen on demand
- Read highlighted text
- Identify the active choice in a menu
- Allow users to utilise the spell checker in a word processor or read the cells of a spreadsheet with a screen reader

There are different types of screen readers available now; based on the specific requirements and available infrastructure, one can choose the right one. The best choice for the user depends on:

- The type of device (computer and or mobile phone) he/she possess.
- The kind of browser he/she prefers. Many browser and screen reader combinations work better than others.
- The software he/she uses; while all screen reader users work with popular office apps, email and the Internet, if he/she needs a screen reader to deal with specific applications, he/she may be limited to one that can be programmed to fit well with it.

Some of the best screen readers (Everyday Sight, 2019), their functionality, supportive system, price, availability, and other details are provided in Table 8.

**Table 8: List of Best Screen Reader Software Programs (Free & Commercial)**

Name	Creator	Initiation	Supported Platform	Nature	Price
Job Access with Speech (JAWS)	Freedom Scientific	1995	Windows & DOS	Commercial	\$1000/one time (Home License) \$1200/one time (Professional License)
Dolphin Screen Reader	Dolphin Computer Access Ltd.	1986	Windows	Commercial	\$795/one time
Cobra		2006	Windows	Commercial	\$749 to \$849/one time
System Access	Serotek	2001	Windows	Commercial	\$895/full package \$39.95/month
ZoomText	Ai Squared	1991	Windows	Commercial	\$875/one time
VoiceOver	Apple Inc.	2005	Mac OS X, iPhone, iPad, iPods, and Apple TV	Free, Commercial	Free with an Apple product
NaturalReader	NaturalSoft Ltd.		Windows, Mac OS, Linux	Free, Commercial	Premium features available on, \$99.50, \$129.50, & \$199.50/one time



Name	Creator	Initiation	Supported Platform	Nature	Price
NonVisual Desktop Access (NVDA)	NonVisual Desktop Access Project	2006	Windows	Free & open source	N/A
TalkBack	Google	2009	Android	Free & open source	N/A
WebAnywhere	University of Washington	2008	Web	Free & open source	N/A
Ocra	The GNOME Project	2005	Linux, Unix	Free & open source	N/A
BRLTTY	The BRLTTY Team	1995	Linux/Unix, Windows console, DOS, Android	Free & open source	N/A
Text to Speech (TTS)	SpeakComputers.com	2006	Windows	Freeware	N/A

## NonVisual Desktop Access (NVDA) & NV Access

Concerned by the high cost of commercial screen readers, Michael began developing a free screen reader for use with computers running on Windows called NVDA (NonVisual Desktop Access) in April 2006. Later, James Teh, his school friend, also joined to help with this project. The main reason for briefly discussing about this screen reader in this paper is because the not-for-profit

organisation, NV Access, is founded by two fully blind men, to support the development of the NVDA screen reader. The main purpose of NV Access is to abolish the social and economic barriers of visually impaired/print disabled persons by developing free open-source assistive technologies for them, enabling and ensuring access to information. It aims to remove the cost barrier and raises awareness and promotes the importance of accessibility for the blind or vision impaired. It is also engaged in fundraising to support the various existing and future projects encompassed by the organisation.

**Table 9: NonVisual Desktop Access (NVDA): Specifications**

Creator	Michael Curran	
Initial Release	2006	
Programming Language	Python, C++	
System Requirements (for NV Access)	Operating System	Windows 7, Windows 8, Windows 8.1, Windows 10 (all 32-bit and 64-bit editions), and all Server Operating Systems starting from Windows Server 2008 R2
	Memory	256MB or more of RAM
	Processor speed	1.0ghz or above
License	GNU General Public License (Version 2)	
Type	Free & Open Source Software	
Availability (language)	55	
International acceptability	Used by people in more than 175 countries	
Website	www.nvaccess.org/	
Repository	github.com/nvaccess/nvda	

## Features

The following are some features (NV Access, 2018) which placed NVDA in a better position than other available screen readers:

- Support for popular apps like Web browsers, including Mozilla Firefox and Google Chrome, email, Internet chat applications, music players, and office programs, including Microsoft Word and Excel.
- Built-in speech synthesiser that supports more than

50 languages, plus support for many other third-party voices.

- Text formatting reports where available, such as font name and size, style, and spelling errors.
- Automatic text notification under the mouse and optional audible mouse location indication.
- Support for many refreshable braille displays, including Braille through braille displays with a braille keyboard.
- Ability to run completely without the need for installation from a USB flash drive or other portable media.
- Easy to use speaker installer.
- Translated into more than 50 languages.
- Support for modern Windows operating systems, both 32-bit and 64-bit editions (e.g. Windows 7, Windows 8, Windows 8.1, & Windows 10).
- Ability to run on Windows logon and other secure screens.
- Announcing controls and text when engaging with touch-screen motions.

NVDA also provides certification tests (NV Access, 2019) for the expert to test his knowledge using the NVDA screen reader in Microsoft Word. It is a great opportunity for the librarians and library professionals to gain expertise in NVDA, and help the blind and vision impaired user in the best possible way.

## Conclusion

The Utopian idea of building a knowledge society has to be all-inclusive, without any discrimination of individuals on account of their right to access, read, understand, and comprehend published knowledge tangibly without any struggle through the established modes of publishing. The realisation of the very idea of facilitating ‘Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled’ has been successfully accomplished through the Marrakesh VIP Treaty, a.k.a. the MVT, administered by WIPO (2013). MVT is a living example of a noble, humanistic, and societal upliftment of those who are marginalised in terms of their right to read and gain knowledge, as

they are incapacitated due to vision abnormalities, preventing them from holding and manipulating a book, which interferes with the effective reading of printed material. MVT mandates the Authorised Entities (AEs) (“recognised” by the government) located in Contracting Parties (CEs) to facilitate reproduction, dissemination, and availability of published works in accessible formats by means of a collection of restrictions and exceptions in their national copyright laws. At present, the ABC catalogue contains only bibliographical details. To make the retrieval more fruitful, it is now being automated with the facility to upload the actual digital files, minimising the role of human intervention for uploading the title requested by the patron, thus saving a significant amount of AEs’ time per transaction. This will reduce the delivery time of the requisite document to the beneficiary, bringing satisfaction and ease of use. ABC is planning to procure the necessary technical infrastructure for the automation process. Additionally, WIPO is looking forward to providing the beneficiaries a single-window federated search and discovery platform for wider access to the widest possible range of languages. ABC encourages the production of “born accessible” works by publishers, i.e. books that can be used from the start by both the sighted and the print disabled. A major focus remains on the EPUB3 standard for the production of digital publications, with the required accessibility features. Currently, there are 100 signatories to the *ABC Charter for Accessible Publishing* comprising of eight high-level principles pertaining to digital publications in accessible formats. ABC also organises the *ABC International Excellence Award for Accessible Publishing*.

ABC provides training and technical assistance in EPUB3, DAISY, and Braille (both electronic and paper-printed) formats in developing countries and LDCs. ABC has drafted syllabi for capacity-building regarding accessible publishing. WIPO has established an ABC fellowship programme seeking support for the library services as well as in other ABC activities. One of the targets of ABC, along with the IPA (International Publishers Association), is to increase the number of signatories (member nations) to the “*ABC Charter for Accessible Publishing*” (WIPO, 2018). The work of the ABC is consistent with the spirit of the Sustainable Development Goals (SDGs), and promotes several of them, supporting the work of the MVT in an admirable way.

## References

- AbilityNet. (2019, February). An introduction to screen readers. Retrieved December 23, 2021, from <https://abilitynet.org.uk/factsheets/introduction-screen-readers>
- Article 19 of the Universal Declaration of Human Rights. (n.d.). Retrieved December 28, 2021, from <https://www.humanrights.com/course/lesson/articles-19-25/read-article-19.html>
- Coates, J., Felsmann, C., & Hackett, T. (2018, March). Getting started, implementing the Marrakesh treaty for persons with print disabilities a practical guide for librarians. Retrieved from [https://www.ifla.org/files/assets/hq/topics/exceptions-limitations/getting\\_started\\_faq\\_marrakesh\\_treaty\\_a\\_practical\\_guide\\_for\\_librarians\\_2018\\_en.pdf](https://www.ifla.org/files/assets/hq/topics/exceptions-limitations/getting_started_faq_marrakesh_treaty_a_practical_guide_for_librarians_2018_en.pdf)
- DAISY Forum of India. (n.d.). About us. Retrieved December 28, 2021, from <https://daisyindia.org/home/about-us/>
- Diver, L., & Schafer, B. (2017, August 31). Exceptions for disability. Retrieved December 20, 2021, from <https://www.copyrightuser.org/understand/exceptions/disability/>
- EIFL. (2015, October). The Marrakesh treaty: An EIFL guide for libraries. Retrieved from [https://www.eifl.net/system/files/resources/201710/marrakesh\\_lowres\\_1.pdf](https://www.eifl.net/system/files/resources/201710/marrakesh_lowres_1.pdf)
- Everyday Sight. (2019, July 15). 10 best screen readers for blind people (5 of these are FREE!). Retrieved December 23, 2021, from <https://www.everyday-sight.com/best-screen-readers-for-blind/>
- Home|Sugamya Pustakalaya. (n.d.). Retrieved December 28, 2021, from <https://library.daisyindia.org/NALP/welcomeLink.action>
- IFLA. (2019, August). Marrakesh treaty implementation. Retrieved December 20, 2021, from [https://www.ifla.org/files/assets/hq/topics/exceptions-limitations/documents/marrakesh\\_update\\_october\\_2019.pdf](https://www.ifla.org/files/assets/hq/topics/exceptions-limitations/documents/marrakesh_update_october_2019.pdf)
- IFLA. (2019, January 21). The Treaty of Marrakesh. Retrieved December 22, 2021, from <https://www.ifla.org/node/10916>
- Ministry of Human Resource Development, Government of India. (n.d.). India: Copyright exception for accessible formats. Retrieved December 21, 2021, from <https://zeroproject.org/policy/india/>
- Ministry of Law and Justice, Government of India. (2012, June 8). The copyright amendment act, 2012 No. 27 of 2012. Retrieved from [http://copyright.gov.in/Documents/CRACT\\_AMNDMNT\\_2012.pdf](http://copyright.gov.in/Documents/CRACT_AMNDMNT_2012.pdf)
- National Mission on Libraries, Ministry of Culture, Government of India. (2014, January 15). Screen reader access. Retrieved December 24, 2021, from <http://www.nmlindia.nic.in/screenreaderaccess>
- Nayak, S. (2013, September 12). Historic Marrakesh treaty: For visually impaired/print disabled persons – Intellectual property – India. Retrieved from <http://www.mondaq.com/india/x/262396/Copyright/Historic+Marrakesh+Treaty+For+Visually+Impaired>
- NV Access. (2019, July 5). About NV access. Retrieved December 24, 2021, from <https://www.nvaccess.org/about-nv-access/>
- NV Access. (2018, July 25). About NVDA. Retrieved December 24, 2021, from <https://www.nvaccess.org/about-nvda/>
- NV Access. (2019, January 14). NV access certification system. Retrieved December 24, 2021, from <https://certification.nvaccess.org/>
- Press Information Bureau, Ministry of Human Resource Development, Government of India. (2014, July 2). India becomes the first country to ratify the Marrakesh treaty. Retrieved from <https://pib.gov.in/newsite/printrelease.aspx?relid=106012>
- Rishika. (2015, January 12). Disability exceptions in copyright legislations – The centre for internet and society. Retrieved December 22, 2021, from <https://cis-india.org/accessibility/blog/disability-exceptions-in-copyright-legislations>
- Selvam & Selvam. (2016, March 7). Disability Exceptions in Copyright. Retrieved December 20, 2021, from <https://selvams.com/blog/disability-exceptions-copyright/>
- Sutori. (n.d.). Libraries and Marrakesh – A history of engagement. Retrieved December 22, 2021, from <https://www.sutori.com/story/libraries-and-marrakesh-a-history-of-engagement--3W5Tf1QA-fab4aBeHVDezRi3>
- The Accessible Books Consortium (ABC). (n.d.). Accessible publishing. Retrieved December 21, 2021, from <https://www.accessiblebooksconsortium.org/publishing/en/#epub3>
- United Nations. (2019, October 7). Universal declaration of human rights. Retrieved from <https://www.un.org/en/universal-declaration-human-rights/>
- WIPO. (2016). Main provisions and benefits of the Marrakesh treaty (2013). Retrieved from <https://>

[www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_marrakesh\\_flyer.pdf](https://www.wipo.int/edocs/pubdocs/en/wipo_pub_marrakesh_flyer.pdf)

WIPO. (2018, September 17). Marrakesh treaty to facilitate access to published works for persons who are blind, visually impaired or otherwise print disabled (MVT). Retrieved from [https://www.wipo.int/edocs/mdocs/govbody/en/mvt\\_a\\_3/mvt\\_a\\_3\\_inf\\_1\\_rev.pdf](https://www.wipo.int/edocs/mdocs/govbody/en/mvt_a_3/mvt_a_3_inf_1_rev.pdf)

WIPO. (2013). Summary of the Marrakesh treaty to facilitate access to published works for persons who are blind, visually impaired, or otherwise print disabled (MVT). Retrieved December 20, 2021, from

[https://www.wipo.int/treaties/en/ip/marrakesh/summary\\_marrakesh.html](https://www.wipo.int/treaties/en/ip/marrakesh/summary_marrakesh.html)

WIPO. (n.d.). WIPO-administered treaties: Marrakesh treaty to facilitate access to published works for persons who are blind, visually impaired or otherwise print disabled. Retrieved December 20, 2021, from [https://www.wipo.int/treaties/en/text.jsp?file\\_id=301016](https://www.wipo.int/treaties/en/text.jsp?file_id=301016)

WIPO. (2019, June 28). WIPO General Assembly, Fifty-First (24th Ordinary) Session Geneva, September 30 to October 9, 2019. Retrieved from [https://www.wipo.int/edocs/mdocs/govbody/en/wo\\_ga\\_51/wo\\_ga\\_51\\_9.pdf](https://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_51/wo_ga_51_9.pdf)