A Decade of Promoting Multilingualism in Cyberspace

About the Knowledge Societies Division of UNESCO

The initiatives of UNESCO on the promotion of multilingualism in cyberspace are undertaken by the Knowledge Societies Division, which is responsible for the realization of the concept of knowledge societies that are built on the key principles of inclusion, openness, diversity and pluralism. The Division also coordinates UNESCO's overall contribution to the follow-up to the World Summit on the Information Society (WSIS) outcomes and is in charge of the implementation of UNESCO's only normative instrument in this field - the "Recommendation concerning the Promotion and Use of Multilingualism and Access to Cyberspace" adopted by the General Conference in 2003.

Furthermore, this Division promotes access to information and knowledge using ICTs to enhance the quality of and access to education, build scientific knowledge and innovation, promote open access to scientific research, and empower local and marginalized communities. Significant efforts are mobilized to build capacities of key stakeholders, particularly teachers, to use ICTs effectively and acquire the indispensable for the 21st century competencies in Information, Media, Digital and ICT literacy competencies.

The Knowledge Societies Division is also actively involved in the implementation of the United Nations Convention on the Rights of Persons with Disabilities (2006), with regard to the improved access to information and knowledge for persons with disabilities using Information and Communication Technologies.

The Secretariat for the intergovernmental Information for All Programme (IFAP), that assists Member States in elaborating national information policy frameworks and implementing activities in its six priority areas, namely: information accessibility, information ethics, information for development, information preservation, information literacy and the promotion of multilingualism, is also hosted by this Division.

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Introduction

In today's world, information and knowledge are increasingly key determinants of empowerment, wealth creation, social transformation and human development. Languages allow the transmission of knowledge from one generation to the next and are a strong force in disseminating cultures and traditions. Yet the world's languages are disappearing at an alarming rate. There is evidence ascertaining that global linguistic diversity has long been in decline but, according to some estimates, half of all languages spoken currently will have disappeared by the year 2050.

Nowadays, the Internet is considered as a primary way of sharing information and knowledge. But while, in principle, it is open to all languages when certain technical conditions are met and the necessary human and financial resources are in place, in reality this is far from being the case. A large number of languages are still not present on the Internet. It is estimated that out of the world's approximately 6,000 languages, just 10 of them make up 84.3 per cent of people using the Internet, with English and Chinese the dominant languages, accounting for 52 per cent of Internet users worldwide.

It is clear that being able to use one's own language on the Internet determines the extent to which one can participate fully in the emerging knowledge societies. It follows therefore that this vast linguistic divide will only exacerbate the existing digital and knowledge divides. So it is obvious that everyone should have access to a multilingual Internet. Nations, communities and individuals without universal access to the Internet and its resources would be increasingly marginalized with limited access to information and knowledge, which are critical elements in support of sustainable development. They should also have access to quality content created not only at an international or regional level, but also locally. Speakers of non-dominant languages need to be able to express themselves in culturally meaningful ways on the Internet in their mother tongue. The Internet should be a multilingual and culturally diverse place where every culture and language has its own space.

UNESCO has always considered that cultural diversity and multilingualism have a key role to play in fostering pluralistic, equitable, open and inclusive knowledge societies. It therefore encourages its Member States to formulate comprehensive language-related policies, allocate resources and develop and use appropriate tools in order to promote and facilitate linguistic diversity and multilingualism, including on the Internet and in the media. In this regard, the Organisation supports the inclusion of new languages in the digital world, the creation and dissemination of content in local languages on the Internet and mass communication channels, and encourages multilingual access to digital resources in cyberspace. The Internet holds an enormous potential for development, and UNESCO particularly emphasises its crucial role in increasing the free flow of information and ideas throughout the world.

This document is published as UNESCO celebrated a decade since the adoption of the *Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace*. It aims to highlight a diversity of conceptual issues that influence the promotion of a multilingual Internet and to provide some concrete examples of UNESCO's salient activities in this field.

Relevant international normative instruments and key milestones

Over the past decade, the issue of languages in danger of disappearing has gained greater awareness among the scientific community, international organisations and increasingly, the public. There has also been a growing interest in the role that a multilingual Internet can play in the preservation, revitalization and promotion of languages. This has resulted in the development and endorsement of several international normative instruments by UNESCO and other organizations.

Year	Normative instruments and other milestones	Notes
1948	The Universal Declaration of Human Rights (UDHR)	UDHR Article 2 has been modified to include language and now states that: "Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion." In addition, communicating in one's home language is central to the right to freedom of expression and access to information, as set out in Article 19.
1960	UNESCO Convention and Recommendation against Discrimination in Education	Article 5 of the normative instrument specifically recognizes "the right of the members of national minorities to carry own educational activities, including … the use or the teaching of their own language".
1976	UNESCO Recommendation on the Development of Adult Education	Article 22 states that "with regard to ethnic minorities, adult education activities should enable them to express themselves freely, educate themselves and their children in their mother tongues, develop their own cultures and learn languages other than their mother tongues".
1978	UNESCO Declaration on Race and Racial Prejudice	Article 9 specifically recognizes that "steps should be taken to make it possible for their children to be taught their mother tongue".
1989	International Labour Organization (ILO) Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries	The ILO convention affirms the rights of minorities to read and write in their own indigenous language or in the language most commonly used by the group to which they belong (Article 28).
1990	International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families	Articles 1, 7, 18, 16, 22 and 45 aim to ensure the rights of all migrant workers and members of their families to receive education and information services in language they understand.
1992	United Nations Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities	Adopted by the United Nations in 1992, the Declaration aims to ensure the rights of people belonging to minorities without distinction as to race, sex, language or religion (Article 4).
	European Charter for Regional or Minority Languages	The Charter aims to protect and promote minority languages and to maintain and develop Europe's cultural traditions and heritage. It is supervised by the Council of Europe and has been ratified by 16 countries.
1994	The Salamanca Statement and Framework for Action on Special Needs Education	Adopted by UNESCO, the document recognizes the importance of sign language as the medium of communication among people with disabilities (Article 21).
1995	UNESCO Declaration and Integrated Framework of Action on Education for Peace, Human Rights and Democracy	Article 29 calls to respect the educational rights of persons belonging to national or ethnic, religious and linguistic minorities.
1996	Universal Declaration of Linguistic Rights	Adopted in 1996, the Declaration serves as a point of enrichment for other conventions.
1999	International Mother Language Day	Proclaimed by UNESCO in 1999, it has been celebrated on 21 February every year since 2000, to promote linguistic and cultural diversity and multilingualism.
2001	Universal Declaration on Cultural Diversity	Adopted by UNESCO in 2001, the Declaration provides the framework for a range of actions that promote cultural diversity and the preservation of endangered languages.
2003	UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage	The Convention, adopted by UNESCO in 2003, aims at safeguarding intangible heritage such as oral traditions, performing arts, social practices, rituals and festive events, for example.
	UNESCO Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace	
2006	United Nations Convention on the Rights of Persons with Disabilities	Articles 21 and 30 recognize and support specific cultural and linguistic identity, including sign languages and deaf culture.
2007	United Nations Declaration on the Rights of Indigenous People	The Declaration sets out the individual and collective rights of indigenous peoples, as well as their rights to culture, identity, language, employment, health, education and other issues.
2007	International Year of Languages	UN General Assembly proclaimed 2008 the International Year of Languages

Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace

On 15 October 2003, Member States at UNESCO's General Conference, recognizing the importance of promoting multilingualism and equitable access to information and knowledge, especially in the public domain, and reiterating its conviction that the Organisation should have a leading role in encouraging access to information for all, multilingualism and cultural diversity on the global information networks, unanimously adopted the *Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace*.

Through this normative instrument, UNESCO encourages Member States to support equitable and affordable access to information and to promote the development of multilingual knowledge societies. Member States are requested to consider undertaking actions in four areas, to facilitate the implementation of this Recommendation:

• Development of multilingual content and systems

• Facilitation of access to networks and systems

• Development of public domain content

• Reaffirming the equitable balance between the interests of rights-holders and public interest.

Policies and tools

Language policy is seen as a powerful political instrument for promoting the coexistence of different languages. International normative instruments such as conventions, treaties or recommendations can be reinforced at national level if comprehensive language policies are formulated, concrete measures are introduced, resources are allocated, and effective language tools are provided and used by all stakeholders concerned.

View of the building, Alexander Calder mobile, UNESCO Headquarters.
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Case study 1: Debate on the formulation of comprehensive language policies

In order to promote and assist in the design of language policies, UNESCO initiated a debate between a number of international experts working in the fields of linguistics, anthropology, education, media and the Internet at its headquarters in Paris, France from 30 May to 1 June 2011. The main objective of the meeting, entitled "Towards UNESCO Guidelines on Language Policies: A Tool for Language Assessment and Planning", was to discuss the development of a tool, based on UNESCO's Language Vitality and Endangerment Methodology (LVE), that could be used to assess the status quo of a language in a local or national context.

Case study 2: Guidelines for Terminology Policies

Terminology planning has come to the fore across the world at national, regional, language community, local, institutional and organisational levels. It is also important in various professional fields such as chemistry, biology, physics and medicine, for example, as well as for standardization and harmonization in industry and elsewhere. A terminology policy or strategy, especially when conceived and implemented at national level, needs to take into account highly complex demographic, cultural, ethno-linguistic, geo-linguistic and socio-psychological factors. The guidelines, prepared by UNESCO in cooperation with the International Information Centre for Terminology (Infoterm), are aimed at decision makers in various user communities who formulate policies on terminology issues.

Case study 3: Development of Standards for Ethiopic Script

The development of a standard in a national script for use by communities is seen as a precondition for content development in local languages. In order to tackle this issue, a workshop on the standardization, development and dissemination of the Ethiopic script, used to write Amharic, the official working language of Ethiopia, was held in Addis Ababa in 2003 in collaboration with the United Nations Economic Commission for Africa (UNECA).

Case study 4: Digital Library Software in Russian and Kazakh

For local content to be managed and disseminated in a systematic manner, national partners need to be supplied with appropriate software tools that help to build and distribute digital information, particularly digital library collections, in various languages. Greenstone, an open-source software produced by UNESCO in cooperation with the University of Waikato and the Human Info NGO, provides a new way of organising information and publishing it on the Internet or on CD-ROM. Russian and Kazakh versions are being used for capacity building by libraries and archives in Central Asia to create their own electronic collections.

Case study 5: Revival of traditional Mongolian script through e-tools

The 800-year-old Mongolian script is an essential part of the country's cultural heritage. In a project supported by UNESCO, the National University of Mongolia worked with the Mongolian University of Science and Technology to develop e-tools for the text processing of traditional Mongolian script. A database was developed which consists of 55,000 words in traditional Mongolian script and Cyrillic Mongolian writing. Together with spellcheck software for the script, the team finalised several digitized types of traditional script and genuine UNICODE-compatible open-type fonts.

Case study 6: Development of Internet Governance Glossary

The terminology used in the field of Internet Governance is constantly evolving, changing and being updated. In order to effectively participate in international multi-stakeholder processes, national representatives need to understand and be kept up-to-date with the latest terms. UNESCO, together with the Internet Corporation for Assigned Names and Numbers (ICANN) and the International Information Centre for Terminology (Infoterm), has initiated the development of a glossary of Internet Governance terms for Arabic speakers.

Case study 7: NET.LANG: Towards the Multilingual Cyberspace

A major research project by a number of leading experts from the World Network for Linguistic Diversity (Maaya), Organisation Internationale de la Francophonie, Latin Union, African Network for Localization and the International Development Research Centre, resulted in the publication of *NET.LANG: Towards the Multilingual Cyberspace*.   It is an educational, political and practical guide to policy and practice in the area of multilingualism in cyberspace and provides suggestions for the creation of a cyber-presence that is open, participatory, inclusive and equitable. UNESCO provided support to the authors of the publication to carry out research addressing the key political, economic, cultural and social life aspects of communities confronted by the growth of cyberspace.

Capacity building

Over the last decade, UNESCO has initiated a
number of capacity building initiatives with an aim
to strengthening national and regional institutional
capacities to foster the implementation of language
policies, train key players on the technical applications
for language promotion, produce self-learning tools
and training manuals, promote information sharing
and exchange of good practices and South-South and
North-South cooperation.

Sayeda Akhtar, a 21-year-old Bangladeshi woman known as a
Tattahakallayani or Info Lady, shows a 15-minute video on a laptop
to a group of women at a weekly meeting in Saghata, a remote
impoverished farming village in Netrokuna district, northeast of Dhaka,
Bangladesh.

© 2011 A.M. Ahad, Courtesy of Photoshare

Case study 1: Voice of the Aiyl Village

Voice of Aiyl mobile android application, launched in Kyrgyzstan, can be used for reading articles, listening to audio and watching video clips published by community multimedia centres. The app delivers the voice of rural women, youth and children, in podcast form to the relevant decision makers in four languages, Kyrgyz, Russian, Uzbek and English. Villagers can also use the application as a pocket digital radio by downloading podcasts on their smartphones, significantly increasing their access to information. Voice of Aiyl aims to increase access to public services, particularly for vulnerable groups such as women, youth and children, in 30 rural municipalities in Kyrgyzstan. The project was implemented by UNESCO in close cooperation with UNDP, UNICEF and UN Women.

Case study 2: Local language computing for community media centres in Nepal

Research has shown that a lack of English language skills is one of the biggest hurdles in the access to and use of information communication technologies (ICTs) at UNESCO-supported community multimedia centres (CMCs) in Nepal. Without local language alternatives, rural and marginalized people who do not understand English and other popular languages on the Internet will remain isolated from new information, education and knowledge resources. As part of efforts to bridge this language gap, several trainers and volunteers from the three CMCs were trained on the application and installation of Nepalinux, a local language open-source operating system.

Case study 3: Translating training manuals into national languages

Thapar University in Patiala, India, in collaboration with the Department of Scientific and Industrial Research (DSIR), the Government of India and UNESCO's office in New Delhi, published a WINISIS Software Training Manual in Hindi. It covers all aspects of WINISIS, including installation of software, creation of a database, database operations, customization of search interfaces and display formatting language. It also looks at advanced features, such as hyper-linking, web interfacing, full-text document processing and automation of libraries. The manual is aimed at library professionals working in academic, special and public libraries as well as students of library science courses. But it will also be helpful to small organisations that are building digital archives at local library or on CD-ROM. It is particularly useful in the South Asian region where the availability of training material in local languages is crucial for providing public information services using free and open-source software (FOSS).

Case study 4: Role of media and technologies in disseminating and preserving languages and linguistic diversity

The second "Global Seminar on Linguistic Diversity, Globalisation and Development", which took place in Brazil in December 2009, looked at the role that the media and new technologies can play in disseminating and preserving languages and linguistic diversity. Backed by UNESCO and other international bodies leading efforts to promote and enhance the status of linguistic diversity, experts at the seminar called for more languages to be used. Participants included India's public television network, BBC World Service, ARTE TV, Brazil's Globo media conglomerate and Televisió de Catalunya, Catalonia's public broadcasting network.

The promotion of multilingual local content on the Internet

The creation of local content and its distribution through both local and global Internet infrastructures is an important aspect of inclusive knowledge societies. This means having the capability not just to acquire information, including multilingual local content, but also to transform it into knowledge and understanding thereby empowering individuals to increase their livelihoods and contribute to the social and economic development of their society.

Case study 1: Research on the relationships between local content, Internet development and access prices

In order to better understand the creation and preservation of cultural heritage in relation to the implications and relationships of the Internet and ICTs, policymakers need to be supplied with evidence-based research results. In 2011, UNESCO, the Organisation for Economic Cooperation and Development (OECD) and The Internet Society (ISOC) undertook a study on the economic aspects of local content creation and Internet infrastructure. It considered whether the development of local content and infrastructure had an impact on the cost for local users of accessing the Internet for local users. It also looked at the enabling environment for sustainable, broad-based and robust local content industries. The research confirmed that local content, Internet infrastructure and access prices are interrelated. Some concrete recommendations were formulated for policymakers in that respect.

Case study 2: Access to public domain content: launch of municipal website in Casablanca, Morocco

One aspect of UNESCO's *Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace*, is the importance of promoting and disseminating public domain information, including that of the government, which contributes positively to economic and social development. In line with this, UNESCO, together with the Islamic Educational, Scientific and Cultural Organisation (ISESCO), supported the development of an information system for the municipality of Sidi El Bernoussi in Casablanca, Morocco, that was launched in October 2006. The main objective was to promote good governance and provide information that corresponds to the needs of all citizens, enabling them to make informed decisions on the issues that affect their everyday lives, their environment and their future.

Case study 3: Development and Dissemination of Video Programmes in Samoa

At least one hundred five-minute productions about current affairs, aspects of Samoan culture, history, environment, sports and religious life were developed for webcasting, with 80 per cent of them in Samoan languages. The project to develop programmes with local content was undertaken by UNESCO's Information for All Programme (IFAP) in collaboration with the Samoa National Commission and the Samoa Broadcasting Corporation.

Case study 4: New collection of the Majaliss Digital Library of classical Arabic literature

The fifth volume of the Majaliss Digital Library of classical Arabic literature, published in 2011, is freely available on the Internet and on CD-ROM. Majaliss, which means "place of sitting" in Arabic, makes hundreds of books accessible to readers and enhances the preservation of cultural heritage in the Arab world. Each CD contains a collection of digitized books and an application with features for reading and writing. Volume 5 showcases 40 works of classical Arabic literature that look at the role of women in Arab society throughout history. It also includes a library of 15 audiobooks read by professional actors.

Case study 5: UNESCO works with Discovery Communications and UN to Promote Languages

In celebration of International Mother Language Day on 21 February 2003, Discovery Communications (DCI), a global real-world media and entertainment company, in partnership with UNESCO and the UN Works Programme, highlighted some of the world's endangered languages with a broadcast to over 100 million viewers internationally on the Discovery Channel.

Case study 6: Recovering the oral memory of the Mindalae of Ecuador

The Kichwa Association of Audiovisual Producers (APAK) from Imbabura (Ecuador), with the support of UNESCO's office in Quito, concluded its ethno-historical research project with the making of a documentary about the significance of the handicraft trade in the identity of the Kichwa Otavalo people. These skilled artisans and producers of textiles have kept alive the traditions of the mindalas, who were specialist merchants in pre-Colombian civilizations in the Americas. The film, *Mindalae*, focuses on historical events around the travels and commerce of the communities of Peguche, Quinchuquí, Agato and La Compañía from 1910 to 2010. In it, Kichwa migrants tell their own story, that of a people who for the past forty years have travelled to many parts of the world resulting in the biggest migration flow from Ecuador. Entire families left the country in order to market local crafts in Belgium, Colombia, Indonesia, Italy, Japan, Spain, Venezuela and other countries.

Measuring linguistic diversity
on the Internet

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For almost a decade, UNESCO has provided substantial support to several initiatives and projects measuring linguistic diversity on the Internet. The Organisation believes there is a strong correlation between the presence of languages on the Internet and the diversity of languages within a country. For this reason, Member States have an important role to play by adopting appropriate language policies for the Internet, based on reliable data.

Case study 1: Research on measurement of linguistic diversity on the Internet

Two important studies were undertaken which culminated in the 2005 publication of *Measuring linguistic diversity on the Internet*, produced by Funredes, Latin Union, Indiana University and members of the Language Observatory Project and the Japan Science and Technology Agency, the 2009 publication of *Twelve years of measuring linguistic diversity in the Internet: balance and perspectives* by members of Funredes and Latin Union, and in 2007, *Securing a place for a language in cyberspace* by Laboratory on "Language, Languages and Cultures of Black Africa". The studies show that there are many technical challenges in calculating language diversity on the Internet, but they also offer a number of suggestions on how to address these difficulties, including proposing research methods for measuring linguistic diversity in cyberspace.

Case study 2: UNESCO to publish Handbook on Language Preservation and Documentation

Language Preservation and Documentation Handbook: South Asia version guides the reader through the process of collecting linguistic data about their language without the help of a linguist. It begins with a questionnaire covering background information on the language community, followed by advice on how to create a writing system and lists of key words. It then shows readers how to record and transcribe the stories which are an important part of their heritage, and ends with material on various aspects of the grammar of the language, through questionnaires and translation exercises. Oral recordings of the language are also made. For many ethnic groups, assimilation and other processes have led to the decline of their culture as well as their language and knowledge systems. The idea for the handbook was inspired by requests from several ethnic minorities in Nepal who were interested in self-documenting their languages for posterity.

Case study 3: Sharing experiences on measuring languages in cyberspace

A workshop organised by UNESCO, the Language Observatory Project (LOP), the World Network for Linguistic Diversity (WDLD) and supported by the Japan Science and Technology Agency (JST), provided a platform for sharing experiences on measuring languages in cyberspace. A comparative discussion was held on the different methodologies for measuring the presence and absence of languages in the digital world. Participants shared experiences and the findings of the web language surveys on Asia and Africa. They also discussed a possible roadmap to promote multilingualism and equal access in cyberspace and to demonstrate the usefulness and workability of the multi-stakeholder network.

Internationalized Domain Names

As the Internet continues to grow, so does its impact on social, political and economic life. This tremendous development has highlighted the need for some sort of oversight over the various aspects of its structural functioning and public multidimensional implications. Two important aspects of the Internet are the Domain Name system and Internet Protocol (IP) addressing. Considerable work has been undertaken by the Internet Corporation for Assigned Names and Numbers (ICANN) to develop the Internet Domain Name System through the introduction of Internationalized Domain Names (IDNs), which introduced Top-Level Domains (TLDs) in different scripts and enables Internet users to access domain names in their own language. IDNs which consist of characters from non-Latin scripts form a vital part of the ecosystem necessary to foster the growth of local languages online.

As UNESCO strongly advocates for a multilingual Internet as well as for promoting cultural diversity in cyberspace, it has worked closely with ICANN and the European Registry of Internet Domain Names (EURid), notably on issues relating to multilingual addressing and the internationalization of the Internet. UNESCO supports this development by ensuring that all Member States are fully aware of issues arising from the development of IDNs and that they are engaged in the associated policy debate.

Case study 1: Promoting the debate on Internationalized Domain Names

In January 2008, the Organisation obtained observer status on ICANN's Governmental Advisory Committee (GAC) and took part in the preparation of a report by the Internationalized Domain Names working group (IDNC WG). UNESCO has also offered help in providing linguistic expertise, raising awareness in countries that use non-Latin scripts and building capacity in Member States.

Case study 2: Analysing the deployment of Internationalized Domain Names

Since 2011, UNESCO, together with EURid, has prepared annual world reports which examine the global use of IDNs that support non-Latin scripts and multilingualism online. The reports are based on surveys, studies and research conducted by EURid in cooperation with industry experts and sector leaders. The *2014 World Report* shows that IDNs help enhance linguistic diversity in cyberspace, make the IDN market more balanced in favour of emerging economies, as well as that IDNs are accurate predictors of the language of the web content. However, more work needs to be done on multiple fronts to ensure that IDNs can be used seamlessly.

Case study 3: Working group on Cyrillic script

UNESCO, in cooperation with ICANN, hosted an expert group meeting on the Cyrillic script at its Paris headquarters in September 2011. Six case studies on Arabic, Chinese, Cyrillic, Devanagari, Greek and Latin scripts were conducted to identify issues associated with the safe and beneficial delegation of IDN variant Top-Level Domains (TLDs).

International cooperation and special initiatives

11th meeting of the Broadband Commission at
UNESCO Headquarters, Paris, 27 February 2015.
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Intergovernmental Information for All Programme (IFAP)

The Information for All Programme (IFAP) is an intergovernmental programme established at UNESCO in 2001 to promote the creation of equitable societies through better access to information. It works closely with other intergovernmental organisations and international NGOs, supporting a wide range of projects from individual capacity building, to research or thematic debates. In order to achieve its goals, the programme concentrates its efforts on six priority areas: multilingualism, information ethics, information accessibility, information preservation, information literacy and information for development. Numerous activities have been carried out in the past by UNESCO and national IFAP committees to promote multilingualism around the world.

The first and second international conferences on "Linguistic and Cultural Diversity in Cyberspace" took place in Yakutsk, Russian Federation, in July 2008 and 2011, at which leading experts from around the world made concrete recommendations for actions to promote multilingualism in cyberspace. The discussion covered the political, cultural, social, ethical and technological aspects of the research and development of linguistic diversity in cyberspace, and examined issues related to the use of ICTs to safeguard all languages. The deliberations and recommendations of the conferences were published in the *Lena Resolution* (2008) and the 2011 *Yakutsk Call for Action: a Roadmap towards the World Summit on Multilingualism (2017)*. The recommendations were taken into account in discussions about the creation of UNESCO's *World Atlas of Languages* during a meeting of international experts held in 2014, in Paris.

World Summit on the Information Society (WSIS)

UNESCO was one of the key players in the lead-up to the WSIS and developed for WSIS the renowned "inclusive knowledge societies" concept. Because of its prominent role during WSIS, UNESCO was asked with ITU and UNDP to co-lead the implementation of the WSIS outcomes. UNESCO is today also a key contributor to the ongoing WSIS+10 Review process. For the WSIS implementation, the Organization is covering six thematic domains through Action Lines, including on "Cultural diversity and identity, linguistic diversity and local content" (Action Line C8) and on "Access to information and knowledge" (Action Line C3). The Organization believes that cultural and linguistic diversity, while stimulating respect for cultural identity, traditions and religions, is essential to the development of inclusive knowledge societies based on dialogue among cultures, and regional and international cooperation. It is also an important factor for sustainable development.

UNESCO organised several consultations and thematic workshops to better coordinate the work of key partners, identify concrete projects and initiatives aimed at the implementation of the Action Lines and the exchange of information. As a result, stakeholders concerned with Action Line C8 have come together to focus in particular on heritage, local content, linguistic diversity and through the linkages with the Action Line C3 on Access, also on the empowerment through ICTs of people with disabilities.

WSIS resulted in the creation in 2006 of the multi-stakeholder annual Internet Governance Forum (IGF) at which international agencies, governments, Internet professionals and business and civil society organisations explore the development of the Internet and its interaction with other areas of public policy. UNESCO has been and continues to be a strong supporter of the IGF's work.

Partnership with ICANN

In December 2009, UNESCO signed an agreement with the Internet Corporation for Assigned Names and Numbers (ICANN) to create greater linguistic diversity on the Internet by helping to put into operation the first multilingual domain names. Both organisations agreed to collaborate on the internationalization of the Internet. More specifically, the UNESCO-ICANN agreement covers a variety of cooperation areas so that the new development can benefit as many language groups as possible. UNESCO agreed notably to call upon its network of linguistic experts to help in the process, inform Member States about the new IDNs, encourage involvement by other relevant United Nations agencies, and establish working groups to help developing and least-developed countries participate fully.

The European Registry of Internet Domain Names (EURid)

Since 2011, UNESCO and EURid have been analysing the deployment of IDNs on the assumption that they can foster the growth of multilingualism online. Both organisations agree that there is a strong correlation between the language or script of the domain names and the language of the associated website content. In this regard, IDNs have a vital part to play in fostering a multilingual Internet. The world reports prepared include detailed information on how IDNs are used, concrete case studies illustrating experience acquired in different countries, challenges identified and recommendations made for different stakeholders.

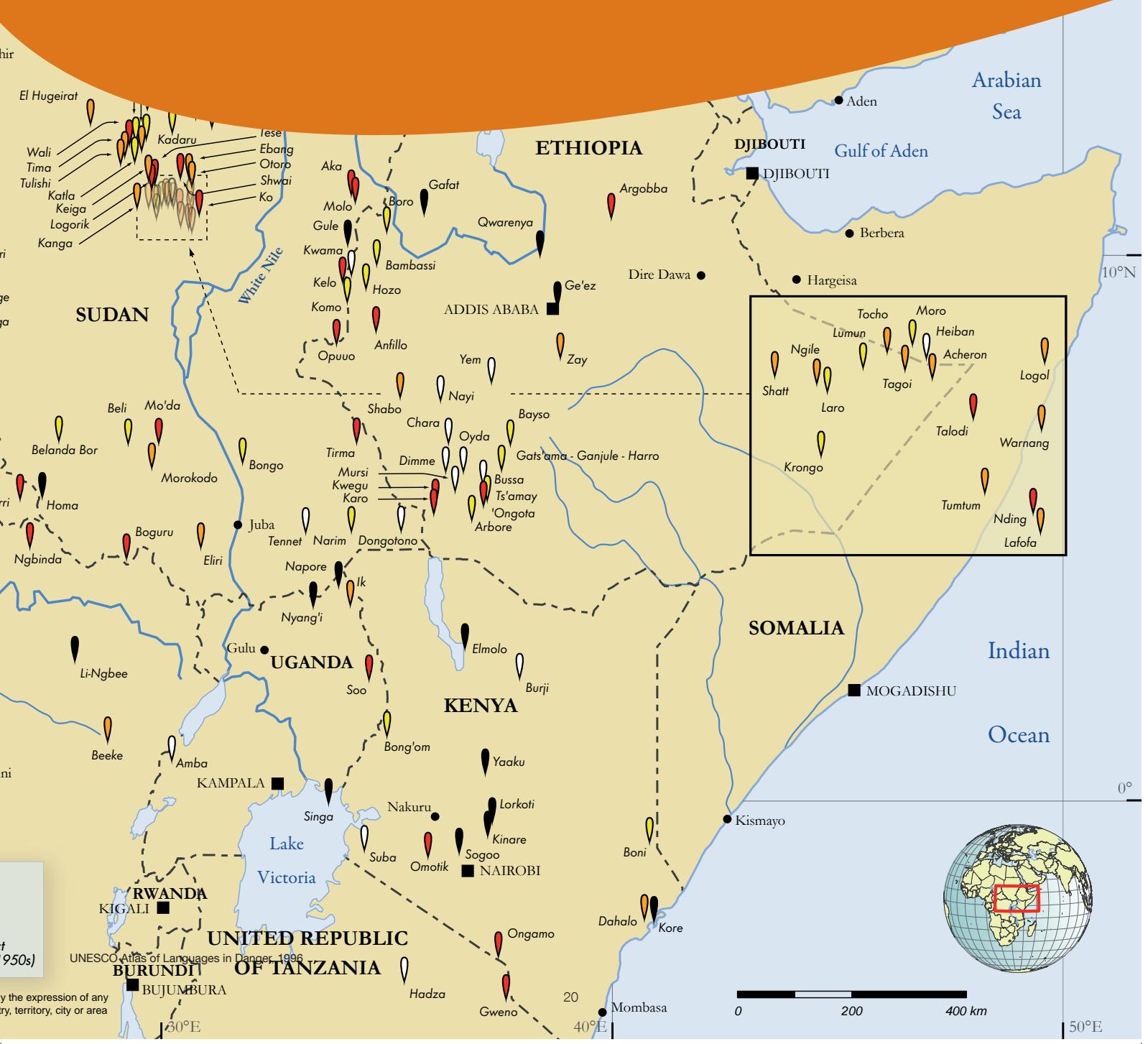## Broadband Commission for Digital Development

The Broadband Commission for Digital Development, established in 2010, believes that high-speed, high-capacity broadband connections to the Internet are an essential element for inclusive knowledge societies today, with wide ranging socio-economic and cultural benefits. Its mission is to promote the adoption of broadband-friendly practices and policies worldwide, allowing for the physical deployment of infrastructure and as importantly, underlining the need to develop the human capacities and locally relevant, multilingual content, in order for broadband to have the expected sustainable development impact. The populations that are most in need of help are those that have not yet entered the digital culture, in many cases due to the digital language divide. One of the Commission's working groups looks specifically at the issue of multilingualism and its importance for the achievement of development objectives.

The Broadband Commission for Digital Development publishes an annual report in order to increase awareness and understanding of the importance of broadband networks, services, and applications for generating economic growth and achieving social progress. As an integral part of the reports published in 2012, 2013 and 2014, a range of issues and projects dealing with multilingualism in cyberspace were addressed, and multilingualism and broadband-friendly practices analysed.

Towards UNESCO's World Atlas of Languages

Linguistic diversity and multilingualism in cyberspace are key assets for promoting innovation, social integration and dialogue, sustainable development and peace. Technological progress provides enormous potential for languages, including those in danger, to be present on the Internet and for content to be accessible by all.

Arabian
Sea

Aden

ETHIOPIA

DJIBOUTI

Gulf of Aden

DJIBOUTI

El Hugeirat

Kadaru

Tese
Ebang
Otoro
Shwai
Ko

Aka

Gafat

Argobba

Berbera

Wali
Tima
Tulishi
Katla
Keiga
Logorik
Kanga

Molo

Boro

Qwarenya

Dire Dawa

Hargeisa

10°N

Gule

Kwama

Bambassi

Ge'ez

SUDAN

White Nile

Kelo

Hozo

ADDIS ABABA

Tocho
Moro
Heiban

Komo

Lumun

Acheron

Anfillo

Opuuo

Yem

Zay

Ngile

Tagoi

Logol

Shatt

Beli

Mo'da

Nayi

Laro

Talodi

Warnang

Belanda Bor

Bongo

Shabo

Chara

Bayso

Krongo

Tirma

Oyda

Gats'ama - Ganjule - Harro

Morokodo

Dimme

Homa

Mursi
Kwegu
Karo

Bussa
Ts'amay
'Ongota
Arbore

Tumtum

Nding

Boguru

Juba

Eliri

Tennet

Narim

Dongotono

Lafofa

Ngbinda

Napore

Ik

SOMALIA

Nyang'i

Indian

Li-Ngbee

Gulu

UGANDA

Elmolo

Soo

Burji

Ocean

MOGADISHU

Beeke

Amba

Bong'om

Yaaku

KAMPALA

Nakuru

Lorkoti

Kismayo

Singa

Kinare

Lake

Suba

Omotik

Sogoo

NAIROBI

Boni

Victoria

KENYA

RWANDA

KIGALI

Ongamo

Dahalo

Kore

UNITED REPUBLIC

UNESCO Atlas of Languages in Danger, 1996

BURUNDI

OF TANZANIA

20

BUJUMBURA

Hadza

Mombasa

Gweno

0

200

400 km

30°E

40°E

50°E

0°

In order to raise awareness about language endangerment and the need to safeguard the world's linguistic diversity among policymakers, speaker communities and the general public, there is a need for evidence-based data and monitoring tools that permit the analysis of the status of linguistic diversity at a global level.

In 1996, UNESCO published its *Atlas of the World's Languages in Danger* as a tool to monitor the status of languages and to raise awareness of this issue. The third printed edition, available in English, French and Spanish, was published in 2010 and provides information on about 2,500 languages that are in danger, of which 199 have fewer than ten speakers or have actually been extinct since 1950. In 2009, an *interactive and collaborative* online edition *of atlas* was created. This free and easily accessible resource includes information on the number of speakers and degree of endangerment, relevant policies, projects, sources, ISO codes and geographic coordinates.

Currently, UNESCO is in the process of using the online edition to create a new *World Atlas of Languages* which will include digital maps, data sets covering all of the world's languages, new technical functionalities and content levels.

After the consultative process in October 2014, UNESCO released a strategic document on the next steps towards the launch of this *World Atlas of Languages*. It also included recommendations for the elaboration of a plan of action aimed at extending global partnerships and translating the recommendations developed by the experts into concrete national and regional actions.

For the past ten years, UNESCO has actively promoted the concept of knowledge societies that are open, pluralistic, equitable, and participatory. UNESCO is also strongly committed to promoting linguistic diversity and multilingualism on the Internet. It is a well-recognized fact today that the information and knowledge available in cyberspace are key determinants in human development and empowerment. This abundance of information and knowledge needs to be made more readily available to all by increasing the amount of content and the tools available in different languages. Being able to use one's own language on the Internet determines the extent to which one can participate in, and contribute to, the emerging knowledge societies. Through the voice of the local communities, universities, information and media professionals, IT sector and governments showcased in this document, UNESCO demonstrates its major federative role in fostering international cooperation and promoting innovation, linguistic diversity and multilingualism on the Internet.

The way ahead

1/ In today's world, information and knowledge are key determinants of wealth creation, social transformation and human development.

2/ Being able to communicate in one's home language is a primary vehicle for the right to freedom of expression and access to information.

3/ Linguistic diversity and multilingualism in cyberspace are key assets for promoting innovation, social integration and dialogue, sustainable development and peace.

4/ The Internet is seen as the primary way of sharing information and knowledge. Technological progress provides enormous potential for languages, including those in danger, to be present on the Internet and for the content to be accessible by all communities.

5/ Being able to use one's own language on the Internet determines the extent to which one can participate in emerging knowledge societies.

6/ Language policy is seen as a powerful political, economic and socio-cultural instrument for the promotion of coexistence, peace and development.

7/ There is a strong correlation between languages on the Internet and the diversity of languages within a country and for this reason, states have an important role to play in adopting appropriate language policies for the creation of a truly multilingual Internet, based on reliable data.

8/ The capability not just to acquire information, including multilingual local content, but also to transform it into knowledge and understanding is crucial as it empowers individuals to enhance their livelihoods and to contribute to the social and economic development of their society.

9/ Internationalized Domain Names, which consist of characters from non-Latin scripts, form a vital part of the ecosystem necessary to foster the growth of local languages online.

10/ Joint efforts by all stakeholders are needed to safeguard and promote linguistic diversity as it is a primary driver and enabler for sustainable development.