





INTERNATIONAL MEETINGS
ON PRESERVATION OF LANGUAGES
AND DEVELOPMENT OF LINGUISTIC DIVERSITY
IN CYBERSPACE IN THE FRAME
OF UNESCO INFORMATION FOR ALL
INTERGOVERNMENTAL PROGRAMME
(2008–2019)

FINAL DOCUMENTS







International Meetings on Preservation of Languages and Development of Linguistic Diversity in Cyberspace in the framework of the UNESCO Information for All Intergovernmental Programme (2008–2019)

Final Documents

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International Conference on Linguistic and Cultural Diversity in Cyberspace

(Yakutsk, Russian Federation, 2–4 July, 2008)

Final document

Lena Resolution

The participants of the International Conference on Linguistic and Cultural Diversity in Cyberspace (Yakutsk, Russian Federation, July 2–4, 2008),

- 1. Recalling the Universal Declaration on Cultural Diversity, adopted at the 31st session of the UNESCO General Conference in 2001, which says that "cultural diversity as a source of exchange, innovation and creativity is just as indispensable for humanity as biological diversity for Nature, and is a treasure shared by the entire human race",
- 2. Recalling further the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, adopted at the 32nd session of the UNESCO General Conference in 2003,
- 3. *Taking into account* the key documents of the World Summit on the Information Society (WSIS) Declaration of Principles and Plan of Action (first phase in Geneva, 2003) and Tunis Commitment and Tunis Agenda for the Information Society (second phase in Tunis, 2005) which all emphasize the importance of the preservation of cultural and linguistic diversity and suggest a set of measures necessary to achieve this goal,
- 4. *Emphasizing* the need to continue preserving multilingualism because languages are stores of a rich and vast amount of human heritage and knowledge, as well as necessary instruments for social life, the expression and dissemination of social and cultural traditions, self-identification and preservation of human dignity of their speakers,
- 5. Recognizing that the dissemination of multilingual information on the history, languages and culture of different nations contributes to the promotion of tolerance and mutual understanding and guarantees a peaceful sustainable development of the contemporary civilization,
- 6. *Taking into account* that the current absence of certain languages in cyberspace contributes to the widening of the already existing digital information gap,
- 7. Considering that the already existing information and communication technologies offer new opportunities for the preservation of linguistic and cultural heritage for equal and universal access to knowledge,

- 8. *Bearing in mind* the messages of the Director General of UNESCO at the occasions of the International Year of Languages in 2008, the World Day for Cultural Diversity, for Dialogue and Development on May 21, and the International Mother Language Day on February 21,
- 9. *Thanking* the Director General of UNESCO for his message at the opening of the current International Conference on Linguistic and Cultural Diversity in Cyberspace,
- 10. Thanking also the Government and the people of the Republic of Sakha (Yakutia) for their hearty hospitality, which ensured the success of the Conference,

Consider it necessary:

- a) to use every opportunity to promote the preservation of linguistic and cultural diversity in cyberspace and elsewhere;
- b) to stress the importance of implementing the Recommendations of:
 - the World Summit on the Information Society (Geneva, 2003, and Tunis, 2005),
 - the International Conference "UNESCO between Two Phases of the World Summit on the Information Society" (St. Petersburg, 2005), in particular Action Line C8 (Cultural Diversity and Cultural Identity, Linguistic Diversity and Local Content), and
 - the thematic meeting on "Multilingualism for Cultural Diversity and Participation of All in Cyberspace", organized by UNESCO in preparation for the second phase of the World Summit on the Information Society (Bamako, Mali, 2005);
- c) to invite the UNESCO Intergovernmental Council of the Information for All Programme to examine the possibility of creating an expert group on multilingualism in cyberspace;
- d) to suggest to UNESCO and MAAYA (World Network for Linguistic Diversity) to convene a World Summit on Linguistic Diversity in Cyberspace;
- e) to support the ACALAN (African Academy of Languages) and MAAYA initiative for a World Forum on Multilingualism.

Suggest in particular,

f) to invite all interested organizations and private persons to contribute to the UNESCO website "Languages Matter!", dedicated to the International Year

- of Languages, and to the discussion forum "Communication and Information", organized by UNESCO as a follow-up to the decisions of the World Summit on the Information Society in Action Line C8 (Cultural Diversity and Identity, Linguistic Diversity and Local Content), by placing information on their own projects in support of linguistic diversity;
- g) to invite the national committees of the UNESCO Information for All Programme to elaborate indigenous and minority linguistic programmes promoting linguistic and cultural diversity in cyberspace;
- h) to call the attention of governmental and other organizations regulating television, radio and mobile telephones environments to the necessity of considering the opportunity of using the latest technologies for broadcasting in minority languages during the media switch to digital broadcasting;
- to continue searching for fair and balanced solutions between the international copyright and intellectual property legislation and regulatory frameworks for the formation of digital libraries responsible for cultural and linguistic diversity;
- j) to increase support for libraries, museums and archives in the access to and preservation of multilingualism and dissemination of information representing cultural and linguistic diversity;
- k) to promote the elaboration and dissemination of relevant free/libre open source software, fonts and other technical means necessary for the use of languages in cyberspace;
- to promote the elaboration and dissemination of a unified and universally accessible set of fonts and diacritic marks supporting the languages of all cultural groups in the Russian Federation, along with Unicode enhancements as necessary;
- m) to continue promoting the activities aimed at documenting, preserving and developing languages, mainly minority languages, through the latest information technologies;
- n) to continue promoting the elaboration of multilingual thesauri and dictionaries and the inclusion of minority languages into internationally accepted thesauri on cultural heritage such as UNESCO, HEREIN, ICONCLASS, Getty, Garnier etc.;
- to continue the study of ethical aspects of the preservation of linguistic and cultural diversity in cyberspace, and their consideration in the activities aimed at preserving and promoting such diversity;

- p) to step up activities for the introduction, promotion and enhancement of minority languages in the educational systems and the expansion of their application and use (in the government sector, the sphere of research and art, on television, radio, etc.);
- q) to suggest to the participating countries the monitoring of language diversity on the Internet;
- r) to extend international cooperation with all interested organizations including the International Federation of Library Associations (IFLA), the Conference of Directors of National Libraries (CDNL) and the International Indigenous Librarians Forum (IILF);
- s) to invite the Government of the Republic of Sakha (Yakutia) to consider establishing a competence centre for the study and promotion of multilingualism in cyberspace and for sharing its experiences with the world at large.

Second International Conference on Linguistic and Cultural Diversity in Cyberspace

(Yakutsk, Russian Federation, 12–14 July, 2011)

Final document

Yakutsk Call for Action. A Roadmap towards the World Summit on Multilingualism (2017)

Preamble

The Second International Conference on Linguistic and Cultural Diversity in Cyberspace was held in Yakutsk, Russian Federation, from July 12 to July 14, 2011. in the framework of the Russian chairmanship in the UNESCO Information for All Programme. The event was organized by the Ministry of Culture of the Russian Federation, the Commission of the Russian Federation for UNESCO, UNESCO, the Russian Committee of the UNESCO Information For All Programme, the North-Eastern Federal University, the Interregional Library Cooperation Centre, MAAYA World Network for Linguistic Diversity, and Union Latine.

The Conference which held several working sessions and plenary meetings gathered over 100 participants from more than 30 countries and all continents. It was attended by leaders and experts of intergovernmental and international nongovernmental organizations, government bodies, agencies and institutions of culture, education, research, information and communications, representatives of private sector, civil society and the mass media.

The conference tackled the three major themes dealing with 1) Instruments for language preservation and promotion in cyberspace, 2) Institutes to promote linguistic and cultural diversity, and 3) Creating positive environment for the promotion of linguistic and cultural diversity in cyberspace.

A roadmap towards the World Summit on Multilingualism has been proposed and approved by the participants.

I. Achievements since the Lena Resolution (Yakutsk, Russian Federation, 2008)

Lena resolution was adopted at the First Conference on Linguistic and Cultural Diversity held in 2008 proclaimed by the UN the International Year of Languages. It introduced the idea of holding the World Summit on Multilingualism and

supported a series of initiatives. Since then, several activities have taken place including the Bamako International Forum on Multilingualism 2009 (BIFM), the creation of the Centre to Advance Multilingualism in Cyberspace under the North-Eastern Federal University (Russian Federation), the development of DILINET project on indicators of linguistic diversity in cyberspace by MAAYA and partners, and the preparation of the на Second International Conference on Linguistic and Cultural Diversity in Cyberspace (July 2011, Yakutsk).

II. The roadmap to the World Summit on Multilingualism (2017)

We, the participants and organizers of the Second international Conference on Linguistic and Cultural Diversity in Cyberspace, inspired by the Lena Resolution and Bamako commitment on universal multilingualism, invite all interested individuals and organizations concerned in linguistic and cultural diversity support and promotion to participate in the preparation of the World Summit on Multilingualism. We therefore propose the following roadmap.

- 2012: Experts meetings and consultations in various regions of the world
- 2013: Ministerial conference on Multilingualism
- 2013: Proposing a draft resolution on the World Summit on Multilingualism to the UNESCO General Conference. Possible creation of an international commission to prepare a Report on multilingualism
- 2014: Possible adoption of a draft resolution on the World Summit on Multilingualism by the UN General Assembly based on the Report
- 2015-2017: Thematic meetings and regional conferences to prepare for the Summit
- 2017: World Summit on Multilingualism

All the stakeholders (governments, international organizations, private sector, and civil society including the academia and research community) are encouraged to commit themselves in preserving and promoting linguistic and cultural diversity worldwide and invited to contribute to the success of the World Summit on Multilingualism which could lead to the adoption of an international Charter on the governance of linguistic diversity in the world.

Third International Conference "Linguistic and Cultural Diversity in Cyberspace"

(Yakutsk, Russian Federation 28 June – 3 July 2014)

Final report

The Third International Conference "Linguistic and Cultural Diversity in Cyberspace" was convened in Yakutsk, Russian Federation, from June 28 to July 3, 2014. This Conference has become part of the activities of the UNESCO's Information for All Programme (IFAP) and an important contribution to the implementation of the decisions of the World Summit on the Information Society (Geneva, 2003, and Tunis, 2005).

The Conference was organized by the Russian Committee of the UNESCO Information for All Programme, the North-Eastern Federal University in Yakutsk and the Interregional Library Cooperation Centre with the support of the Government of the Republic of Sakha (Yakutia), the Ministry of Culture of the Russian Federation, the Federal Agency for Press and Mass Communications of the Russian Federation, the Commission of the Russian Federation for UNESCO, and in cooperation with UNESCO.

This interdisciplinary forum was attended by leading experts from 48 countries: specialists working in the fields of science, culture, education, communication and information, researchers on philosophical, sociological and anthropological issues emerging from the growing use of Internet and other ICTs, representatives of international and national governmental and nongovernmental organizations, governmental policy makers in the field of knowledge societies development, managers of ICTs and media programmes from the private sector and civil society institutions, as well as executives from Russia's various governmental bodies.

The Conference was built on the recognition of the importance of cultural and linguistic diversity in the digital world. It addressed political, cultural, social, ethical and technological aspects of activities aimed to support and develop linguistic and cultural diversity. The discussions focused on policies, standards and tools necessary to ensure linguistic and cultural diversity safeguarding and preservation and on specific tools for the promotion of multilingualism.

To accomplish their work the participants held two plenary sessions and eight sessions of four specific thematic sections:

- Section 1. ICT for linguistic and cultural diversity in cyberspace;
- Section 2. Socio-cultural aspects of linguistic diversity in cyberspace;
- Section 3. Preservation of linguistic and cultural diversity in cyberspace: National vision and experience;
- Section 4. Education for preservation of linguistic and cultural diversity in cyberspace.

Creation and implementation of policies to develop and preserve languages and identification of the best practices in these areas of activities were the conference's crosscutting issues.

In conclusion of their work, conference participants thanked the organizers and supporters of the event and adopted the final document – **Yakutsk Declaration** on Linguistic and Cultural Diversity in Cyberspace.

Final document

Yakutsk Declaration on Linguistic and Cultural Diversity in Cyberspace

Preamble

The participants of the Third International Conference "Linguistic and Cultural Diversity in Cyberspace" are conscious that:

An overwhelming majority of peoples in the world have no statehood and sovereignty. As a rule, their languages are not the state languages of their country of residence because a majority of countries are multi-ethnic and multilingual. Even in the most beneficial situation, when the government and the larger, dominant ethnic entities display the utmost care of ethnic and linguistic minorities, most languages are marginalized to varying extents. They develop or decline in the shadow of a major and fitter language dominant in its country and used in all spheres – political, economic, educational, cultural, scientific, etc.

The relationship between language and culture is one of interdependency. No language can develop outside the culture of the ethnos that created and speaks it. Culture is a function of language, and language is a vector for culture; no one exists without the other. Every time we talk about culture we are addressing language, and every time we look upon language we are reaching culture through it.

The linguistic and cultural diversity of humankind is the tip of an "iceberg" that includes cultural identities, the sense of belonging to a community, personal rootedness, intangible heritage, popular life-crucial knowledge and achievements over the centuries, proper interpretation of local content and much more.

The dissemination of multilingual information on the history, languages and culture of different nations enriches our ability to analyse facts, events and behaviours thanks to multiple viewpoints contributing to the promotion of tolerance and mutual understanding and a peaceful sustainable development of contemporary civilization. Cultural diversity and multilingualism are enablers of wellbeing and of the successful flourishing of humans.

Languages are stores of a rich and vast amount of human heritage and life-crucial knowledge, i.e. the knowledge necessary for health, well-being, and participation in the local and worldwide community and economy, as well as necessary

instruments for social life, the expression and dissemination of social and cultural traditions, self-identification and preservation of human dignity of their speakers, whether these are native to the territory or migrants.

Urbanization and globalization promote the assimilation of ethnic cultures and challenge their majority status, moving them ever farther into the margins. Knowledge and historical and cultural experience stored by these cultures vanish gradually, and the potential of those cultures and languages is reduced. Cultural and linguistic marginalization is an interrelated and interdependent process. A unique culture vanishes with the death of its languages. Meanwhile forecasts say and UNESCO has been continuously warning that more than half of the approximately 7,000 currently alive languages may become extinct within several generations.

Migration and human mobility have experienced an unprecedented increase over the past few years. For the first time ever, in 2010, the majority of the world's population was predominantly urban, and this proportion is growing. By 2050, more than 70% of the world's population will live in a city. The high concentration of people in urban settings has resulted in an increasing linguistic diversity, a trend that will continue over the next years.

An increasing number of studies show that a well-planned strategy on managing diversity, including the languages of migrants, can lead to social and economic benefits for the society as a whole. Diversity can also create benefits as it increases the variety of goods, services and skills available in urban environments. The increased level of competences provided by diversity can also foster creativity, innovation and economic growth.

The role of ICTs

The global information society is forming rapidly, and the recent relevant social impact of improvements in Information and Communication Technologies (ICTs) makes this a turning point for the preservation of cultural and linguistic diversity.

Ever more people are becoming active users of ICT, particularly of the Internet. It has become an inalienable and essential part of the life of the young majority, due to the extensive opportunities for communication, access to information and knowledge, self-expression, education, leisure and a greatly extended picture of the world. However, Internet services and information are mainly available in the dominant languages and the current absence of certain languages in cyberspace contributes to the widening of the already existing digital information gap. While globalization encourages the merging of cultures and

languages into a de facto standard, at the same time emerging ICTs potentially enable the exploitation of different languages and cultures and the flourishing of new alphabets and writing systems.

One of the main issues that is against the strengthening and diffusion of indigenous languages is that they are languages with no written tradition. In the context of our modern world, only a written tradition allows a language to become recognizable and useful. Cyberspace offers a unique opportunity for creating a writing tradition at low cost and with maximal possibilities of diffusion.

The digital era in which we live nowadays provides a unique opportunity to support the active promotion of well being, inter alia via the enabling of multilingualism and preservation of cultural diversity in cyberspace. Existing ICTs offer new opportunities to promote linguistic and cultural heritage for equal and universal access to life-crucial knowledge.

Being aware, in addition, that the increasing number of social media applications available and accessible may offer a relevant contribution to minority languages and cultural preservation and promotion thanks to services, communities and crowd initiatives, we must support initiatives to encourage them further.

Of course "availability" does not always mean "real use"; free or affordable access to ICTs is still a problem in many areas of the world and for many potential users. However, thanks to smart and mobile solutions both the new generation, and even those previously digitally excluded, have entered the digital age. Furthermore we are aware of the potential opportunities and threats connected to this process.

Guaranteeing linguistic and cultural diversity and the survival of every language and culture must be a common goal for humanity. Institutions ought to make commitments and assume responsibilities in relation to linguistic diversity and coexistence of languages.

Differences of languages and cultures should not create either manifest or hidden artificial obstacles for reasonable and fruitful cooperation among nations. This cooperation should be based on the equal treatment of all parties and it should not be governed by any cultural or linguistic prejudices.

The protection of linguistic and cultural diversity should include promoting and sustaining it in cyberspace, by enforcing digital opportunities for all languages.

Taking into account all the above and recalling the

- Outcomes of the First and the Second International Conferences on Linguistic and Cultural Diversity in Cyberspace (Yakutsk, Russian Federation, 2008 and 2011) as well as the Bamako International Forum on Multilingualism (Bamako, Mali, 2009), the 1st International Symposium on Multilingualism in Cyberspace (SIMC I Barcelona, Spain, 2009), the 2nd International Symposium on Multilingualism in Cyberspace (SIMC II Brasilia, Brasil, 2011) and the 3rd International Symposium on Multilingualism in Cyberspace (SIMC III Paris, France, 2012);
- Universal Declaration on Cultural Diversity which says that "cultural diversity as a source of exchange, innovation and creativity is just as indispensable for humanity as biological diversity for Nature, and is a treasure shared by the entire human race";
- UNESCO Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace;
- Key documents of the World Summit on the Information Society (Geneva, 2003, and Tunis, 2005) and the Vision for WSIS Beyond 2015 (WSIS+10, Geneva, 2014) which emphasize the importance of the preservation of cultural and linguistic diversity and suggest a set of measures necessary to achieve this goal;

The Conference agrees on the following recommendations:

General framework

Local, regional and central governments should play a wider and significant role in preserving, developing and sustaining local indigenous languages and their cultures by providing, in particular, resources for the development of digital tools, and the promotion of education and literacy for these languages to be present in cyberspace.

Governmental bodies at all levels should build professional communities and further develop necessary resources and tools (training courses, higher education courses, educational curricula, preparation of teachers, training for trainers, seminars, research, etc.) to strengthen linguistic and cultural diversity in cyberspace as digital language vitality is only sustainable where the language is spoken and taught. "Digital natives" should not be left alone in the digital arena. They belong to the always-on global communication community. They create their own forms of language to exchange text messages, instant and multimedia messages as an additional legacy for future generations.

This can be done with the help of academia and thinktanks providing the expertise and identifying the best practices on language policies that not only promote all languages and put them on equal footing but also foster dialogue between coexisting languages in specific territories.

The development of natural language processing technologies (Text understanding, Question answering, Information querying, Speech Recognition, Speech Synthesis, (Spoken) Machine Translation and others) is a crucial step for ensuring equal digital opportunities for all languages. Mobile phone, Internet chat and social media interaction should be included in any definition of digital vitality and use of minority languages.

All institutions, organizations, associations and even individuals involved in language development, language planning or language promotion should set up collaborative projects to support lesser spoken languages, with a special attention to

- development of culture-based terminologies;
- production and dissemination of written materials and digital documents in these languages.

Local digital communities (not just read-only material) are also needed for digital ascent. Micro-grants to small communities (literary, theatrical, whatever brings people together) should be provided to document in their native language what they are doing.

Further examination should be made of the:

- identification of all the factors necessary to sustain linguistic diversity;
- link between digital vitality and spoken language vitality;
- impact of digital stillness on a spoken language.

The setting-up of language policies should include the state language, the national/regional language, and also migrant languages, as this is the only way to ensure that all citizens, regardless of their legal status in a territory, can be recognized equally by recognizing the plurality of their languages.

Diversity management of the communities enables a real representation of language minorities to promote stable and sustainable development.

Corpora, the lifeblood of modern computational linguistics, must be unencumbered by Copyright. A research exemption must be enshrined in the legal framework. In addition national projects need to make their corpora not just searchable but also downloadable by ROAMing (randomize, omit, anonymize, mix). Open access to materials collected, as a precondition of funding, must be assured.

The significant part in linguistic diversity is linguistic diversity in scientific production. "Grey" literature naturally incorporates a greater linguistic diversity in scientific production particularly in developing and less developed countries. Promoting "grey" scientific literature can ensure linguistic diversity in knowledge production. Efforts should be deployed to raise the interest of the Academy in "grey" literature and acknowledge the alternative knowledge production it represents.

The open access movement makes scientific publications openly accessible and proposes that they give a greater priority to linguistic diversity so that the production of knowledge in multiple languages is promoted and facilitated, especially life-crucial knowledge.

All publicly funded translations of works should be available under free license for everyone to use and re-use without additional restrictions or exemption from copyright. This should apply both to works that are in the public domain as well as works still being under copyright, so they can be used as soon as copyright to the original work expires. International and national Copyright law systems should be amended in a way to allow all educational, scientific and non-commercial use of global cultural heritage.

In order to promote a widespread positive adoption of the notion of linguistic diversity and a favourable cultural climate that is the precondition for its flourishing, educational and informative tools need to be developed, aiming at correctly informing society at large and at educating the new generations about the value of multilingualism.

Efforts should be made to:

- support, enable and assist the documentation, protection and promotion of regional, minority and endangered languages;
- bring together specialists in specific areas of the world with members of endangered language communities in these areas.

It is very important to ensure long-term preservation of audio and video recordings reflecting linguistic and cultural diversity, specifically of orally transmitted cultures, key elements to ensure demo-anthropological studies.

Over the past 60 years, rich collections of such audio-visual recordings have been produced, forming the basis of our present knowledge. Nowadays they can only be preserved by digitization and proper digital preservation of data. Presently, however, the availability of replay equipment for magnetic audio and videotapes is dramatically shrinking which may bring digitization programmes to a halt. Adequate measures must be taken to respond to this threat in order to prevent such unprecedented loss of irreplaceable documents of the linguistic and cultural diversity of humankind.

At the political level

- 1. All stakeholders should seek to facilitate the emergence of knowledge societies respecting human rights and values and based on four principles: Promoting freedom of expression in traditional and new forms of media, including the Internet; Access to quality education for all; Respect of cultural and linguistic diversity; and Universal access to information and knowledge, especially in the public domain;
- 2. UNESCO, especially through its Information for All Programme (IFAP), should pursue in cooperation with relevant UN agencies, IGOs and NGOs the efforts for further development and promotion of ethical, legal and societal principles and norms for preserving linguistic and cultural diversity worldwide, in particular in cyberspace;
- 3. All stakeholders should encourage governments to enact and implement more effective national policies in support of preservation of linguistic and cultural diversity;
- 4. All stakeholders should continue to promote and support the creation and free dissemination of language resources (alphabets, diacritic marks, phonetic language resources, Wikipedia, Wiktionaries, and related technical means (e.g. spell checkers, and generally speaking natural language processors), with specific reference to the use of virtual keyboards), necessary for the use of indigenous and minoritized languages in cyberspace ensuring equal digital opportunities for all languages;
- 5. UNESCO and its Member States should continue to develop with the relevant IGOs and NGOs policies to enhance the presence (localization and content) of all languages in cyberspace, based on media and information literacy, access to resources and promotion of participation, developing programmes of inclusion of knowledge from languages unrepresented on the Internet, creating a comprehensive and sustainable set of indicators, and

- promoting a comprehensive view of the digital divide which encompasses the content and linguistic divide;
- 6. Governments should strengthen existing discussion platforms involving all concerned stakeholders in a continuous interdisciplinary debate on preservation of linguistic diversity in the context of current socio-cultural transformations in globalizing information society/knowledge societies;
- 7. All stakeholders, especially in academia should develop interdisciplinary research and comprehensive study on the various political, social and cultural challenges, especially in education, with regard to the preservation of linguistic diversity;
- 8. All stakeholders, especially governments, scholars and experts in academia, should develop and strengthen educational and awareness-raising programmes, especially among the youth, to form stronger respect of linguistic and cultural diversity and deeper understanding of the necessity to preserve all languages, particularly minority/minoritized ones.

The Conference also especially recommends UNESCO, and other relevant international, regional and national stakeholders, to

- a. develop and propose an international act on global linguistic and cultural diversity in cyberspace as well as in other communication spaces;
- b. stimulate the creation of a worldwide network of competence centres for the study and promotion of multilingualism in cyberspace and for sharing expertise on the subject;
- c. set up a working group representing each continent to identify language policies, initiatives, and digital opportunities that best respect the linguistic reality of the territory;
- d. invite the National IFAP committees to support the development of culture-based terminologies and promote online publication of indigenous and minority history, events, raw data (Newspapers, Books, Radio-TV Broadcast, Videos, etc.), as well as the production and distribution of annotated corpora, lexica, dictionaries, grapheme-phoneme convertors, parallel corpora, etc. allowing for the development of language technologies;
- e. invite the National IFAP committees to create and support a specific action aimed at activating crowdsourcing in order to address autochthonous and minoritized language content digitization (adopt an endangered language/culture!) and constitute related communities;

- f. emphasize the role of the broader literacy context for digital language ascent (work the chain of literacy);
- g. conduct comparative study on national policies to sustain languages, including linguistic preservation and development in cyberspace;
- h. conduct a survey of the state-of-the-art regarding language resources and technologies for all languages;
- i. set up a clearing-house on language technologies to be used for identifying and assessing digital language development;
- j. start focusing (including through IFAP) on the possibility of using cyberspace as a laboratory for creating writing traditions for endangered and minority languages;
- k. further work on the development of language technologies for minority languages, which can be easily adapted for application from one language to another (easier localization techniques), especially within language families;
- l. ensure the availability of language technologies for the largest number of languages through the cooperation of all stakeholders (Member States and regions, public and private research laboratories, industries) under the general coordination of UNESCO;
- m. design an Index of Digital Language Diversity, as an instrument for measuring the digital language diversity of a given region and for assessing the type of intervention needed to ensure all languages equal digital opportunities;
- n. invite universities in all countries to submit project proposals to international institutions (such as UNESCO Chairs and UNITWIN) to promote multilingualism and cultural diversity in cyberspace;
- o. support the documentation of endangered languages in their area and provide an inventory of existing materials;
- p. start working on the modernisation of the existing Atlas of World Languages by using advantages of modern ICTs;
- q. set up fund-raising events and look for possible sponsors of the work in the area.

A Virtual Observatory for Multilingualism and Digital Language Diversity (possibly as a part of the IFAP Information Society Observatory) should be set up in order to:

- 1) accumulate reliable and up-to-date data about the presence of the world's languages on the Internet, the availability of digital technologies supporting languages, and of infrastructural conditions enabling presence of languages in the digital world;
- 2) accumulate publications on academic and civil society projects concerning multilingualism in digital world;
- 3) closely monitor existing language policies that best respect the linguistic reality of the territories, and the efforts and initiatives taking place worldwide to support multilingualism both offline and online;
- 4) help identify best practices being developed in each continent;
- 5) highlight what works best in each geographical location and to monitor the extent to which language diversity is digitally reflected;
- 6) map the researchers working on the subject and the fields of knowledge.

The Conference finally urges UNESCO and other relevant international, regional and national stakeholders to initiate a preparatory process for a World Summit on Multilingualism as it is highly desirable for the preservation and development of the world's languages and cultures in the epoch of galloping globalization.

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International Expert Meeting on Improving Access to Multilingual Cyberspace

(Paris, France, UNESCO's Headquarters, 28–29 October 2014)

Final Recommendations for the Action Plan of UNESCO's World Atlas of Languages

Preamble

The Universal Declaration of Human Rights recognizes the importance of languages that individuals speak and acknowledges it, as essence for the realization of the fundamental human rights and freedoms. Therefore, language should be considered as a key asset by all stakeholders for ensuring sustainable development and peace.

Many linguistic communities remain underprivileged in enjoying and exercising their rights and freedoms, in expressing their views and opinions, and communicating in a most meaningful and effective manner. Speakers of endangered languages require special attention, in particular to have access to education and economic prospects.

The constant technological progress has brought about multiple opportunities for users to access, create and share information and knowledge in various languages, and to benefit from new models of learning and socio-economic development. This progress has not only changed the way language communities communicate with each other, but also how they contribute to language documentation, revitalization, monitoring and maintenance. Regrettably, Information and Communication Technologies (ICTs) are not evenly spread and made available around the world – there are deep inequalities in terms of universal access. The growing digital divide is even more reinforced by the existing linguistic divide.

UNESCO is convinced that linguistic diversity and multilingualism have a key role to play in fostering pluralistic, equitable, open and inclusive knowledge societies. In this regard, the Organization supports the safeguarding of all languages and their inclusion in the digital world – in particular those which are not represented online – and the creation and dissemination of local content on the Internet and mass communication channels.

The Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, adopted by UNESCO's General Conference in 2003, is the only normative instrument at the international level, focusing on the promotion of these priorities.

* * :

From 28 to 29 October, 2014, at its Headquarters in Paris, UNESCO, in cooperation with the Government of the Khanty-Mansi Autonomous Okrug – Ugra (Russian Federation), the Permanent Delegation of the Russian Federation for UNESCO and the Russian Committee of the UNESCO Information for All Programme, organized a two-day international expert meeting bringing together leading experts, researchers, and policymakers to discuss the status of linguistic diversity and multilingualism, including in cyberspace, and determine the next concrete step to be taken by UNESCO.

The focus of the discussions was two-fold:

- Further steps for the implementation of the Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace and an examination of the recommendations of the third International Conference "Linguistic and Cultural Diversity in Cyberspace", held in Yakutsk, Russian Federation, from 28 June to 3 July 2014;
- Elaboration of a plan of action and initiation of new partnerships to upscale UNESCO's Atlas of the World's Languages in Danger to UNESCO's Atlas of World's Languages for the monitoring and promotion of the world's languages online, and strengthen cooperation and knowledge sharing using open and inclusive technological solutions among international, regional and national language institutions.

* * *

We, the participants in the International Expert Meeting on Improving Access to Multilingual Cyberspace,

Fully committed to the promotion of linguistic diversity, according to the UNESCO's Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003), the Geneva Plan of Action and Tunis Agenda of the World Summit on the Information Society (WSIS) and the ongoing debate of the post-2015 Sustainable Development Goals,

Recalling that multilingualism is one of the main strategic priorities of the UNESCO Intergovernmental Information for All Programme (IFAP),

Referring to the relevant Resolutions of the General Conference of UNESCO with regard to the promotion of multilingualism and universal access to information,

Convinced that the development of ICTs provides great opportunities to improve the presence of, and access to, languages in cyberspace, but it also presents new challenges for language users,

Noting that current disparities in technological support for world's languages impede equitable access to information and knowledge, and that language communities without sufficient institutional, financial, political and technological support are becoming further marginalized,

Recognizing that promotion and safeguarding of linguistic diversity is a key asset of humankind, compared to the importance of biodiversity, it should be at the core of contemporary debates in the globalized world as a determining factor in the development of inclusive knowledge societies,

Inviting UNESCO and its Members States and partners to increase efforts for the implementation of the Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace and of the recommendations of the third International Conference, "Linguistic and Cultural Diversity in Cyberspace", held in Yakutsk, Russian Federation, from 28 June to 3 July 2014,

Also recalling the importance of upscaling UNESCO's Atlas of the World's Languages in Danger as a central tool for the accomplishment of the above goals, as follows: (i) through the monitoring and promotion of the world's languages; (ii) the provision of comprehensive information about languages to all stakeholders, particularly policy decision-makers; and (iii) by using open and inclusive technological solutions enabling sharing of e-content on languages,

Recommend the present Action Plan to UNESCO for its work on the promotion of linguistic diversity and on the creation of its World Atlas of Languages:

Policy and strategic orientations

- 1. Member States should formulate and adopt sustainable national language policies on the crucial issue of linguistic diversity and multilingualism, including promotion, safeguarding, representation, technological development and use of the world's languages, and the development of national competencies. The establishment of comprehensive language policy frameworks will help to ensure that rights and freedoms of every language user and community are equally respected and protected.
- 2. Strategies must be designed to promote the learning and teaching of languages using solutions provided by technological and scientific progress. International support and assistance to developing countries

should be strengthened and extended to facilitate the development of freely accessible materials on language education in electronic and open forms and human capital in this area. To this end, Member States should adopt and implement specific policies for the improvement of access to cyberspace for disadvantaged communities who are often carriers and custodians of languages in danger.

- 3. Member States should encourage technological solution developers and Internet service providers to consider facilitating affordable Internet access in public service institutions, such as schools, academic institutions, museums, archives and public libraries, as a transitional measure towards universal access to cyberspace.
- 4. UNESCO, its Member States and other relevant stakeholders concerned, should develop training materials and build the capacity of content developers, particularly local content producers and providers, in using sustainable formats that enable universal content sharing.

Development of technological solutions

- 5. UNESCO and its Member States should encourage research and development on language technology systems/tools with extensive multilingual capabilities, especially with regard to operating systems, search engines and web browsers.
- 6. Furthermore, efforts should be supported with regard to developing advanced information services, such as those for multilingual information retrieval offering speech understanding, instant machine translation and interpretation and other intelligent linguistic services.
- 7. Development of multilingual content resources making language technology systems/tools and information services more effective, such as online dictionaries and terminologies, text and speech corpora, should be encouraged.
- 8. UNESCO, in cooperation with other international, regional and national organizations, should establish a collaborative online platform UNESCO's World Atlas of Languages, containing a full data on world's languages, policies, regulations, technical recommendations and best practices in this field.
- 9. Member States and international organizations should encourage the development and application of open access solutions including the formulation of technical and methodological standards, design of

sustainable formats for information exchange, ensuring portability and interoperability, as well as accessibility of digital public domain information on global information networks throughout its lifecycle, regardless of the technology used when it was originally created.

Strengthening international cooperation and building partnerships

- 10. UNESCO, its Members States and partners concerned should support capacity-building for the production of local and indigenous content on the Internet, and foster cooperation especially in favor of endangered language communities.
- 11. The public and private sectors, research community, the civil society and other stakeholders at large should encourage the creation, processing of, and access to multilingual educational, cultural and scientific content in digital and open forms and work to provide the necessary resources as indispensable measures to alleviate language barriers for a different range of users, including marginalized communities.
- 12. Inter-agency cooperation within the United Nations system should be reinforced in that respect with a view to building up the existing experience for the benefit of developing countries and disadvantaged communities.

Over the next two-year period

- 13. UNESCO, in close cooperation with other relevant partners, should establish an Advisory Group for the upscaling of the UNESCO's Atlas of the World's Languages in Danger to UNESCO's World Atlas of Languages. This Group will be composed of professionals and experts within the relevant fields, respecting geographical representation and gender balance.
- 14. UNESCO, in partnership with other relevant bodies, should develop a mechanism and sustainable tools for monitoring language vitality and for the assessment, promotion and preservation of linguistic diversity and multilingualism, including in cyberspace, applying innovative technological solutions. To that end, UNESCO should revise the existing Language Vitality Index to cover most of the world's languages.
- 15. UNESCO should further promote multilingualism in the context of the Post 2015 Sustainable Development Goals and on the World Summit on the Information Society outcomes implementation, and also consider the organisation of a World Summit on Multilingualism.

Global Expert Meeting on Multilingualism in Cyberspace for Inclusive Sustainable Development

(Khanty-Mansiysk, Russian Federation, 4–9 June, 2017)

Final document

Ugra Declaration on Preserving Languages and Promoting Linguistic Diversity in Cyberspace or Inclusive Sustainable Development

The Global Expert Meeting on Multilingualism in Cyberspace for Inclusive Sustainable Development was the first-ever international forum to scientifically address the role and impact of multilingualism and linguistic diversity (in real life and in cyberspace) in achieving progress towards the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015.

Holding this meeting has become Ugra and Russia's significant contribution to the implementation of the intergovernmental Information for All Programme (IFAP) – UNESCO's programme in the field of communication and information, and also IFAP's new contribution to UNESCO's efforts to implement the SDGs formulated in the universal UN document *Transforming Our World: The 2030 Agenda for Sustainable Development*.

The Global Expert Meeting was organised by the Government of the Khanty-Mansi Autonomous Okrug – Ugra, the Commission of the Russian Federation for UNESCO, the UNESCO Intergovernmental Information for All Programme, the UNESCO Institute for Information Technologies in Education, the Russian Committee of the UNESCO Information for All Programme, and the Interregional Library Cooperation Centre.

The event aimed to foster expert exchanges and serve as a platform for the dissemination of innovative theories and pioneer know-how regarding the links and articulations between multilingualism and the sustainable development paradigm, addressing their potential and limitations specifically in relation to the digital presence of languages – the quality, prospects for the existence of such languages, and activities in relevant spheres.

The meeting followed the debates on various aspects of language preservation and the development of linguistic and cultural diversity in cyberspace at the global, regional and national levels. The world saw nine major international themed events in 2008–2016, including five within the framework of the UNESCO Information for All Programme, focused on political, cultural, social, ethical and technological aspects of research and development in the sphere of linguistic diversity in cyberspace and using information and communication

technologies (ICT) for language preservation. The results of the discussions at these meetings were reflected in their proceedings and final documents: the Lena Resolution (2008), the Yakutsk Call for Action – a Roadmap towards the World Summit on Multilingualism (2011) and the Yakutsk Declaration on Linguistic and Cultural Diversity in Cyberspace (2014). These documents were taken into consideration during the discussion of the idea for the UNESCO World Atlas of Languages at the International Expert Meeting on Improving Access to Multilingual Cyberspace at the UNESCO Headquarters in Paris in 2014 and at the Global Expert Meeting on Multilingualism in Cyberspace convened in Khanty-Mansiysk (Russian Federation) in 2015.

The participants of the Global Expert Meeting assumed the following:

- a) Every language is a unique tool for the understanding and description of reality, a fabulously rich store of information about the ethnic entity speaking it, and about ethnic culture, its own evolution, and the nature of man as a biological species. Languages are amazingly abundant and diverse products of human creative reason, precious to their speakers. Languages reflect nations' historical and social experience and serve as tools of individual socialization and means of self-identification. Languages are also the medium and tool of productive communication in the realization of humanity's work and creative realizations, crucial and indispensable pragmatic functions in socio-economic life.
- b) However, in the globalized world, the large part of the some 7,000 existent languages, which are "minor" languages spoken by a small proportion of humanity, are under threat of extinction or their influence is shrinking. "Major" languages spoken by large populations are also facing pressures from a few economically dominant languages. The ability to resist the onslaught of these powerful languages will determine the future of the majority of world languages. It depends on the economic empowerment of these language communities and the development of appropriate language policies, linguistic resources and platforms, notably multilingual cyberspace in which currently only 5% of languages are present.
- c) Taking it as a given that language is not only a dimension of culture and identity but also a key component of all societal processes, multilingualism must be considered as an essential operational factor in achieving the posed SDGs in education, urban development, food security, environment, economic growth and sustainable models for production, consumption and building peaceful and inclusive societies.
- d) However, the UN document "Transforming Our World: The 2030 Agenda for Sustainable Development" contains only one reference to language.

Article 19 emphasizes "the responsibilities of all States, in conformity with the Charter of the United Nations, to respect, protect and promote human rights and fundamental freedoms for all, without distinction of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, disability or other status."

- e) In terms of implementing human rights, linguistic diversity and multilingualism guarantee inclusion, respect for and preservation of identity, quality education, access to information and knowledge, and freedom of expression; they also contribute to economic development and environmental stability.
- f) Human interaction in all spheres of activity unfolds increasingly not only in reality but also in the digital world. Cyberspace provides tremendous opportunities for access to information and communication, implementation of the freedom of expression, access to education and dissemination of cultures and is thus a key enabling factor in the realization of SDGs. Issues of linguistic diversity and multilingualism in cyberspace are thus taking on increasing topicality with regard to inclusivity and access to enable all to take full advantage of these opportunities.
- g) Meanwhile, recent developments in terms of ICT, biotechnologies, cognitive sciences and the so-called fourth industrial revolution, as well as their possible implications that could dramatically transform all aspects of our lives, had not been adequately addressed in the 2030 Agenda for Sustainable Development.
- h) Education is a crucial enabler for sustainable development and an essential tool to preserve languages and promote multilingualism. In this context, Open Educational Resources (OER) are a great opportunity for the enhancement of cultural and linguistic diversity. However, the landscape is totally dominated by the English language, and most nation states have no or few OER in their own national and regional/minority languages.

The participants of the Global Expert Meeting on Multilingualism in Cyberspace for Inclusive Sustainable Development,

Noting that the 2030 Agenda for Sustainable Development, which was adopted by the world's leaders at the landmark UN Sustainable Development Summit in 2015, has the vision of sustainable development focused on the interests of all people and the entire planet,

Being convinced that promotion and protection of linguistic diversity and multilingualism are crucial for humanity and should thus be considered as a determining factor of sustainable development of societies,

Recognizing that the world's regions and communities which are most favorable for linguistic and cultural diversity are at the same time the most disadvantaged from the perspective of economic and social development,

Emphasizing that the 2030 Agenda for Sustainable Development does not spotlight a separate goal or target that would call attention to the fact that languages are central to the global discourse on sustainable development and inclusion, and would directly respond to the demands of particular language speakers,

Urge national governments, UNESCO and other UN agencies managing the achievement of the SDGs, as well as private sector representatives, interested NGOs, scientists, journalists, cultural workers, educators and academics to:

- I. Recognize that cultural and linguistic diversity is one of the pillars of the sustainable development model, and its importance for the prosperity of each and everyone, and of the whole planet, is equal to that of economic growth, environmental protection and social integration,
- II. Advocate the need to integrate the language-related issues as a significant component in the documents defining and regulating the achievement of the following SDGs:
 - End poverty (Goal 1),
 - End hunger (Goal 2),
 - Ensure healthy lives and promote well-being (Goal 3),
 - Ensure inclusive and equitable quality education (Goal 4),
 - Promote sustainable economic growth and decent work (Goal 8),
 - Build infrastructure, promote industrialization and foster innovation (Goal 9),
 - Reduce inequality (Goal 10),
 - Make cities and human settlements sustainable (Goal 11),
 - Protect marine and coastal ecosystems (Goal 14),
 - Protect and restore terrestrial ecosystems (Goal 15),
 - Strengthen and revitalize the Global Partnership for Sustainable Development (Goal 17).
- III. Advocate for the inclusion in the global indicator framework for monitoring progress on the SDGs a new, language-related indicator as an important criterion of inclusiveness and disaggregation for the efforts undertaken, along with the already existing indicators related to income, sex, age, ethnicity, migratory status, disability, geographic location, etc.

IV. Take efforts to update and promote ethical, legal and social principles and norms to preserve linguistic and cultural diversity in cyberspace.

V. Facilitate research aimed at collecting, systematizing and analyzing statistical data related to the use of languages in various areas of social life, especially economic activity, with special attention to languages in education, including open licensed content.

VI. Launch and support initiatives related to the development of literacy in local languages in the context of lifelong education and provision of mother tongue-based multilingual education, and to consider such initiatives as an important component of sound economic policies fostering long-term sustainable development.

VII. Contribute to the expansion of linguistic diversity in the sphere of knowledge production by supporting open access to scientific knowledge, including "gray" scientific literature as one of the alternatives to traditional production of knowledge, and advocating the need to release government-funded scientific translations under open licenses.

VIII. Recommend to UNESCO as the UN agency coordinating activities in 2019, proclaimed by the UN General Assembly the International Year of Indigenous Languages, to attract more world attention to the issues related to multilingualism and linguistic diversity, including, in particular, the following proposals:

- 1. To intensify the development of the UNESCO World Atlas of Languages in terms of the number of languages represented and in terms of the quality, relevance and correspondence of the data contained therein to the real state of languages and their speakers.
- 2. To draw the attention of national governments to the fact that national language-related laws quite often lack due execution and, as a rule, do not regulate the use of languages in cyberspace.
- 3. To empower the creation of a permanent observatory of languages' evolution in cyberspace, in particular to accumulate statistical data, especially on the languages that lack representation or are absent in cyberspace.
- 4. To encourage the creation of an online multilingual periodical devoted to research and best practices in the sphere of providing access to cyberspace for languages, especially those that are absent from or underrepresented in cyberspace.
- 5. To support initiatives on training teachers and students to collect and document the vast knowledge in local languages in order to develop digital content, including OER, and disseminate it; to advocate the need to provide schools and universities with appropriate equipment and software.

- 6. To encourage speakers of the world's least spoken languages to acquire competencies (including media and information literacy) which enable them to create, document and disseminate indigenous knowledge that can be useful to the rest of the world, recognizing it as their unique advantage, as well as to sell their unique content with a focus on content marketing skills.
- 7. To facilitate the creation of centres of excellence to offer advisory opinion, monitoring and support to local initiatives on linguistic diversity promotion with special attention to translation networks and initiatives to promote the development of translation engines for non-dominant languages.
- 8. To raise awareness of all stakeholders in the field of the economy of linguistic diversity and multilingualism, in particular on how digital content in a local language can be used to develop and move forward the local economy. Establishing an award for the best projects in this sense can be a good kickoff.
- 9. To expand work with partner media organizations in order to attract media attention at various levels to the importance of languages in sustainable development initiatives.
- 10. To strengthen the efforts and facilitate the engagement of the International Centre for Multilingualism and Intercultural Understanding, established in Reykjavik (Iceland) under the auspices of UNESCO as a Category 2 Centre, in the implementation of the abovementioned activities and cooperation with active politicians and international experts particularly to carry out research projects to examine and understand the articulation of multilingualism and linguistic diversity with the achievement of sustainable development goals.

This document was produced through a collaborative process involving participants from the following countries: Argentina, Benin, Brazil, Central African Republic, China, Colombia, Czech Republic, Dominican Republic, Egypt, France, Georgia, Germany, Ghana, India, Iran, Italy, Kazakhstan, Latvia, Moldova, Netherlands, Norway, Palestine, Paraguay, Philippines, Russian Federation, Romania, South Africa, Spain, Sudan, Switzerland, Syria, UK, USA, and Zambia.

International Conference "Preservation of Languages and Development of Linguistic Diversity in Cyberspace: Context, Policies, Practices"

(1–5 July, 2019, Yakutsk, Russian Federation)

Final document

Yakutsk Resolution

The International Conference "Preservation of Languages and Development of Linguistic Diversity in Cyberspace: Context, Policies, Practices" took place in Yakutsk, Russian Federation, on 1–5 July, 2019, as a significant contribution by Russia and UNESCO to the implementation of the 2019 International Year of Indigenous Languages declared by the UN, as well as to UNESCO's efforts to achieve the Sustainable Development Goals, and to the implementation of the UNESCO Information for All Programme (IFAP).

It is the fourth (4th) major international forum jointly organized in Yakutsk by the Russian Committee of the UNESCO Information for All Programme, the Interregional Library Cooperation Centre, the Government of the Republic of Sakha (Yakutia) and Ammosov North-Eastern Federal University with the support of the Government of the Russian Federation, the Ministry of Foreign Affairs of the Russian Federation, the Commission of the Russian Federation for UNESCO, the Russian Federal Agency for Ethnic Affairs, the Russian Federal Agency for Print and Mass Communications under the auspices of UNESCO.

The event brought together experts from 63 countries from all regions of the world: public figures, politicians, diplomats, researchers working in the fields of ethnolinguistics, sociolinguistics, ethnopolitology, ethnosociology, cultural anthropology, philosophy, as well as specialists in the elaboration and analysis of national and international language policies, educationalists, academics, representatives of cultural institutions and the info-communication sphere.

Preamble

Languages are unique tools for understanding, describing and analyzing reality. They form the worldview and reflect the historical and social experience of nations. Largely due to UNESCO's efforts, more people today are aware of the role of languages and the importance of preserving languages. It is vitally important to preserve languages, since globalization and urbanization are rapidly

reducing linguistic and cultural diversity, which is a source of intellectual and cultural development and a cornerstone of pluralistic, equitable and inclusive knowledge societies, and sustainable development.

Given that languages are often used as tools for cultural, political and economic domination, ideological manipulation, separation and identity alteration in relation to both individuals and whole nations, linguistic diversity issues have become more relevant than ever before.

It is indisputable that particular attention should be paid to indigenous languages threatened with extinction, primarily due to the small number of speakers, often living in difficult socio-cultural and economic conditions. The loss of such languages may result in a serious reduction in cultural diversity which has been the hallmark of human life on our planet.

The position of indigenous languages cannot be considered separately from the context of multilingualism and linguistic diversity in the real world and in cyberspace. Modern reality, sociocultural transformations in specific countries and throughout the world, political, economic and social processes and trends should not be overlooked.

Language problems in the whole world, especially in really multilingual countries, should not be narrowed down to discussing small indigenous languages. Today, many major and well-equipped languages are also declining in use in various fields – in education, science, business, politics, the media, etc. Even if these languages are spoken by tens of millions of people, the fact that official communications are in a dominant language (such as English) which the majority do not master means that they are marginalized.

Attempts are being made all over the world to make languages visible in all possible ways including in cyberspace. Behind the *digital divide*, understood as a connection problem, lies a deeper and more meaningful *content divide*, directly linked to languages. Little or no content produced in many languages compels their speakers to seek content in other languages and eventually abandon their own languages permanently. Care must be taken to establish a multilingual knowledge system, with a view to producing more and more content in all languages and strengthening language communities so that they can produce original content and increasingly translate to and from other languages.

The fewer opportunities to use different languages (minor, unofficial, official, state and foreign) the less the amount of information its speakers can acquire. And the more languages individuals (and the entire language communities) use, including their first or mother tongues, the wider their *language repertoire*, the more access to information and knowledge and opportunities for self-

expression, description, understanding and analysis of reality they get, the stronger and the more extensive is communication. It is important to recognize the *multilingual repertoires* that people and communities generally use and not just think in terms of individual languages. In this sense, it is necessary to have more multilingualism and not less, and not only in the direction of adding the more spoken languages.

The use of digital technologies can pose threats to many language communities, but we need to consider also that the modern technological environment empowers new uses of less-resourced languages, including oral ones, supporting their preservation and development. Digital technologies, at the same time, facilitate a greater contact of languages and of people inside and between language communities.

Solving the problems of preservation, revival, development and promotion of indigenous languages requires a differentiated approach depending on the function and load of each language and the sociocultural environment in which it exists.

Equipping languages should be focused not on models produced over the past centuries, often in the context of more hierarchical, authoritarian and excluding societies, but on language repertoires, language communities and their demands of different types, demands that organise their linguistic uses. These linguistic uses should point the direction for any development of resources by and for the users of the languages.

Taking into account all the above and recalling the

- Outcomes of the First, the Second and the Third International Conferences on Linguistic and Cultural Diversity in Cyberspace (Yakutsk, Russian Federation, 2008, 2011, 2014), as well as the Bamako International Forum on Multilingualism (Bamako, Mali, 2009), the 1st International Symposium on Multilingualism in Cyberspace (SIMC I Barcelona, Spain, 2009), the 2nd International Symposium on Multilingualism in Cyberspace (SIMC II Brasilia, Brasil, 2011) and the 3nd International Symposium on Multilingualism in Cyberspace (SIMC III Paris, France, 2012), the International Expert Meeting on Improving Access to Multilingual Cyberspace (UNESCO's Headquarters in Paris, 2014), the Ugra Global Expert Meeting on Multilingualism in Cyberspace and the Ugra World Expert Meeting on Multilingualism in Cyberspace for Inclusive Sustainable Development (Khanty-Mansyisk, Russian Federation, 2015, 2017);
- Universal Declaration on Cultural Diversity;

- UNESCO Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace;
- Key documents of the World Summit on the Information Society (Geneva, 2003, and Tunis, 2005) and the Vision for WSIS Beyond 2015 (WSIS+10, Geneva, 2014);
- Holding by the United Nations System, under the coordination of UNESCO, of the International Year of Indigenous Languages in 2019,

Conference participants agree on the following:

- ✓ Achieving Sustainable Development Goals depends on effective communication which is inclusive of indigenous languages and multilingualism in order to ensure that NO ONE is left behind.
- ✓ It is necessary to build on the needs of language communities, to recognise and promote their language repertoires and the joint equipping of language sets, to better address the needs of language communities in the context of sustainable development as indicated by the SDGs (2015–30). This vision will ensure that languages are recognised as rights; it will further ensure that languages, incuding the less spoken ones, are recognised as resources for life and for the future. It means we need more and not less multilingualism.
- ✓ Language policy design needs a shift, moving from quantitative motivations to qualitative ones (especially those describing the functionality of a given language). An integral and thorough language policy would place the real language use and its context on the forefront.
- ✓ One of the most evident problems today is not the lack of good legislations regarding multilingual rights, but the lack or insufficiency of implementation strategies. Overcoming these limitations would require more participative consultation policies with the linguistic communities.
- ✓ The issues faced by truly small languages (with a handful of users) can differ greatly from those of "small" languages (with tens or even hundreds of thousands of users). At the same time, many of the phenomena that affect less spoken languages, linked to their obsolescence in terms of equipment, loss of scope, loss of ability to produce contemporary content, which force their users to choose other languages, are now getting more and more relevant for medium-sized and major languages

- used by millions of people. For that reason it is important to go deeper into research on linguistic loss and to undertake realistic analyses on the subject.
- ✓ Further technological tools such as automatic summarisation and translation should be largely distributed to facilitate access to scientific information to users of all languages over the world.
- ✓ Teenagers and other young people are the most frequent users of language technologies on the Internet. They are the future of language, transmitting it in a short time to the next generations in a very different context than their parents did. It is therefore essential to develop specific ideas and programmes focused on the younger citizens of Member States, bearing in mind that the preservation and development of a language is possible only when a generation of children inherits this language in direct communication with previous generations, parents, grandparents, and their peers.
- ✓ Concerning resources for languages, we need to increasingly consider that languages themselves are resources for language communities, societies in general, and states: languages are *sine qua non* for the good achievement of the Sustainable Development Goals, for example. In this sense, it is important not only to maintain the perspective that languages and their use are a right for the communities involved, a perspective that has been developed in the documentation in the area, but also a social, economic and political resource to be used, even when it comes to the languages used by small communities.

Regarding all the above the Conference has elaborated the following recommendations.

At the political level:

- 1. All stakeholders should seek to facilitate the emergence of knowledge societies respecting human rights and values and based on the four pillars, including cultural and linguistic diversity, freedom of expression, universal access to information and knowledge, and quality education for all.
- 2. UNESCO, especially through its Information for All Programme (IFAP), should pursue in cooperation with relevant UN agencies, IGOs and NGOs the efforts for further development and promotion of ethical, legal and societal principles and norms for preserving linguistic and cultural diversity worldwide, in particular in cyberspace. In the same token, participants

- would recommend UNESCO to develop guidelines on language policies similar to the documents issued about information and knowledge societies, aiming at fostering language vitality and its preservation.
- 3. All stakeholders should encourage governments to enact and implement more effective national policies in support of preservation of linguistic and cultural diversity.
- 4. All stakeholders should continue to promote and support the creation and free dissemination of language resources (alphabets, diacritic marks, phonetic language resources, Wikipedia, Wiktionaries, and related technical means, with specific reference to the use of virtual keyboards), necessary for the use of indigenous and minoritised languages in cyberspace ensuring more digital opportunities for all languages. Social technologies are important as well, like language officialization, bilingual or multilingual curricula, teaching methods, common framework of reference for languages, among others.
- 5. States should ensure that technology education in schools be integrated with the learning and teaching of national and local languages and the enhancement of cultures that are essential to peoples and countries.
- 6. States should also encourage the construction of language content in cyberspace that would safeguard integrity, interculturality and reinforce the shared values of dialogue amongst cultures.
- 7. It is important to invite the UNESCO Institute of Statistics, in cooperation with other technical national institutes, to improve mechanisms for better measuring of the situation of languages in cyberspace.

At the practical level:

- 1. Strategies need to be developed to help individuals to use language technologies and develop confidence in their own abilities so that more people in different language communities can become more involved in communicating and delivering content in their languages. This should include digital and media literacy, because a digitally-literate citizen is the first line of defence, and is a key stakeholder in the digital economy and society.
- 2. Universities as powerful institutions to investigate the linguistic situation, to help equip languages, to organise language courses and to train professionals capable of using languages in different contexts, should be encouraged and oriented to devote more energy to the overall effort

to support language use, multilingualism and linguistic diversity. This also includes transforming universities' linguistic practices, turning themselves into multilingual institutions by including more languages in teaching and research.

- 3. In language education, beyond the dimension of languages as mother tongues, more attention should be given to teaching second and third languages, which represent the flow of linguistic communities in the social space, in search of a better life. Smaller languages will also benefit from this strategy, if they can be prepared to be taught to non-speakers.
- 4. Given the huge role of ICT corporations in the contemporary equipping of languages, it is essential to engage them in the discussions and in the permanent and rapid expansion of the tools and equipment necessary for all languages to be used digitally. It is important today to equip not individual languages, but language sets on the same technology bases. This is basically due to three reasons:
 - equipping a set of languages within a common space optimizes the investment made with the development of the tools, as the same tool serves multiple languages;
 - ii) this strategy mirrors the previously discussed fact that communities in general increasingly use language repertoires and not just individual languages;
 - iii) finally, most of the language tools, such as electronic translators, serve precisely to connect languages and allow information to be passed from one to the other, that is, there are obvious advantages to the efficient connection between them in having language sets sharing the same tools.
- 5. At the same time, new types of alliance between civil society, academy, and governments have to be established to try to counterbalance the excessive concentration of power over languages and their circulation by those bodies.
- 6. The state must support the sustainable work of civic organizations that successfully develop indigenous and other less-spoken languages (e.g., via community based language development, literacy, or language nests), including by providing long-term earmarked subsidies and grants, as well as through administrative support.
- 7. The introduction of artificial intelligence (AI) technologies can greatly accelerate the equipping of languages and benefiting users. However, it

urges us to be aware of the gender and racial biases that might be imported from spoken and written languages into the virtual sphere, and refer to AI as an opportunity to reduce such biases.

The Conference also especially recommends UNESCO, and other relevant international, regional and national stakeholders to:

- Facilitate assistance for the promotion and development of social technologies for languages and language resources; promoting and encouraging international cooperation in the area with the objective to strengthen the use of languages in cyberspace. This works in the sense that all people are equal, and all languages should be given equal chances.
- Welcome the start of the data collection phase for the UNESCO Atlas of the Languages of the World, which extends the scope of the UNESCO Atlas of Languages in Danger and includes in its questionnaire questions on the usability and use of languages in cyberspace, as well as on their technological equipment, which will allow a broad global analysis on the matter.
- Initiate a preparatory process for a World Summit on Multilingualism as
 it is highly desirable for the preservation and development of the world's
 languages and cultures in the context of the superdiversity produced by
 communications in cyberspace, economic globalisation and international
 migrations.

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