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Linguistic diversity as a proxy for the status and trends of traditional knowledge:

An Indicator based on Official National Language Statistics

Results and Challenges

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*UNESCO's
Atlas of the World's Languages
in Danger (2009)*

about half of the
estimated 6000 languages spoken
today are at risk of disappearing
before the end of this century

online version:
<http://www.unesco.org/culture/languages-atlas>



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Project background

- *Status and trends in numbers of speakers of indigenous languages* as one of the 2010/20 Target Indicators for the Convention on Biodiversity.
- Biodiversity Indicators Partnership (BIP) coordinated by UNEP-WCMC



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Some caveats

- Inscription of indigenous knowledge in languages is well-documented
- e.g. specialized terminologies for phenomena of relevance for knowing and managing biodiversity

BUT:

- Not all knowledge is inscribed in language
- Language can be maintained but specialized biodiversity relevant terminologies may be lost
- Cases exist where language has been lost, but knowledge maintained



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Challenges to Operationalize

- Need for data that is readily accessible or simple to collect on a broad scale
- Consistent time series
- Comparability of data sets over space and time
- Advantages of National Census/Survey Data
 - Data already collected
 - Data collection apparatus available and/or accessible
 - Data collection process specified
 - Reasonable consistency within countries over time
 - Official and therefore less contested

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Method

- Start compiling data in 2008
- Database on numbers of speakers.
- Sources : national statistical offices (mainly censuses and surveys)
- Possibility to calculate statistical trends.

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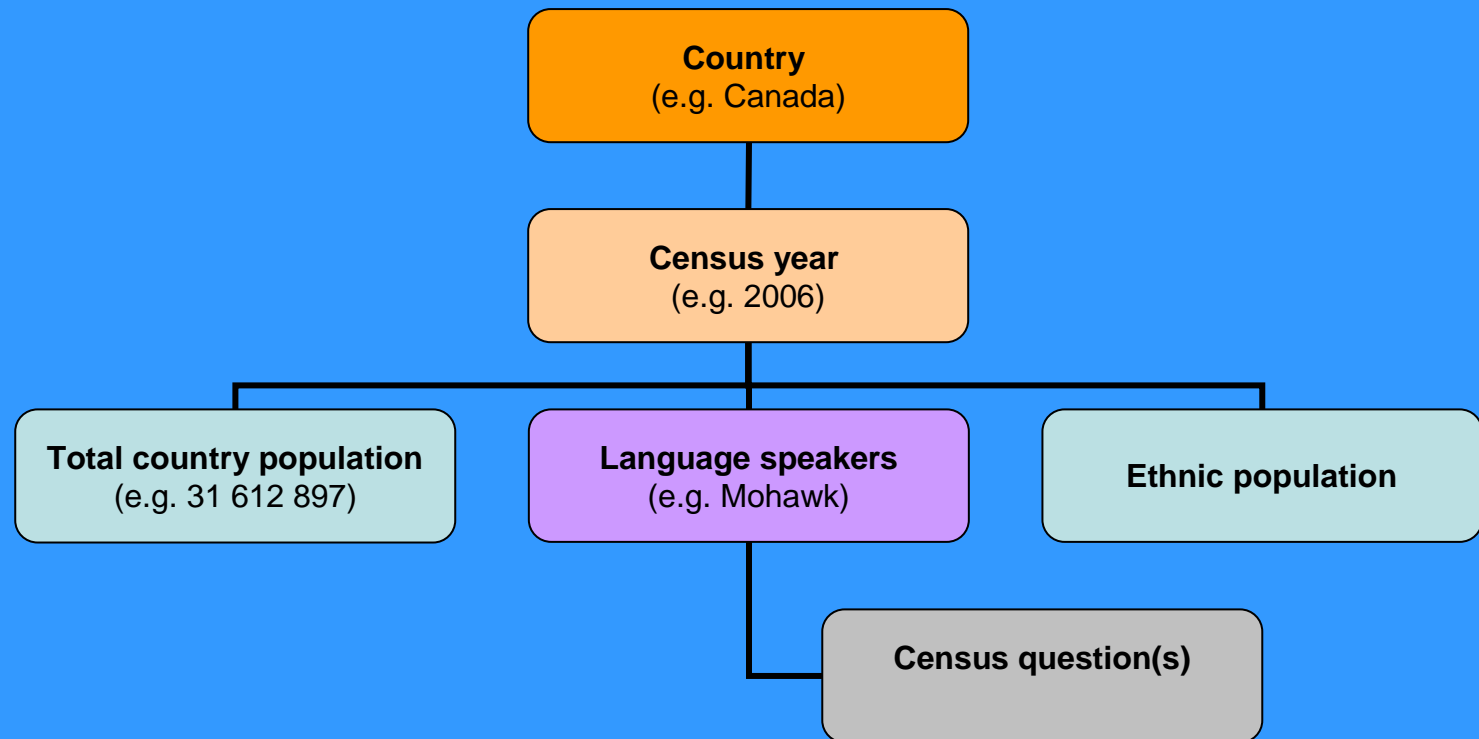
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Organization of the Languages Database

Main and secondary data by data type



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Number of speakers of Mohawk (as a mother tongue): 295 in Canada (2006).
Number of speakers of Mohawk (as a language spoken at home): 20 in Canada (2006).



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A Typology of Language Questions

Language questions asked in the 2006 census of Canada

- Can this person speak English or French well enough to conduct a conversation?
- What language(s) other than English or French, can this person speak well enough to conduct a conversation?
- What language does this person speak most at home?
- Does this person speak any other languages on a regular basis at home?
- What is the language that this person first learned at home in childhood and still understands?



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Typology of Language Questions

UNESCO has identified 5 types of question in use

- **Mother tongue**
- **Spoken language(s)**
- **Language spoken at home**
- **Fluently spoken language(s)**
- **Ability to speak the language of the ethnic group**

UN Statistics Division recommends 3 types of data for languages

- **Mother tongue**
- **Usual language**
- **Ability to speak one or more designated languages**

Source : Principles and recommendations for population and housing census. Second revised version. New York 2008.



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Languages and Traditional Knowledge Compiled Data

Characteristics

- Data compiled for 62 countries
- Time period: 1959-2008
- 2662 distinct entries
- Approximately 800 languages

Browsing functionalities

- Consult data
- Build language trends
- See the available census questions and variables concerning languages.
- Build graphs

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Preliminary study of language trends

- **36 countries** with languages surveyed more than once
ex. Australia, Bolivia, Finland, Mexico, Nepal, Philippines, South Africa, USA, Zambia, etc.
- Preliminary study of **483 languages**
- Time-span of the sample: 1959-2008
- Comparison of data for the earliest and latest available survey year

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Preliminary study on language trends

Language maintenance and language attrition

Language	First year	Number of speakers	Latest year	Number of speakers	Growth rate
English	1991	2784	2001	1037	37
Awadhi	1991	374638	2001	560744	150
Byangshi	1991	1314	2001	1734	132
Bengali	1991	27712	2001	23602	85
Bhojpuri	1991	1379717	2001	1712536	124
Gurung	1991	227918	2001	338925	149
Hindi	1991	170997	2001	105765	62
Jirel	1991	4229	2001	4919	116
Manjhi	1991	11322	2001	21841	193
Nepali	1991	9302880	2001	11053255	119
Newar	1991	690007	2001	825458	120

Growth rates for languages in Nepal included in the sample study (excerpt). **Maintenance** trends are indicated in green, while **attrition** trends are indicated in red.

Source: Nepal Central Bureau of Statistics, 1991 and 2001 census; UN Demographic Yearbook.

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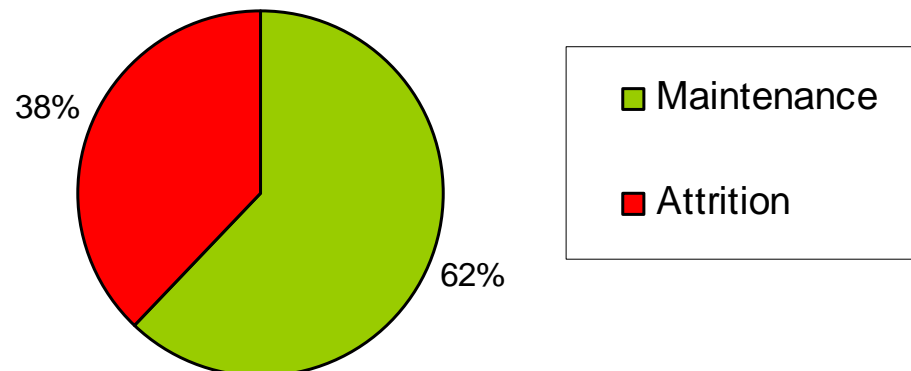
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Results of the preliminary study

Languages of the sample study by type of trend



Note : Figures on maintenance and attrition were obtained on the basis of absolute growth.

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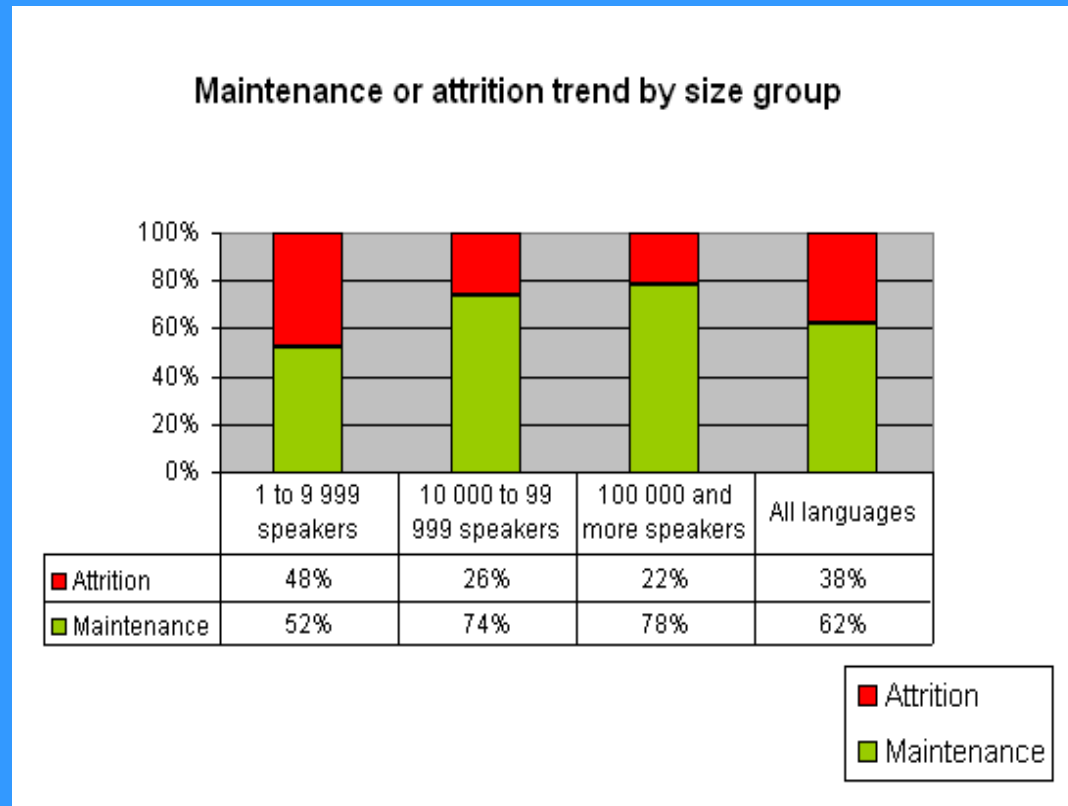
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Preliminary study on language trends

Results by groups size



Note : i) The size group classification was applied to the earliest data point available. ii) Figures on maintenance and attrition were obtained on the basis of absolute growth.

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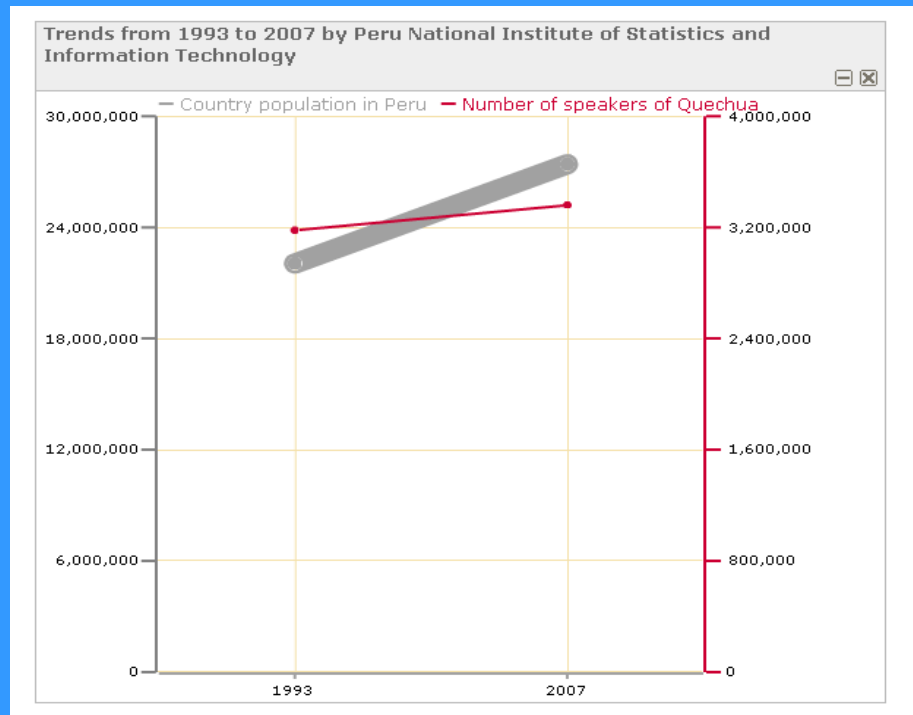
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Language trends and country population trends

Trends in number of speakers of Quechua in Peru compared to the total population of the country (1993-2007).



Source : INEI Instituto Nacional de Estadística e Informática, 1993 and 2007 census.

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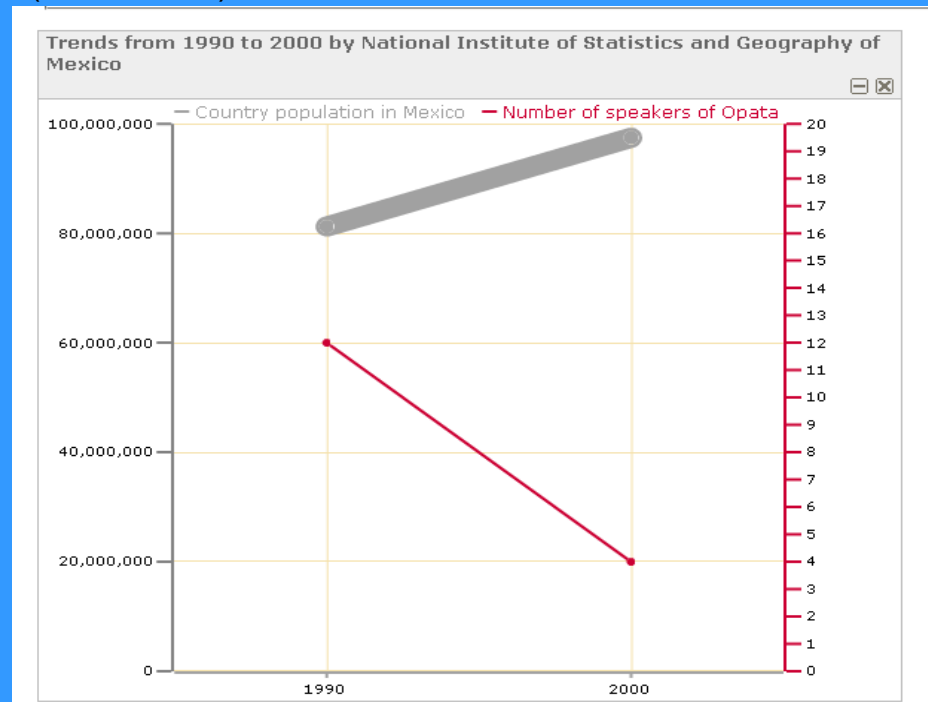
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Language trends and country population trends

Trends in number of speakers of Opata in Mexico compared to the total population of the country (1990-2000).



Source : INEGI Instituto Nacional de Estadística y Geografía de México, 1990 and 2000 census.

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Some Conclusions

- **Official language statistics corroborate the expert's estimates on the decrease of linguistic diversity.**
- **National censuses and surveys are a useful tool for measuring linguistic diversity.**
- **Recommendations at a national and international scale.**

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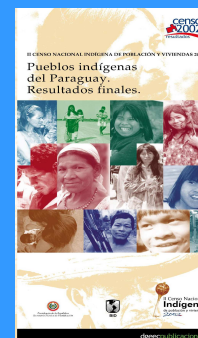
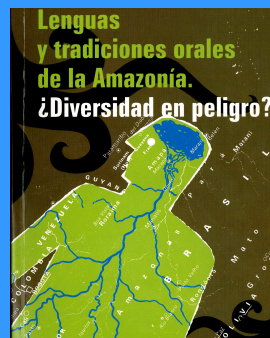
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Some Conclusions

Recommendations and best practices at the national level

- Importance of censuses in the monitoring of linguistic diversity.
- Collaboration between national statistical offices and experts in language monitoring: construction, analysis and dissemination of official statistical data on languages.



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Some Conclusions

Recommendations and best practices at the international level

“It is recommended that countries collect data on the core topics ..., as this would improve the international harmonization and comparability of statistics through the use of common concepts, definitions and classifications.”

UN Statistics Division, *Principles and recommendations for Population and Housing Census*. Second revised version. New York 2008. p. 109.

Recommended social and demographic census topics for the 2010 round

Census topic	Type of topic
Sex	core topic
Age	core topic
Marital status	core topic
Religion	additional topic
Language	additional topic
Ethnicity	additional topic
Indigenous peoples	additional topic

Source: UN Statistics Division, *Principles and recommendations for population and housing censuses*. Second revised edition. New York, 2008



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