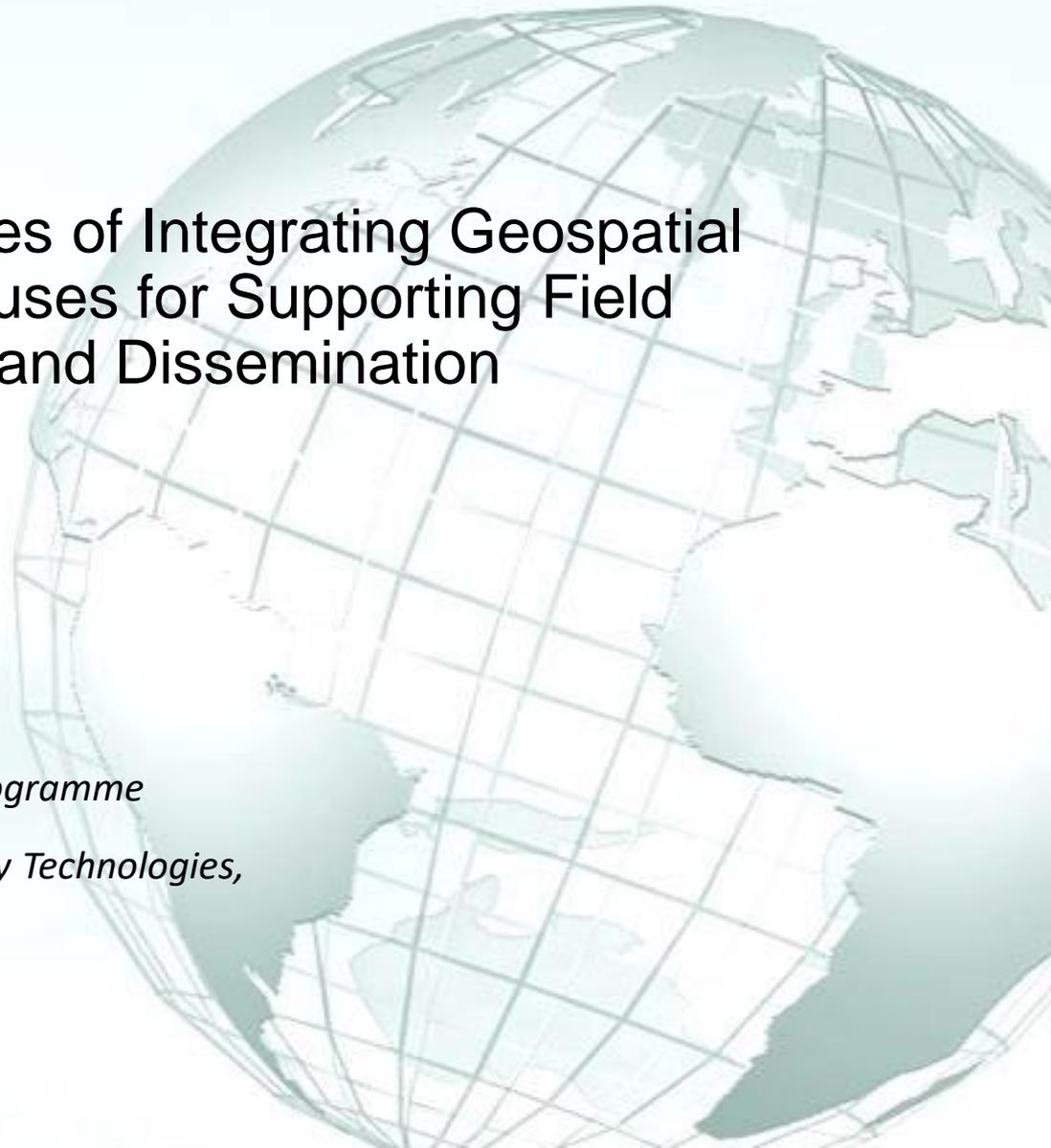


Group Discussion

Benefits and Challenges of Integrating Geospatial Information in Censuses for Supporting Field Enumeration and Dissemination

*Regional Workshop on the 2020 World Programme
on Population and Housing Censuses:
International Standards and Contemporary Technologies,
12-15 March 2019,
Ankara - Turkey*



Census Processes:

1. Pre-Census
2. Census
3. Post-Census



Thank you,
to those who contributed
for these discussions and conclusions.

The participants represented the following
of countries:

Gambia, Iran, Indonesia, Uganda, Malaysia,
Bangladesh, Turkey and Albania



*Together, everyone archives
more pieces of the puzzle.*

Post

Data visualization tool allow anyone to organize and present information intuitively

we can make the mapping boundaries.

Challenges

- ① Maps are by default in digital
 - ② Accuracy of the maps
 - ③ Detailed
- ↳ Impact of GIS
↳ Globalization

PE enum

for developing system infrastructure.

Identify your enum
✓ Integrated analysis

Post enum benefit
- Comprehensive analysis

Challenge

- Cost and time to create maps.
- Size of maps can performance bottleneck

Challenge

- Cost of procuring the necessary GIS software

Challenge

- Interoperability
- Common standards & formats

We collect data in individual household level data as...

layers expertise and technical capabilities

Need by investment

Post

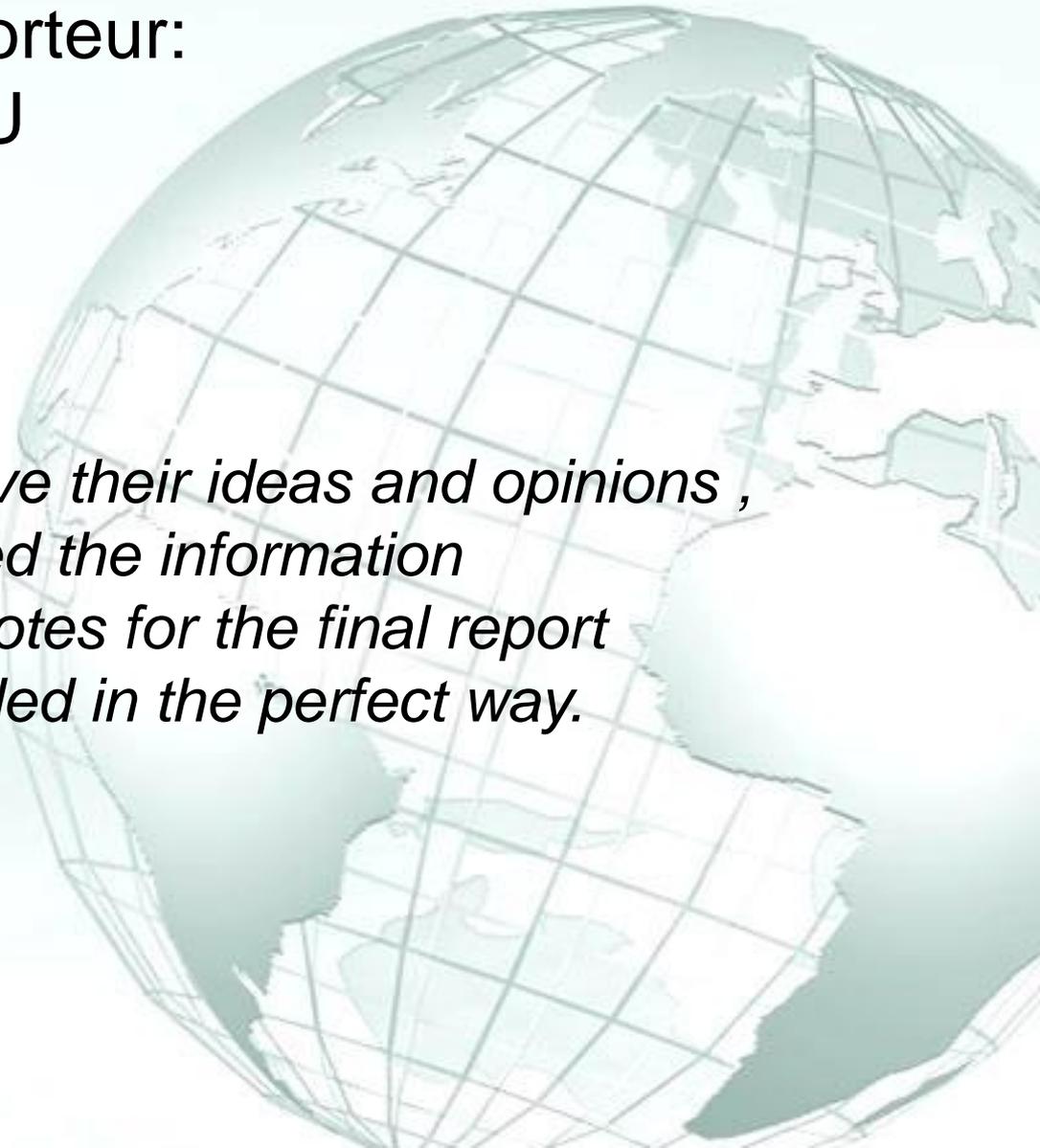
Generating census data area statistics or specific area for user.
→ Producing thematic maps from various sources especially.

Generating census

E-Data region of Enumeration for 2022 can map from 05/20

Thank you very much
to our Group Rapporteur:
Eda Evin AKSU

*After, that everyone give their ideas and opinions ,
she collected the information
and kept every notes for the final report
that she concluded in the perfect way.*



*GIS

Support, Dissemination

Pre-Enumeration

During

Post

* Mapping is useful

* Dissemination

- ↳ Better enumeration areas allocated to enumerators
- ↳ Distribution of addresses logistics management of the field work (1)
- ↳ Organisation of field work (2)
- ↳ Strategic partnerships → non-government agencies
- ↳ we can minimize the overlapping boundaries (3)
- ↳ under and over coverage problems.

↳ Help monitoring the census activities and enumeration (4)

↳ Control enumerators position (5)

↳ Dashboard

↳ Producing thematic maps

↳ Generating census data areal statistics or specific area for user

↳ Dissemination of more useful friendly visualisation of census data.

↳ develop an electronic application for field management that will be able to handle staff and materials, and monitor in real time field operations through a tracking mechanism based on GPS functions in the tablets of enumerators.

↳ when administrative boundary change, it is possible to calculate the new population

↳ data visualisation tool allow anyone to organize and present information intuitively.

↳ integrates analysis

↳ comprehensive analysis

↳ data is collected in individual household level but the database disseminated at aggregate level.

→ Challenges

↳ much effort for developing system.

↳ Needs infrastructure

↳ lack of expertise and technical capabilities

↳ Needs big investment

↳ Cost of procuring the necessary GIS software

↳ Cost and time to create & update maps

↳ Size of maps can cause performance problems.

↳ Cost of infrastructure

↳ Maps too big → impact on downloading the maps

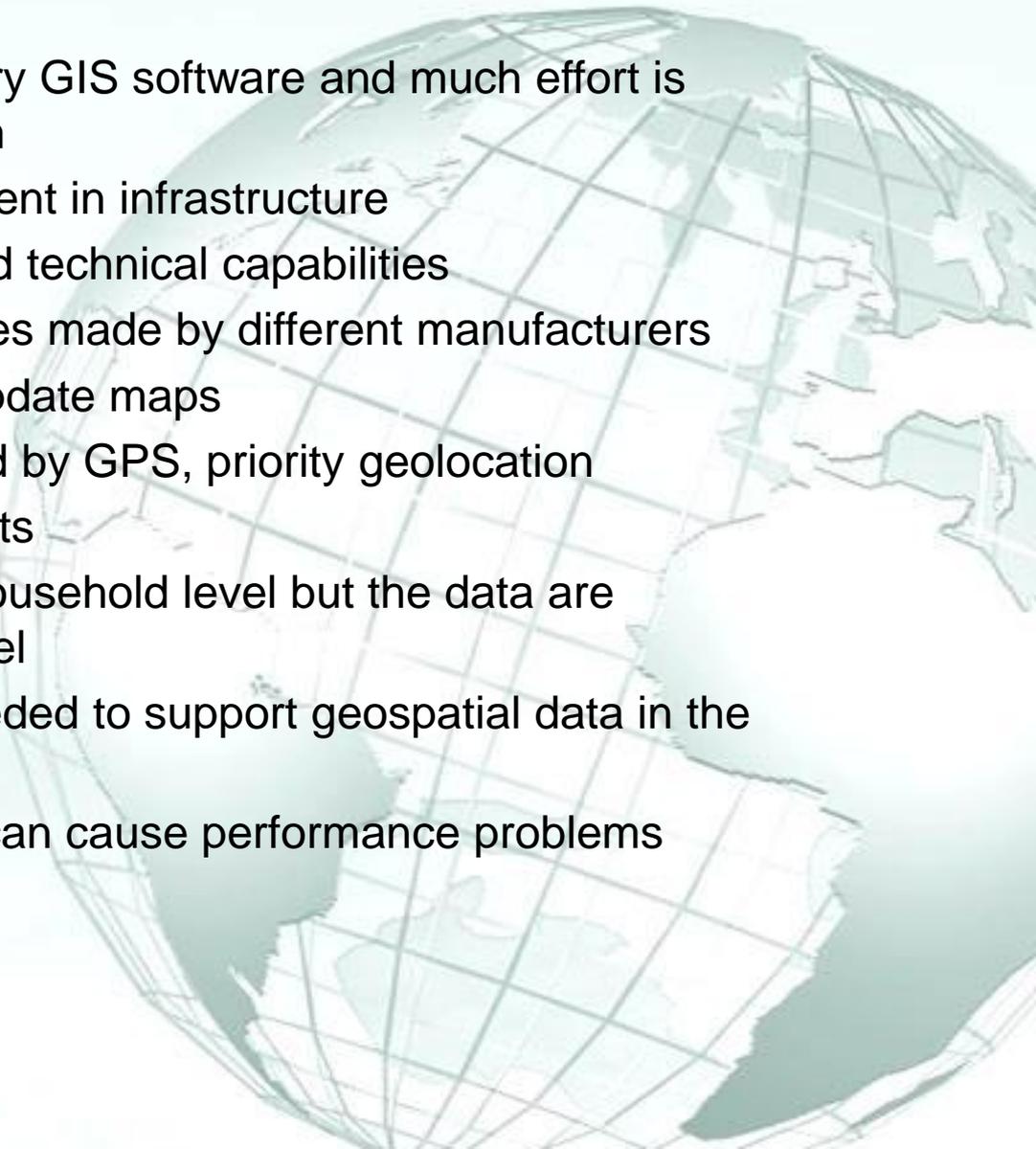
↳ Accuracy of the maps detected by GPS → pinpoint geolocation

↳ massive infrastructure of ICT to support geospatial data in the scope

Benefits

Pre-Enumeration	Enumeration	Post-Enumeration
1.Minimizing the overlapping or uncovered boundaries	5.Help monitoring census activities and enumerator	7.Integrates and Compresive Analysis
2.Organization of field work	6.Generating census data area statistics or specific area for the user	8.Data visualisation tool allow anyone to organize and present information intuitively
3.Better allocation of enumeration areas		
4.Ease the management of the field work		

Challenges

1. Cost of procuring the necessary GIS software and much effort is required for developing system
 2. Needs and cost of big investment in infrastructure
 3. Lack of or limited expertise and technical capabilities
 4. Interoperability between devices made by different manufacturers
 5. Cost and time to create and update maps
 6. Accuracy of the maps detected by GPS, priority geolocation
 7. Common standards and formats
 8. We collect data in individual household level but the data are disseminated at aggregate level
 9. Massive ICT infrastructure needed to support geospatial data in the scope of storage, devices
 10. Maps are usually too big and can cause performance problems
- 

Date 14.03.2019

*Benefits and Challenges of Adoption of Electronic data
collection Technologies in Population and Housing
Censuses*



Benefits

1. Easy to monitor field work
 2. Collects paradata
 3. Improve data quality (skips, validations, verifications, etc.)
 1. Provides making consistency checks during field work, real time editing and supervision
 4. Time saving (one-time data capture, entry, Pre-entered values)
 5. Integration with GPS and GIS
 6. Improved security and data confidentiality (user authorization, encryption, etc.)
 7. Trouble shooting will be handled easier
 8. Provides data collection regardless of online or offline collection
 9. Reduced data processing requirements,
 10. Faster dissemination / release of results
- 

Challenges

1. Cost considerations of investment (tablets, technical expertise, software etc.)
 2. Need qualified human resources
 3. Limitations depending on technological problems
 4. Risk of system failure (energy, hacking, etc.)
 5. More time needed in the preparatory stage
 6. Editing rules must be well tested before application
 7. Need for sustainable power supply and capable broadband network coverage
 8. Theft, damage, loss of equipment
 9. Internet attacks to web application
 10. Data integration from multi mode sources
 11. Change management?
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