International Medical Corps GIS

NetHope Crisis Informatics Webinar
7/28/2016

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GIS Manager
Agenda

• History of International Medical Corps GIS Team

• West Africa Ebola GIS Case Studies
  – Administrative boundary sources
  – Ebola Data Analysis
  – Village / Health facility coordinate locations
History

• GIS office formed 2 ½ years ago
• ESRI software – Cornerstone application
• Personnel build
• Establishing SOPs, database management and training
  – Continuing process
Vision

- Enterprise asset
  - Crisis Events
  - Headquarters to the Field
  - Supports organizational lines of business
- Layering, fusion visualization and analysis of information
• Data Mart Construct
• Multiple systems
• Repurpose information for extraction
• Utilize for decision making

Source Systems:
- CP
- FAM
- T & E
- CR
- Primavera
- Raiser's Edge
- RAAM
- DHIS2
- Security
- Travel
- TM1
- GIS Data Collection

DW / Data Marts:
- Projects
- Anticipated Awards
- Employees
- Requisitions
- Shortfalls
- GIK
- Incidents
- Private Donations
- Travel & Training
- Emergency Response

BI Applications:
- IBM (Cognos BI, TM1, SPSS)
  - Business Intelligence
  - Performance Management
  - Advance Analytics
- ArcGIS (Desktop, Online)
  - Maps
  - Geo Spatial Analysis

Access:
- Desktop
- Online
- Mobile
## Region/SubRegion Comparison

<table>
<thead>
<tr>
<th>Country</th>
<th>Study Region</th>
<th>Study Region Admin Level</th>
<th>Study SubRegion</th>
<th>Study SubRegion Admin Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberia</td>
<td>County</td>
<td>1</td>
<td>District</td>
<td>2</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>District</td>
<td>2</td>
<td>Chiefdom</td>
<td>3</td>
</tr>
<tr>
<td>Guinea</td>
<td>Prefecture</td>
<td>2</td>
<td>Sous-Prefecture</td>
<td>3</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>Region</td>
<td>2</td>
<td>Département</td>
<td>3</td>
</tr>
</tbody>
</table>
Ebola Data Study Results

Patient Admissions to Treatment Units Over Time:

Admissions to Treatment Units by Sex - Diagnosis and Outcome:

Probability of Survival By Age:
Guinea Sample Faux Data

Faux Village/Facility

Country
Region
Prefecture
Sous-prefecture
Faux Quartier/District

Note: The boundaries, names and designations on this map do not imply official endorsement or acceptance by International Medical Corps.
Conclusion

• Data consistency
• MAUP
• Valid data source for geocoding; administrative divisions
Thank you!

International Medical Corps GIS Team
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