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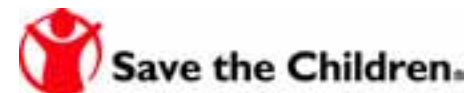
UC1489: Use of GIS for Sampling to Conduct Sample Survey

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Save the Children-USA, Bangladesh

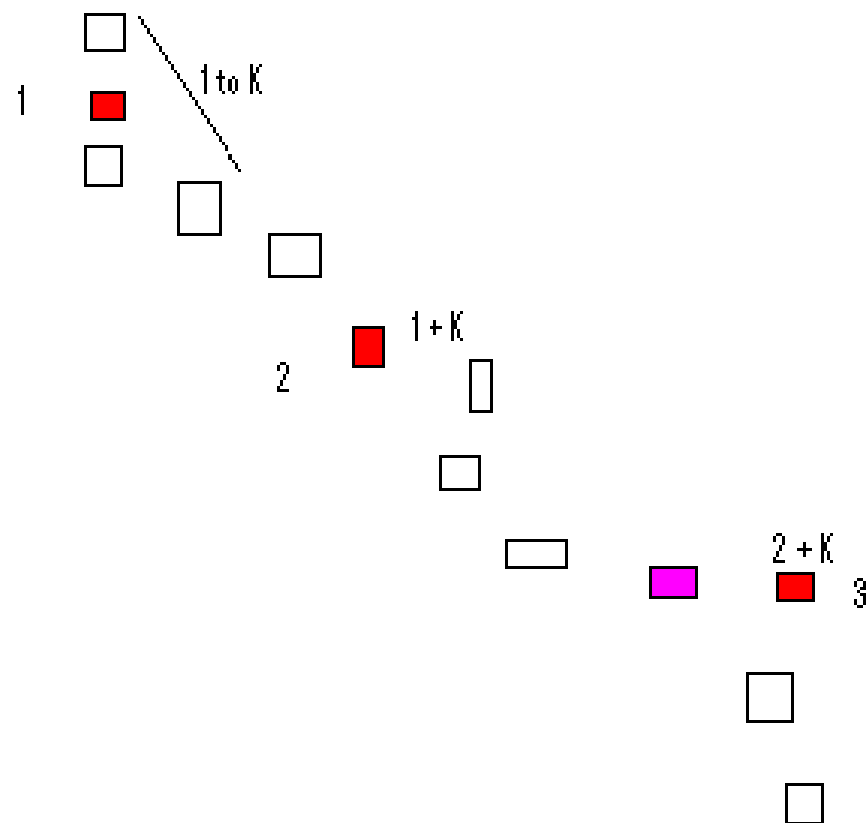


Background

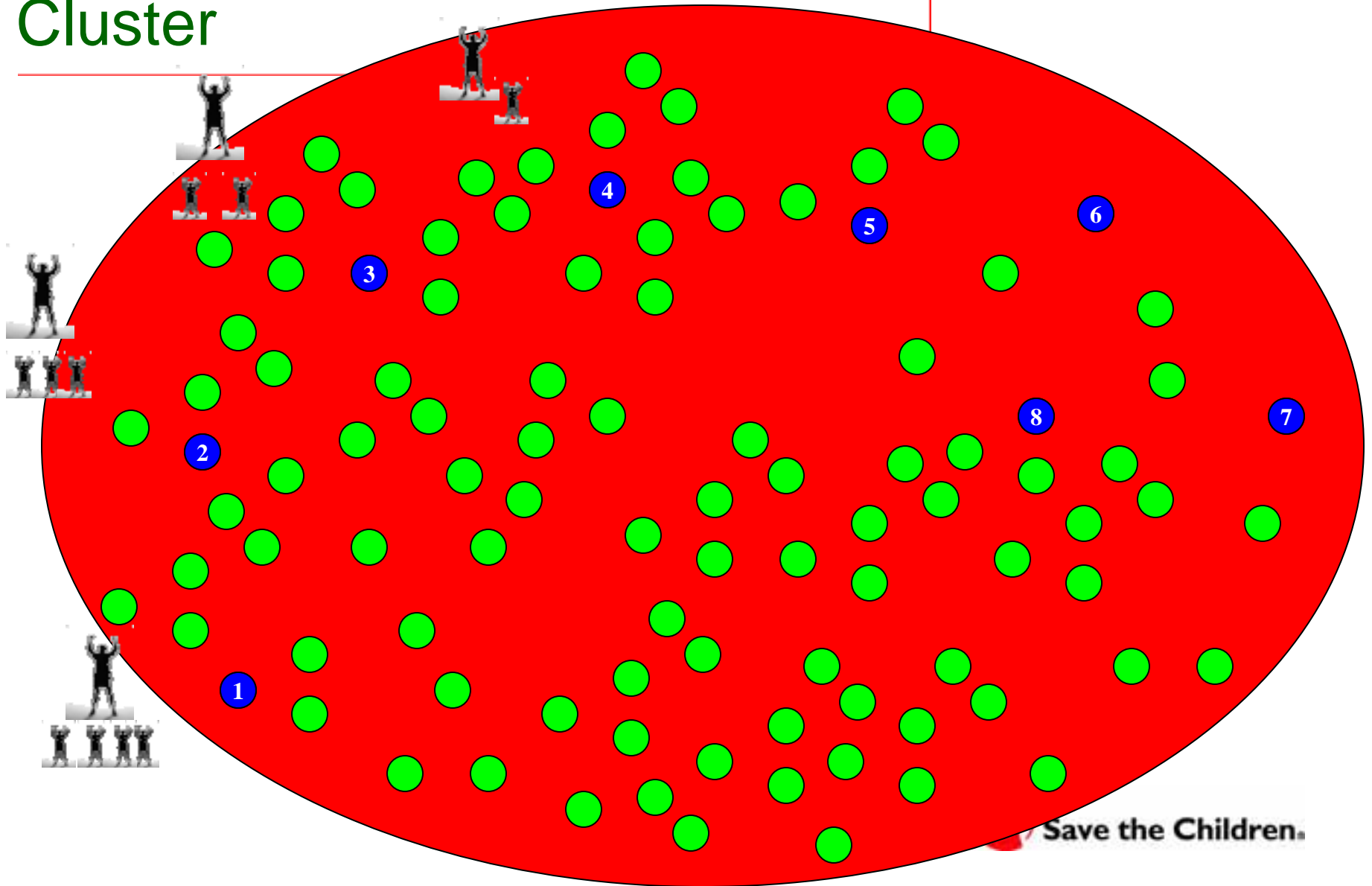
- To help assess outcome and impact, development programs often conduct sample surveys. Clear and accurate survey data is also an important program management and decision-making tool.
- Application of the appropriate sampling method is important to ensure quality data- systematic random cluster sampling method is a popular method.
- In systematic random sampling method, samples are selected using a sampling interval.
- Following the right sampling interval can ensure well-spread samples in a cluster for quality data.
- In June 2009, SC conducted an endline survey for a food security program in Bangladesh and used GIS to verify use of the correct sampling interval and well-spread samples in a cluster.

Systematic Random Sampling Procedure

- Sampling interval = Total sampling units in the cluster \div no. of samples to be selected = K .
- First sample is selected randomly from 1 to K number of sampling units.
- Subsequent samples are selected after K^{th} interval from previous selected one.
- This procedure ensures information from every part of the cluster.

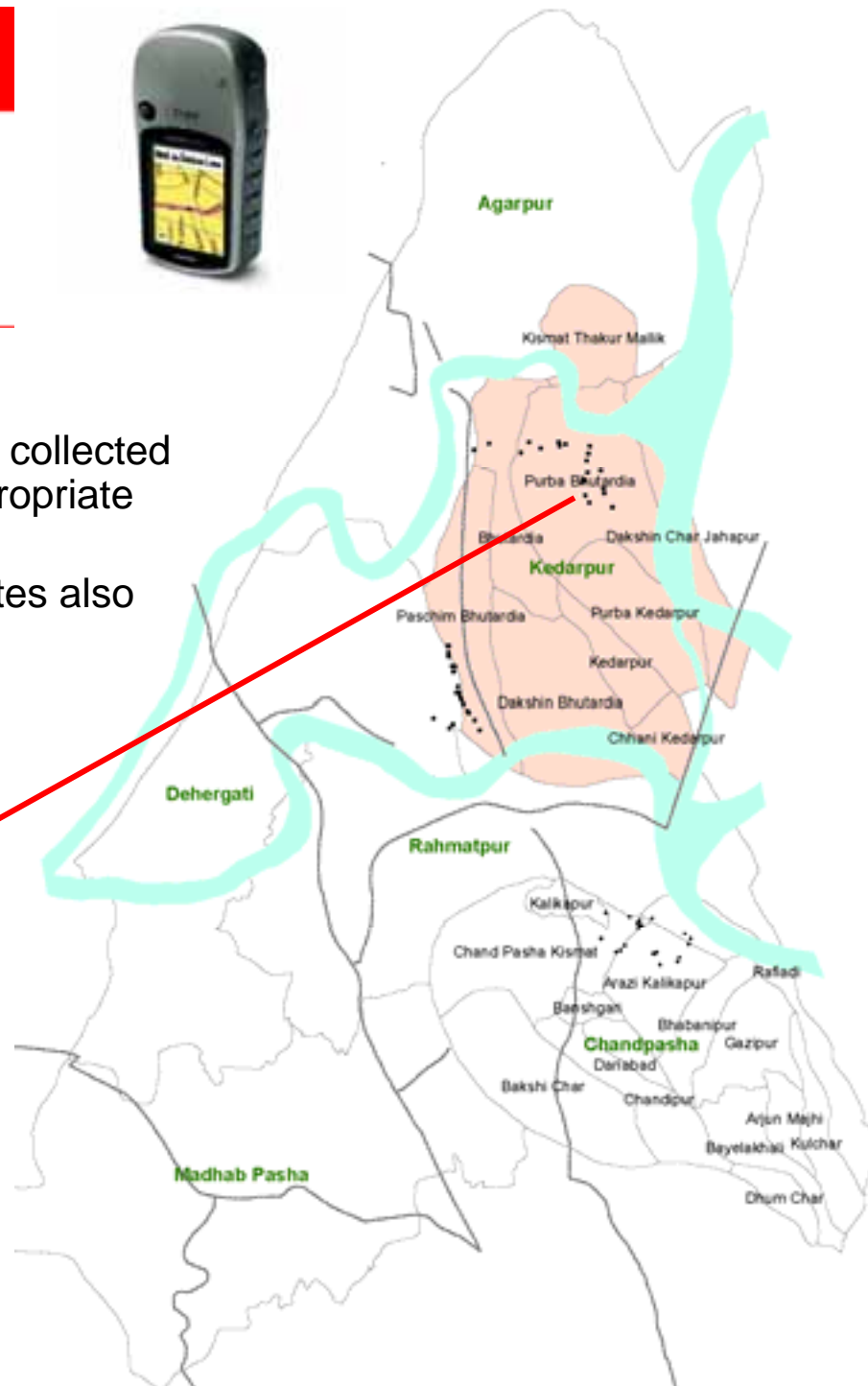


Data Collector's Movement in a Cluster



First Day of Data Collection

- The team used Garmin e-Trex to collect GPS coordinates of the selected samples.
- Maps were developed using ArcView and the collected samples are outside of the cluster and in appropriate use of sampling interval
- For the verification of area gaps the coordinates also plotted in Google Earth.



Manual Mapping before Starting Data Collectic

- The data collectors' supervisors were advised to prepare a freehand sketch of cluster map by talking with community people before starting the data collection.

Team - 3

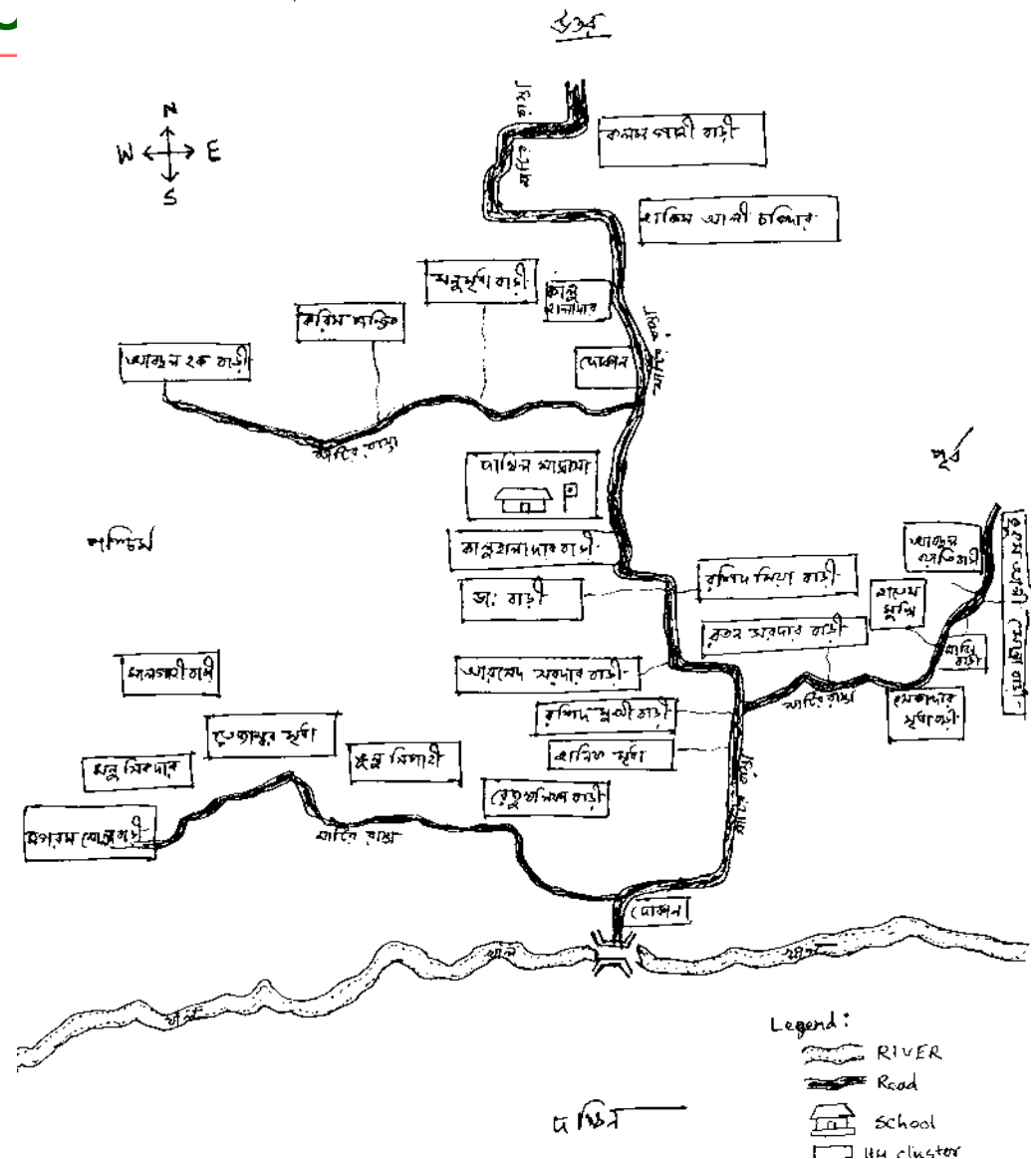
Village - Gushinga

Union - Sauphal

Date - 13.06.2009

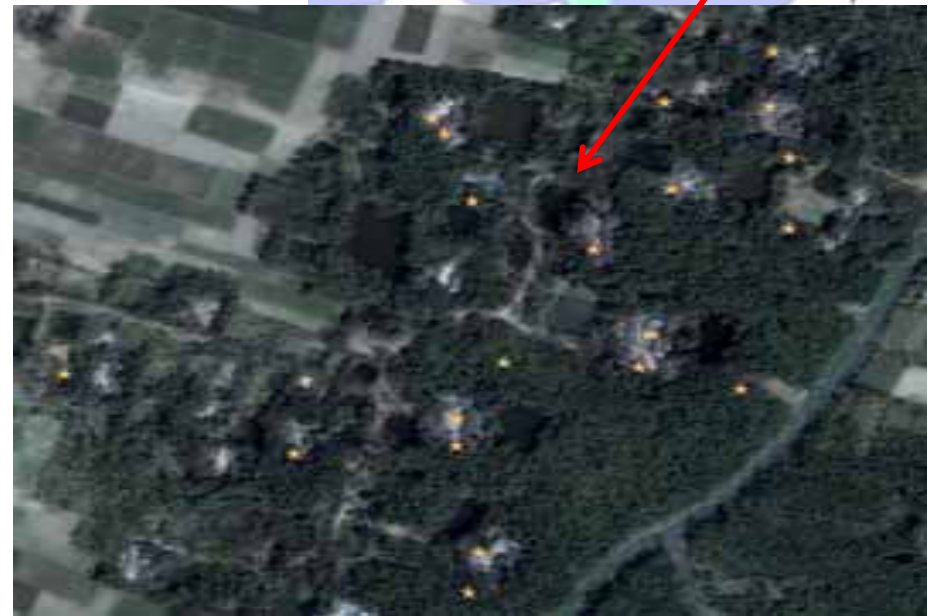
CHV - Kulsum Begum.

Total HH = $200 \div 2 \div 20 = 5$



Improvement of following appropriate procedure

- After showing the actual maps and manual mapping exercise it revealed that data collectors followed the sampling method appropriately.
- The sampling intervals shows symmetric and well spreading within the cluster



Conclusion

- Use of GIS helped to collect quality data by applying sampling procedure appropriately.
- GIS helped visual monitoring of data collection procedures which is easy to understand problems and possible solution.
- Finally, by using authentic produce quality data can be ensured to make right decision

Recommendation

- GIS software need to be less expensive
- Database connectivity and conversion system need to be more simplified.
- Application of GIS software in diversified area need to have easy and frequent sharing mechanism.



Thank You!!