Nile Basin Development Challenge

Nile BDC Knowledge Attitudes and Practices (KAP): Baseline 2011

International Livestock Research Institute

Pamela Pali

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Outline

- Introduction
- KAP survey
- Methodology
- Results
- Conclusions

Introduction

- KAP responds to N2 & N3 - RWM strategies, targeting and scaling out.
- **Project deliverables:** identification of biophysical conditions affecting the suitability of RMS
- Need to identify the RMS that work best for in which parts of Ethiopian highlands given soil topography rainfall levels
- Bring together a range of relevant stakeholders assess the interventions that currently exist to determine the targeted methods to be applied
- Stakeholder workshop to assess the baseline knowledge and data input and the training needs assessment

Knowledge Attitude and Practice

A study of Ethiopian RMS partners conducted to collect information on what is currently known, believed and done in relation to existing targeting approaches

Objective of the KAP survey

- To assess the levels of understanding and application of land use, hydrology and agricultural planning tools

- To establish the status of the knowledge and skills of GIS tools and its applications

Methodology

- **Structured questionnaires** –
  - developed by members of N3
  - Background of the respondent
  - Use of GIS, access to data bases and related aspects
  - Use and application of DSS
  - Self assessment of knowledge on different aspects
  - Attitudes

- **Data entry & analysis**: Excel 2007 Pivot tables.

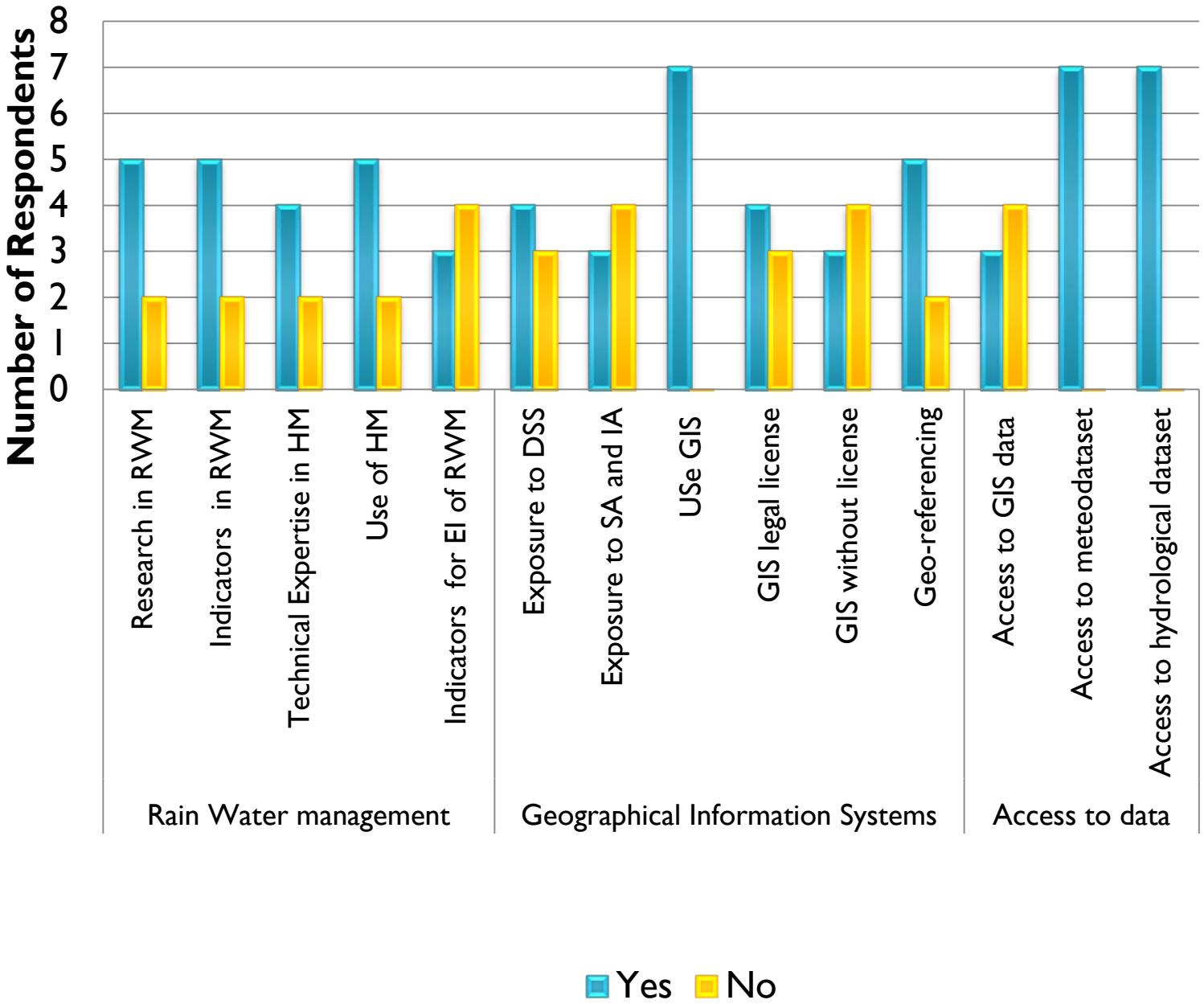
- **N participants**
  - 7 : Land use & Hydrological models
  - 13: GIS self assessment Knowledge

- **N partners:** 11 partner Institutions

GIS USE IN LAND USE, HYDROLOGY & LUP

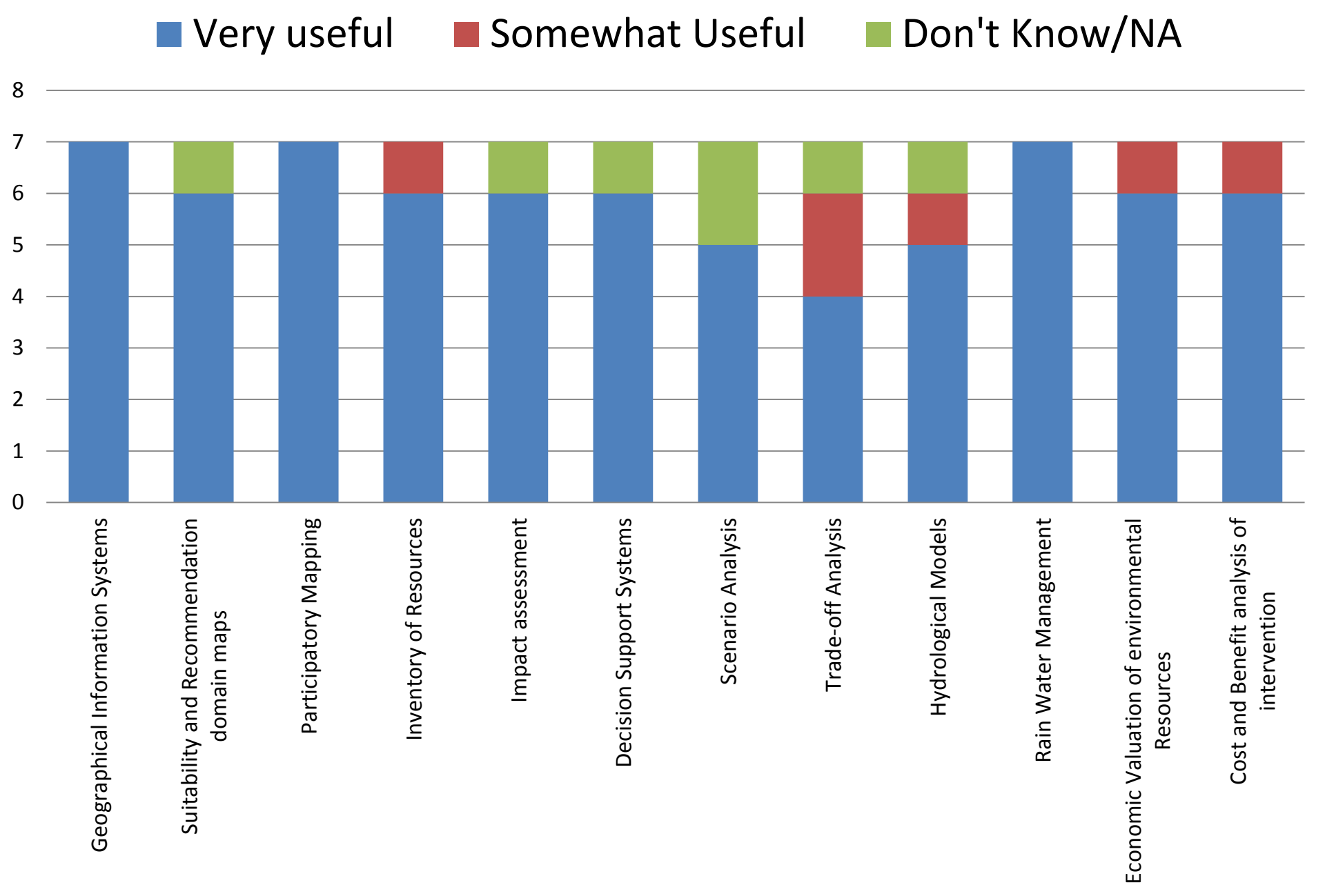
Partner	Position Held	n
Bahir Dar University		1
Addis Ababa University	Chair: Hydrology and Water Resource Management	1
Amhara Regional Agricultural Research Institute(ARARI)	Researcher Junior Researcher	2
Sustainable Land Use forum (SLUF)	Program Manager	1
Catholic Relief Services (CRS)		1
Haramaya University	Project coordinator	1

RWM & GIS Use


Number of Respondents
0
1
2
3
4
5
6
7
8
Research in RWM
Indicators in RWM
Technical Expertise in HM
Use of HM
Indicators for EI of RWM
Exposure to DSS
Exposure to SA and IA
USe GIS
GIS legal license
GIS without license
Geo-referencing
Access to GIS data
Access to meteodataset
Access to hydrological dataset
Rain Water management
Geographical Information Systems
Access to data
Yes
No

PARTNER	RWM RESEARCH	HM USED	DSS USED
ARARI	Soil water mgt	USLE, RUSLE AGNP, SWAT	DSSAT APSIM, SDS
CRS	Multiple uses of water	-	-
Haramaya	RWH Storage	-	-
Addis ababa university	-	HEC, HBV Smart models	Hydrological DSS
Bahir Dar university	-	SWAT HEC – HMS WEAP	-

Usefulness of Tools Practices & Methods



Attitude Statement	Partner	Strongly agree	Agree	No Opinion	Disagree
Policy makers should participate in process of building decision support system		**4**	2	**1 Haramaya University**	0
Innovation Platform should help local stakeholders and communicates to participate in design interventions		**6**	0	0	**1 ARARI**
Improving rainwater productivity can allow **improving food security & livelihoods**		**6**	1	0	0
Intervention should be targeted to specific contexts thereby taking into account local values, agro-ecologies and Production systems		**7**	0	0	0
Longer term impacts should be taken into account when planning rainwater management interventions		**5**	1	**0**	**1 ARARI**
Up and down stream impacts should be taken into account when planning rain water management interventions		**7**	0	0	0

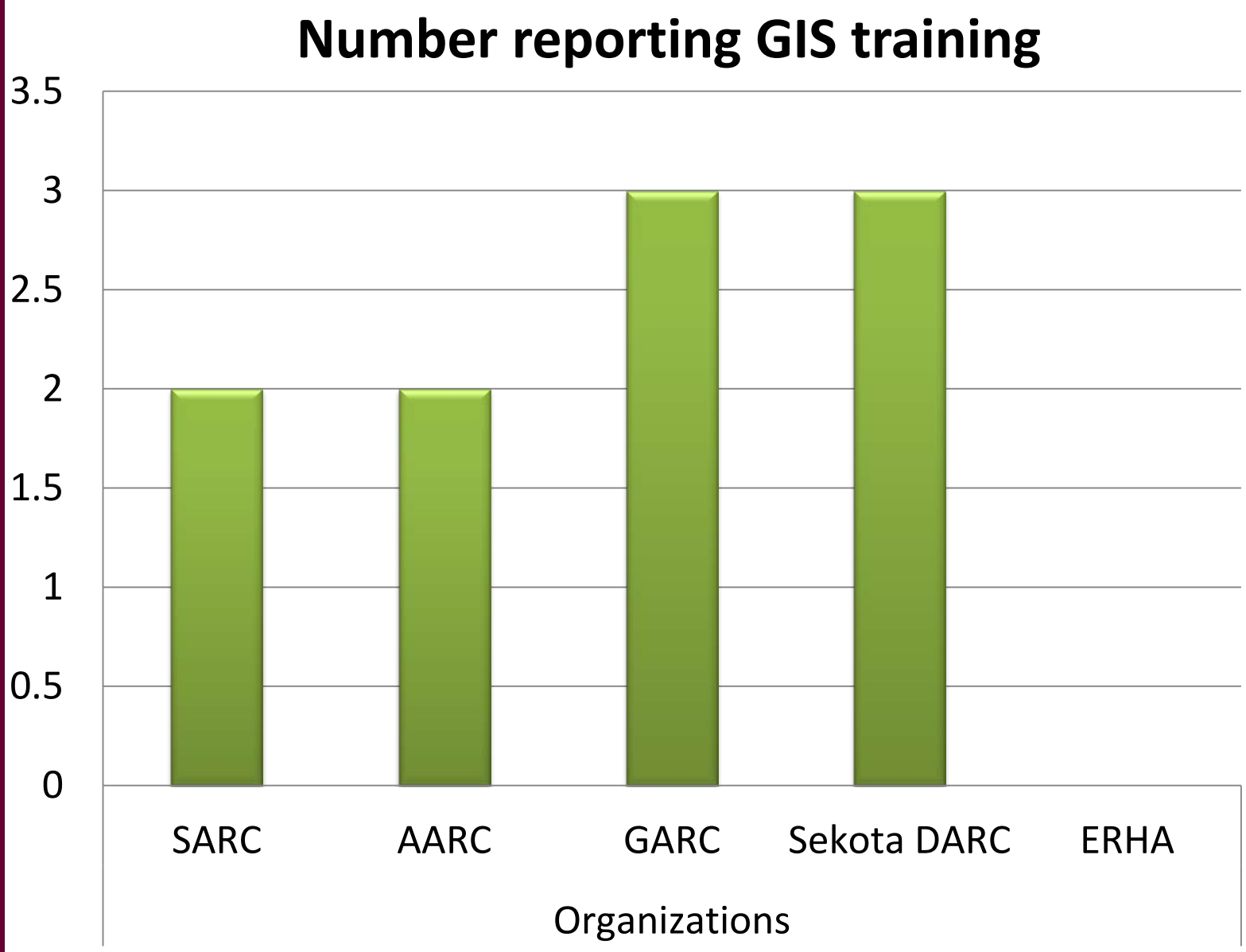
Section Summary

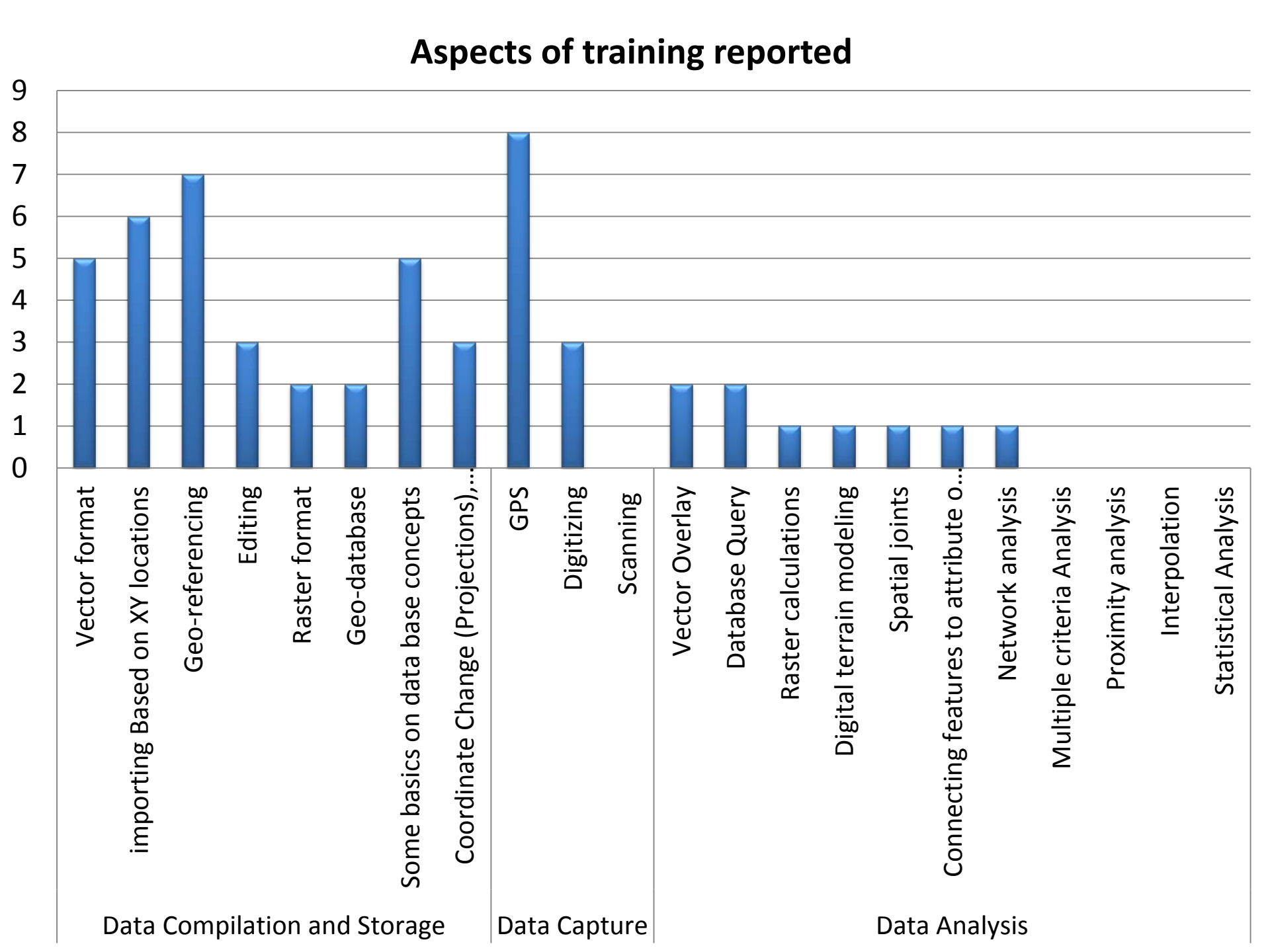
- GIS is widely used and reported to be useful but GIS data is accessed by half the respondents
- Meteodata set and hydrological data set are more accessible than GIS data
- More respondents use ArcView with a licence but half use it without a license
- Half the respondents do not use indicators to assess the economic impact of RWM
- 3 partners of six were able to state the actual models that they use and fewer partners use scenario analysis and impact assessment models
- Participatory mapping and rain water management methods are found to be useful by all respondents while trade off analysis was found to be useful by only half the respondents

GIS KAP BASELINE SURVEY

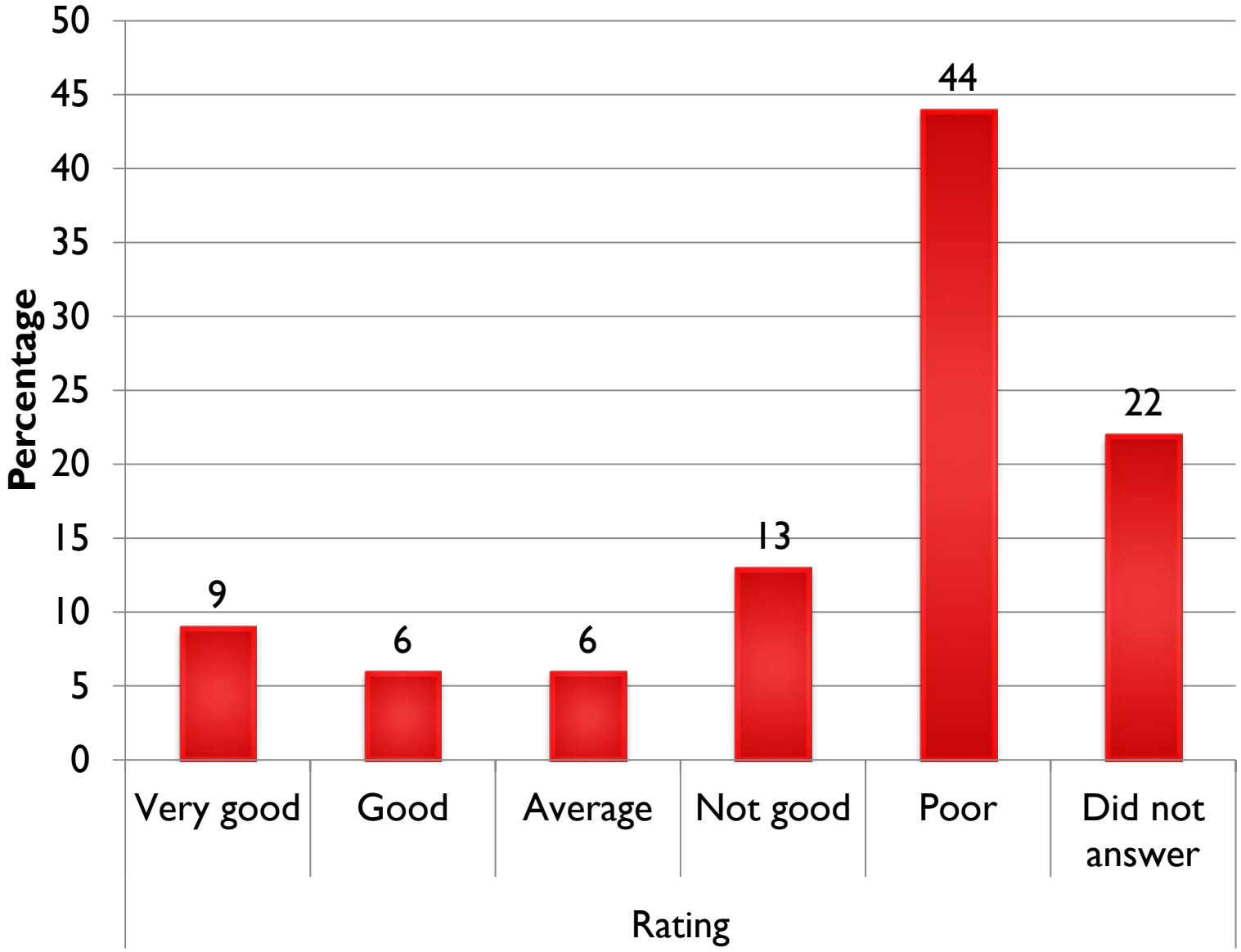
Partner	Position Held	n
Adet Agricultural Research Centre (AARC)	RWM researcher	2
Ethiopian Rain water Harvesting Association (ERHA)	Project officer and Acting Executive Director	1
Gonder Agricultural Research Centre (GARC)	Researcher, Junior Forestry Researcher II,	3
Sekota DARC	S &W research directorate coordinator, Agricultural Water Management Researcher	3
Sirinka agricultural Research Centre (SARC)	Junior Researcher II,	2

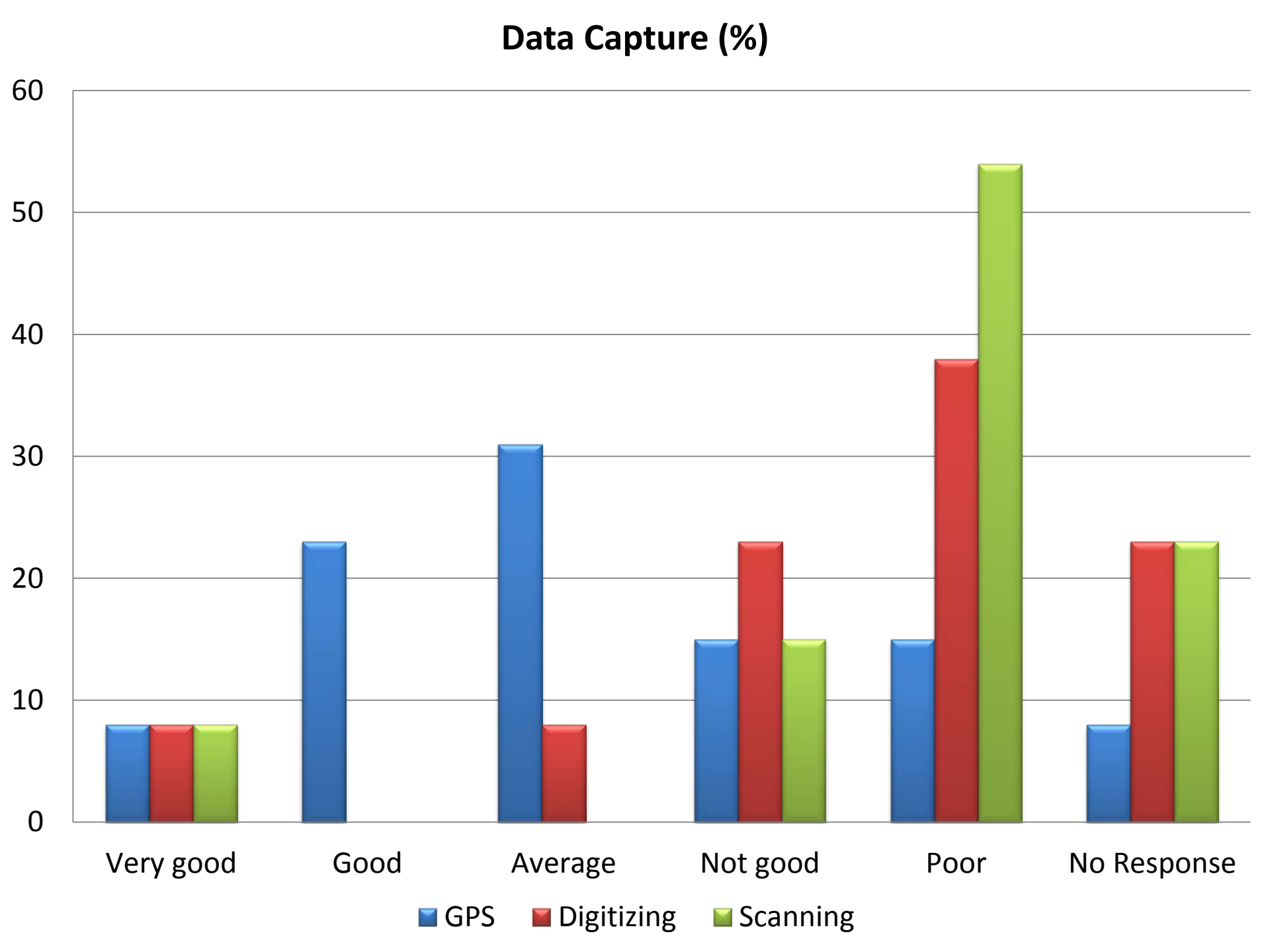
Training


Number reporting GIS training
3.5
3
2.5
2
1.5
1
0.5
0
SARC
AARC
GARC
Sekota DARC
ERHA
Organizations

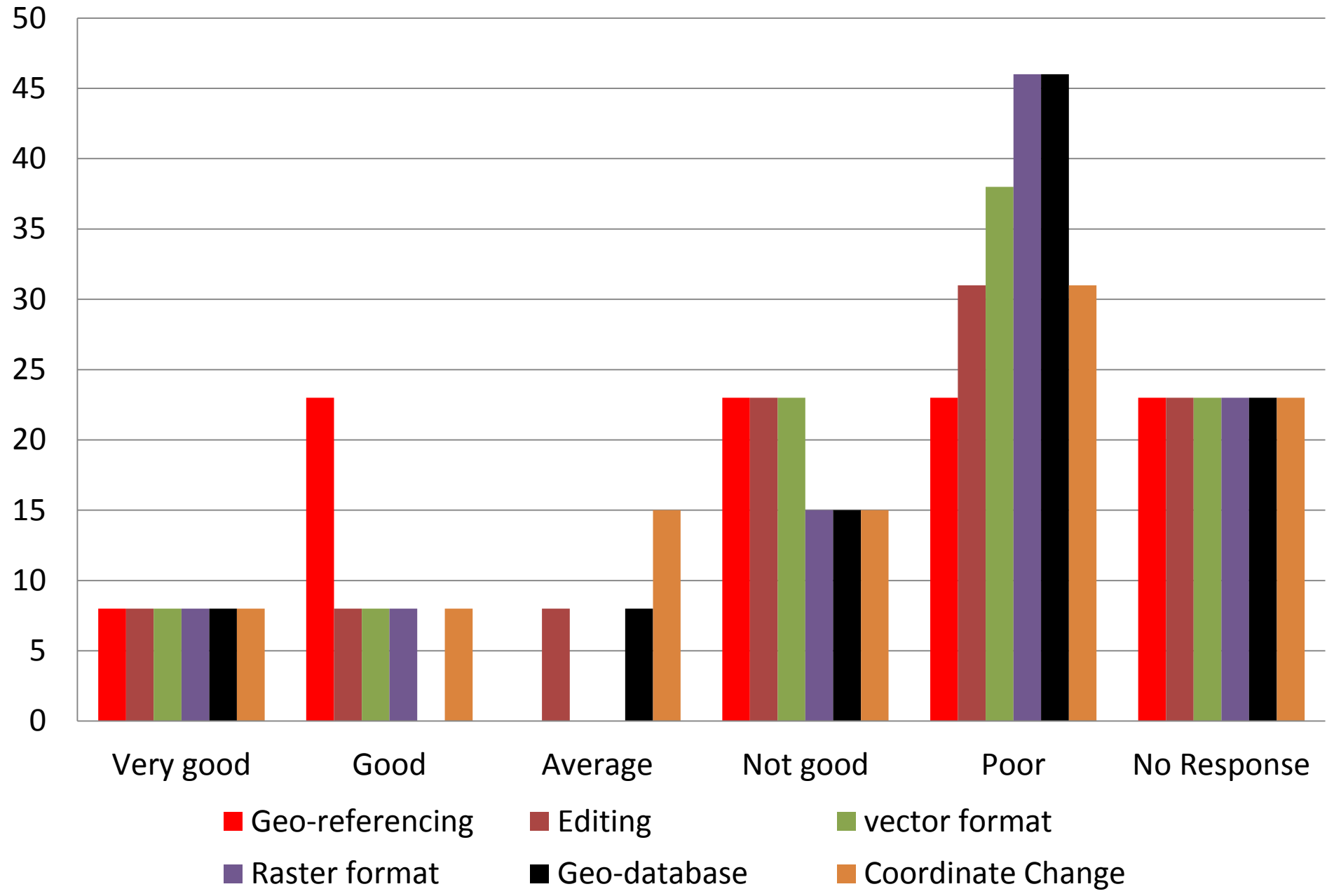

Aspects of training reported
9
8
7
6
5
4
3
2
1
0
Vector format
importing Based on XY locations
Geo-referencing
Editing
Raster format
Geo-database
Some basics on data base concepts
Coordinate Change (Projections),...
GPS
Digitizing
Scanning
Vector Overlay
Database Query
Raster calculations
Digital terrain modeling
Spatial joints
Connecting features to attribute o...
Network analysis
Multiple criteria Analysis
Proximity analysis
Interpolation
Statistical Analysis
Data Compilation and Storage
Data Capture
Data Analysis

Partners self assessment of knowledge & skills in GIS

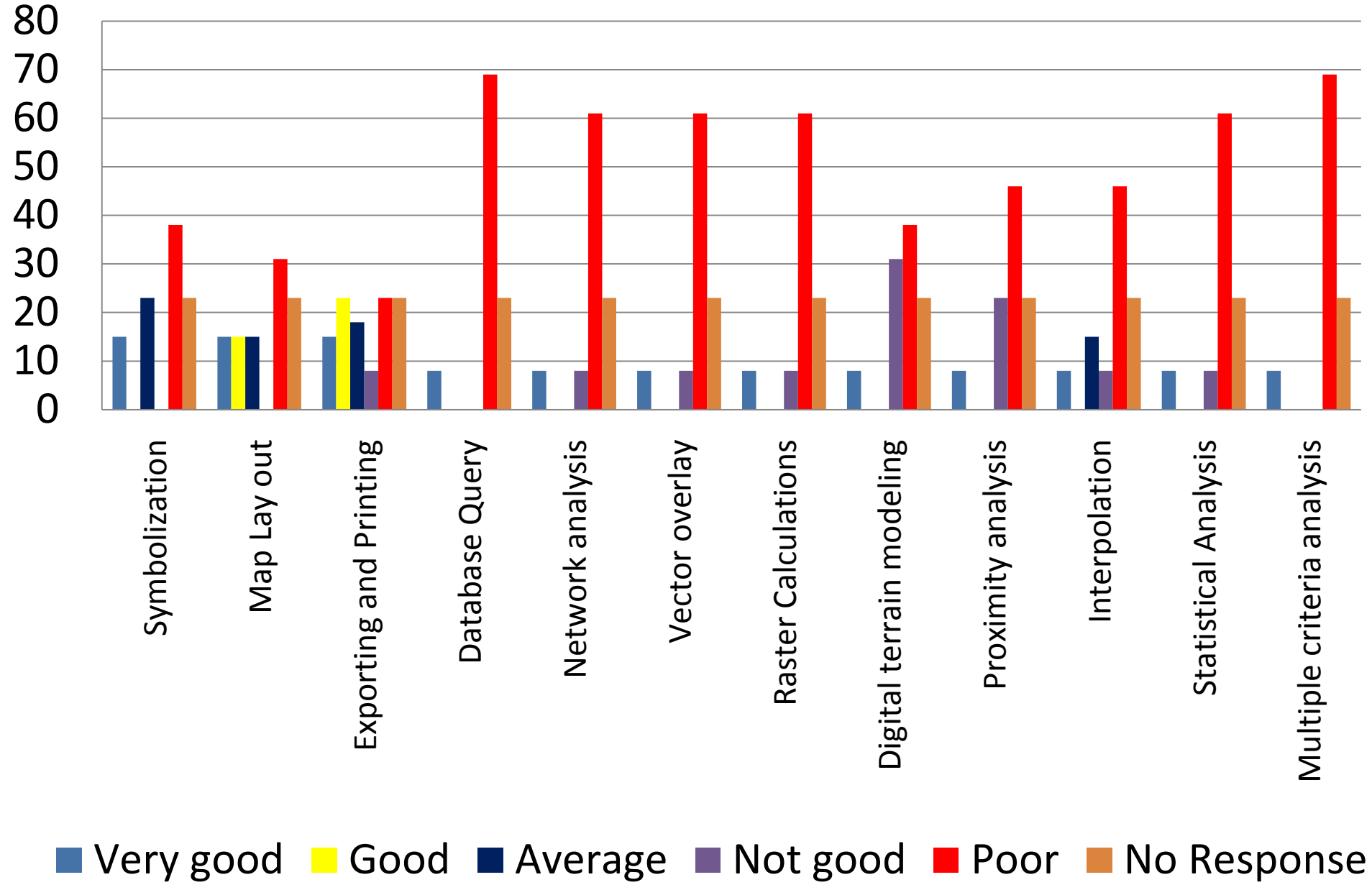



Data Capture (%)
60
50
40
30
20
10
0
Very good
Good
Average
Not good
Poor
No Response
GPS
Digitizing
Scanning

Data Compilation & Storage (%)



Data Analysis (%)



Summary

- Majority (90%) received GIS training
- Most (72%) received training on GPS, geo referencing, importing based on XY locations BUT NONE on scanning, multi criteria analysis, proximity analysis, interpolation and statistical analysis
- Respondents had more capacity on data compilation and storage but less on data capture and analysis
- Partners self assessment of knowledge and skills was rated on average as poor by 57% of the respondents

Conclusions

- Need for more GIS training in addition to previous training
  - Need for a basic GIS practical training
- Poor knowledge and skill about data analysis
  - Need for a more advanced training