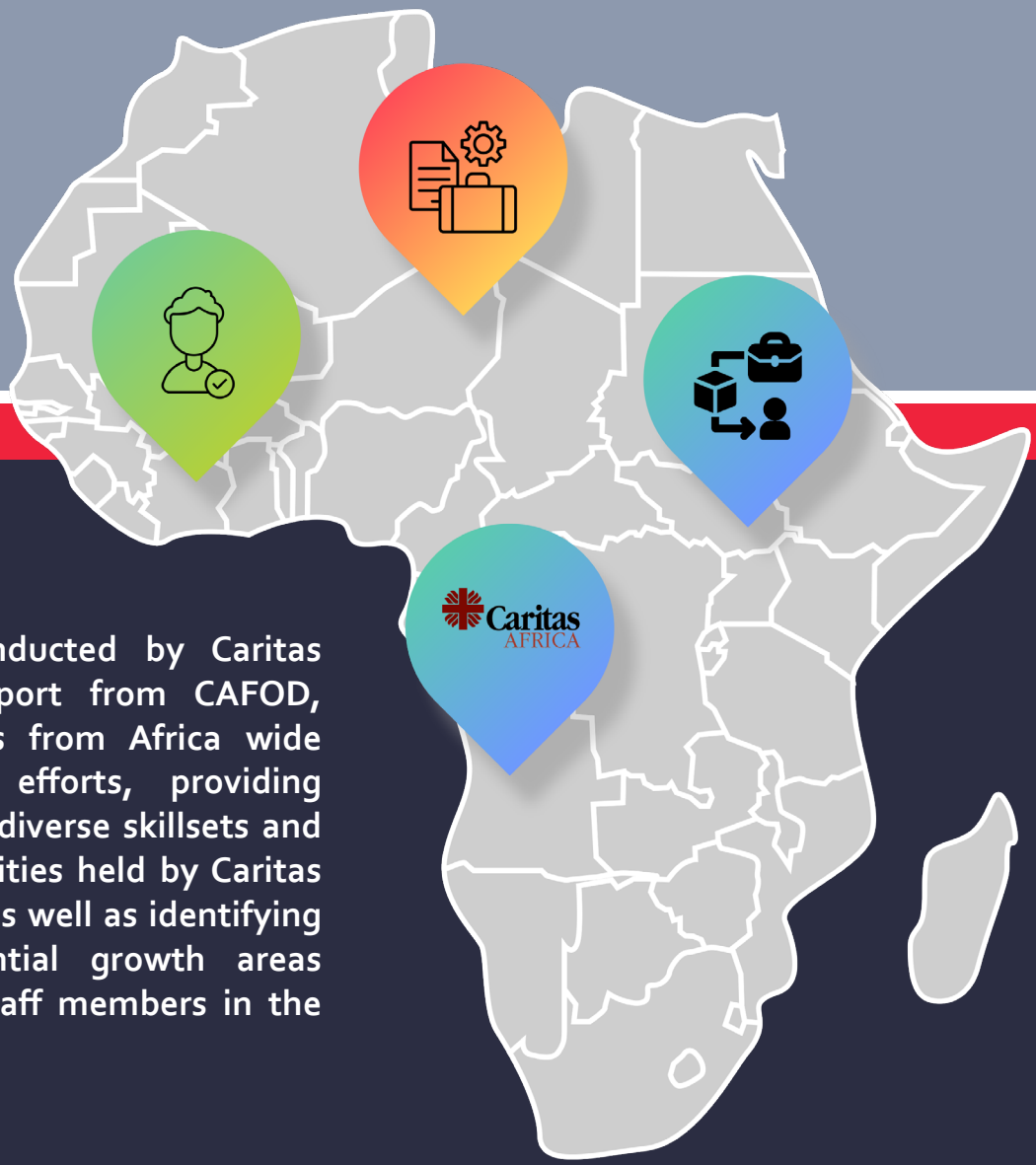
Skills and Knowledge Mapping of Staff Across Different Countries in Africa



This report, conducted by Caritas Africa with support from CAFOD, presents findings from Africa wide data collection efforts, providing insights into the diverse skillsets and knowledge capacities held by Caritas Africa members as well as identifying gaps and potential growth areas among Caritas staff members in the African region.

28th September 2023

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1 - Executive Summary

In an endeavour to gain a comprehensive understanding of the skills and knowledge possessed by staff across various countries in Africa, Caritas Africa designed a survey and made it accessible to employees of Caritas Africa member organizations. This report provides a concise summary of the survey's findings, shedding light on the diverse skillsets and knowledge areas among Caritas staff members in the African region.

This knowledge mapping initiative has a twofold purpose: first, to provide a clear picture of the capacities held by Caritas Africa members; second, to pinpoint strengths, identify gaps, and pinpoint potential growth areas among our staff. The report offers recommendations for prioritizing specific areas based on the data collected and can serve as a foundation for subsequent action planning. In addition to this report, we have developed PowerBI dashboards to empower stakeholders to define their own priorities for action, gain deeper insights, and analyse level of detail not covered by this report.

It is envisaged that the findings and collected data can:

- **form the basis for 'member to member' knowledge sharing & skill transfer,**
- **shape the curriculum framework for training programs aimed at addressing identified gaps,**
- **be used to build a database of specialists available for cross-border deployment in case of emergencies.**

2 - Methodology

We developed a questionnaire using Kobo Collect, making it accessible in three languages to the staff of Caritas Africa members, with a focus on collecting information about their skills and knowledge. The questionnaire consisted of sections covering various domains, including personal information, linguistic skills, core (cross functional) skills of Programme and Financial Management and MEL. All staff, regardless of their expertise, were asked to assess their cross-functional skills.

In order to streamline the collection of specific data, respondents were requested to specify their area of expertise . Their input subsequently triggered a series of questions designed to gauge proficiency levels in those technical skills such as Shelter and Settlement, WASH (Water, Sanitation, and Hygiene), Accountability, Protection Mainstreaming and Real-Time Evaluation.

No sampling was carried out and the questionnaire was open to all the staff.

The staff were asked to self-evaluate using the following rating:

- **0: None: No knowledge or experience in this subject/area.**
- **1: Theoretical: Understanding of the theory of a subject/area but no experience in practical application.**
- **2: Some Experience: Have provided support in this subject/area but have not led.**
- **3: Very Experienced: Strong evidence of competence in this area, can lead, manage, and train others.**

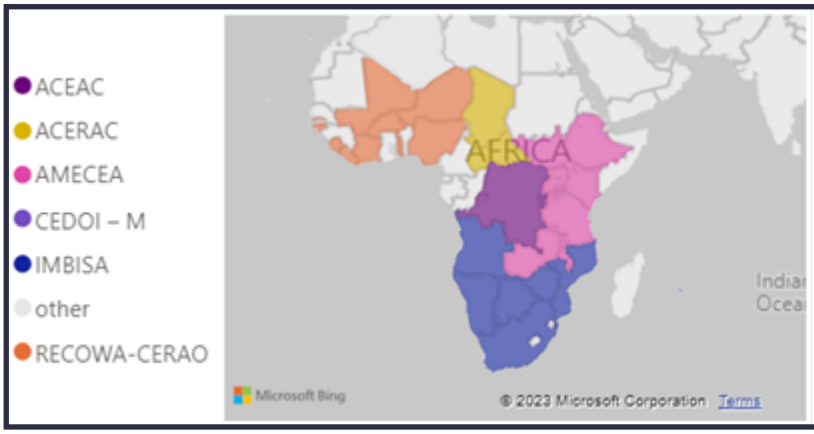
For any future questionnaire design, we recommend changing the expertise question from single select to multiple select.

3 - Findings

3.1 - Response rates

The questionnaire uptake was highest in RECOWA CERAO countries [n 40, 37%], followed by AMECEA countries [n 31, 28%] with the total of 109 respondents of 43 nationalities based in 31 countries and with the joint experience of having worked in 47 countries.

Rwanda (n 15, 14%) and Kenya (n 14, 13%) were among the countries with the highest response rate.



Region	Specialists	%Specialist
RECOWA-CERAO	40	36.70%
AMECEA	31	28.44%
ACEAC	23	21.10%
IMBISA	9	8.26%
other	3	2.75%
ACERAC	2	1.83%
CEDOI – M	1	0.92%
Total	**109**	**100.00%**

Figure 1, Response rates

3.2 - Linguistic proficiency

The survey results clearly demonstrated Caritas Africa's strong linguistic abilities, with English emerging as the most commonly used language at 94% (n 102), followed by French at 69% (n 75). However, it's important to exercise caution when interpreting these findings, as it appears that many respondents did not accurately identify or report their primary/native language on multiple occasions.

Proficiency	Basic		Fluent		Intermediate/Good		Native		Total	
Language	Respondents	% All respondents	Respondents	% All respondents	Respondents	% All respondents	Respondents	% All respondents	Respondents	% All respondents
English	25	23%	58	53%	15	14%	4	4%	**102**	**94%**
French	17	16%	45	41%	8	7%	5	5%	**75**	**69%**
Swahili	20	18%	20	18%	3	3%	9	8%	**52**	**48%**
Spanish	13	12%	2	2%	4	4%	1	1%	**20**	**18%**
Portuguese	2	2%	10	9%	1	1%	6	6%	**19**	**17%**
Arabic	5	5%	2	2%	1	1%	2	2%	**10**	**9%**

Figure 2, Language proficiency

3.3 - Variability between regions and skill clusters

The survey unveiled a broad spectrum of skill sets within the staff of Caritas Africa membership, spanning from real-time evaluation to expertise in shelter and settlement.

- **The average skill level was 1.9 (expressed on the scale in the range 0-3)**
- **Small to moderate differences were observed among the two regions with the highest response rate. However, we were unable to find strong support for the idea that the groups differ in a statistically significant way as the variability between the groups is not much larger than the variability within the groups (Annex 1).**

Skills groups	Number of Specialists	StDevRating	Average skill level
Core skills	**106**	**0.96**	**1.89**
IMBISA	9	0.84	2.20
AMECEA	31	0.85	2.02
ACEAC	23	0.96	1.88
RECOWA-CERAO	40	1.02	1.79
CEDOI – M	1	0.95	1.42
ACERAC	2	0.96	1.23
Technical skills	**106**	**1.01**	**1.87**
IMBISA	9	0.85	2.23
RECOWA-CERAO	40	1.01	1.95
ACEAC	23	0.98	1.90
AMECEA	31	1.00	1.72
ACERAC	2	1.02	0.95
CEDOI – M	1	0.31	0.11
Total	**106**	**0.97**	**1.89**

Figure 3, Skills rating by region

We did observe differences in reported skills rating among the various skill clusters but were unable to conclude that there are statistically significant differences between the skill clusters/grouped data (Annex 2).

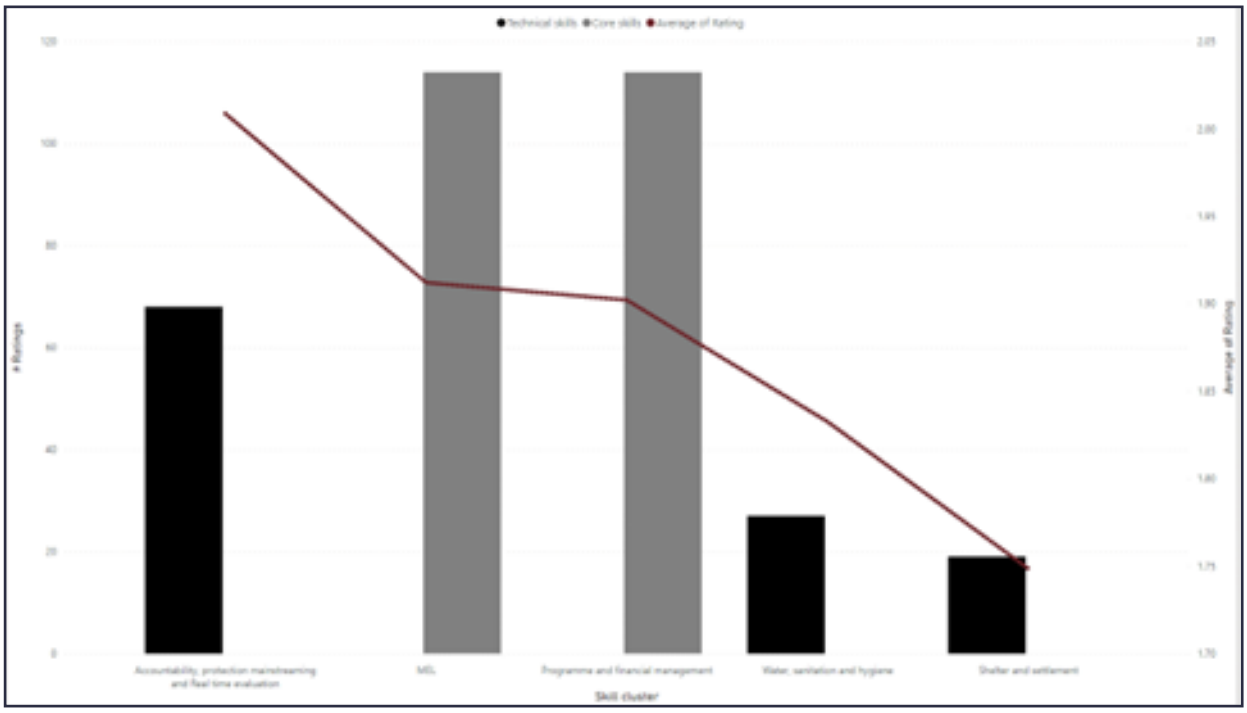


Figure 4, Skills rating by skills clusters

Using Hedges' g as an effect size measure to quantify the standardized difference between groups. analysis of variance (ANOVA) test: F-Statistic (0.569587), P-Value (0.723111) there is not enough evidence to conclude that there are significant differences among the group means. In summary, based on the given F-statistic and p-value, it appears that there are no statistically significant differences among the groups being compared.

3.4 - Priority geographic and skill areas for action

While the variations in average skill levels across regions and skill clusters did not provide statistically significant findings, we were able to identify priority areas for action by creating quadrant plots, designating the low quadrants as the priority areas for action.

The plots (Figure 5, 6) are constructed based on two dimensions: the average skill rating (y) and the standard deviation of that skill rating (x). Therefore for instance, the lower-right quadrant identifies skill clusters (Figure 5) and countries (Figure 6) that received below-average skill ratings and exhibited high levels of inconsistency/ variability. Lastly, the size of the bubble indicates the response rate.

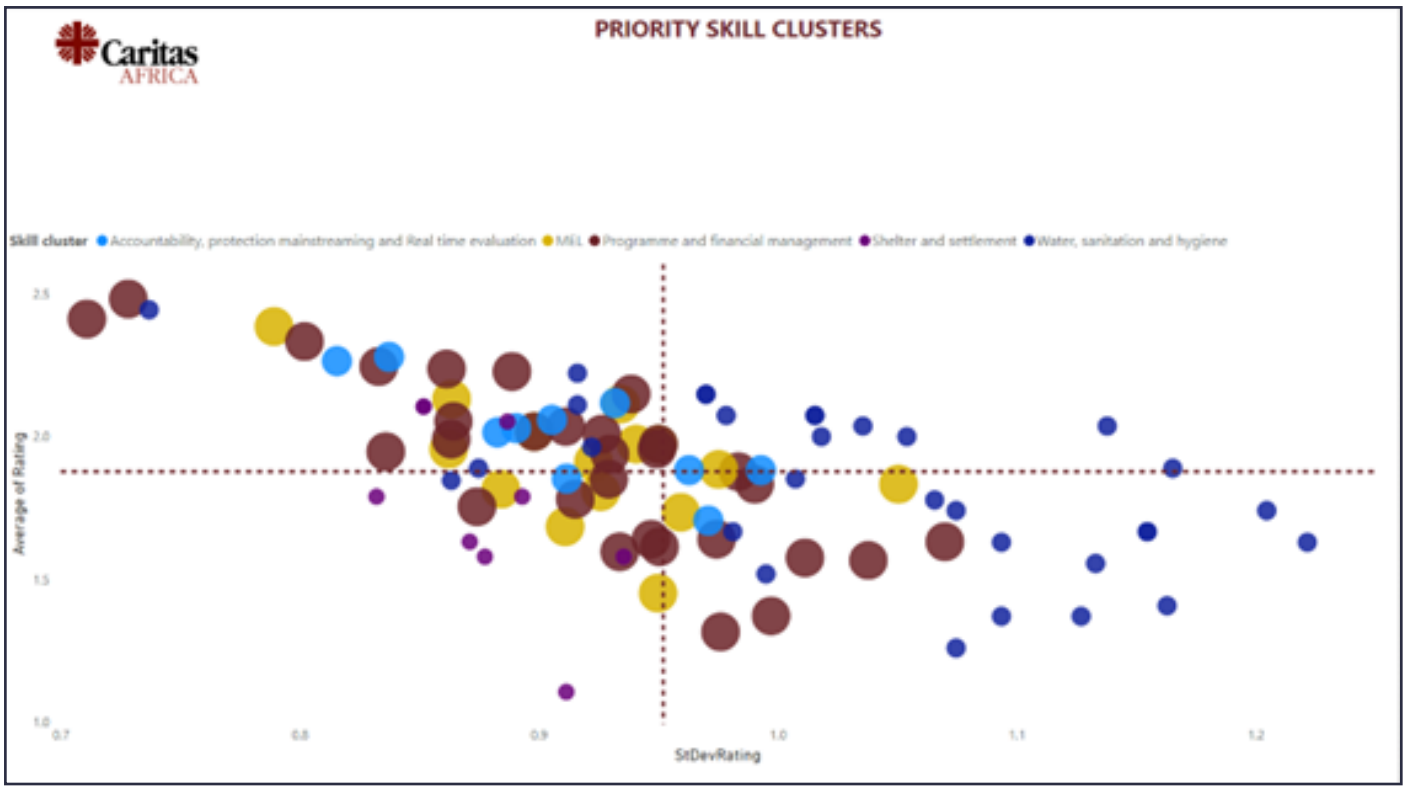


Figure 5, Priority skill clusters

Whilst WASH constitutes a priority skill cluster area, similar conclusions are harder to make when identifying geographical priorities, with possible focus on RECOWA CERAO region being in the lower right quadrant (Figure 6).

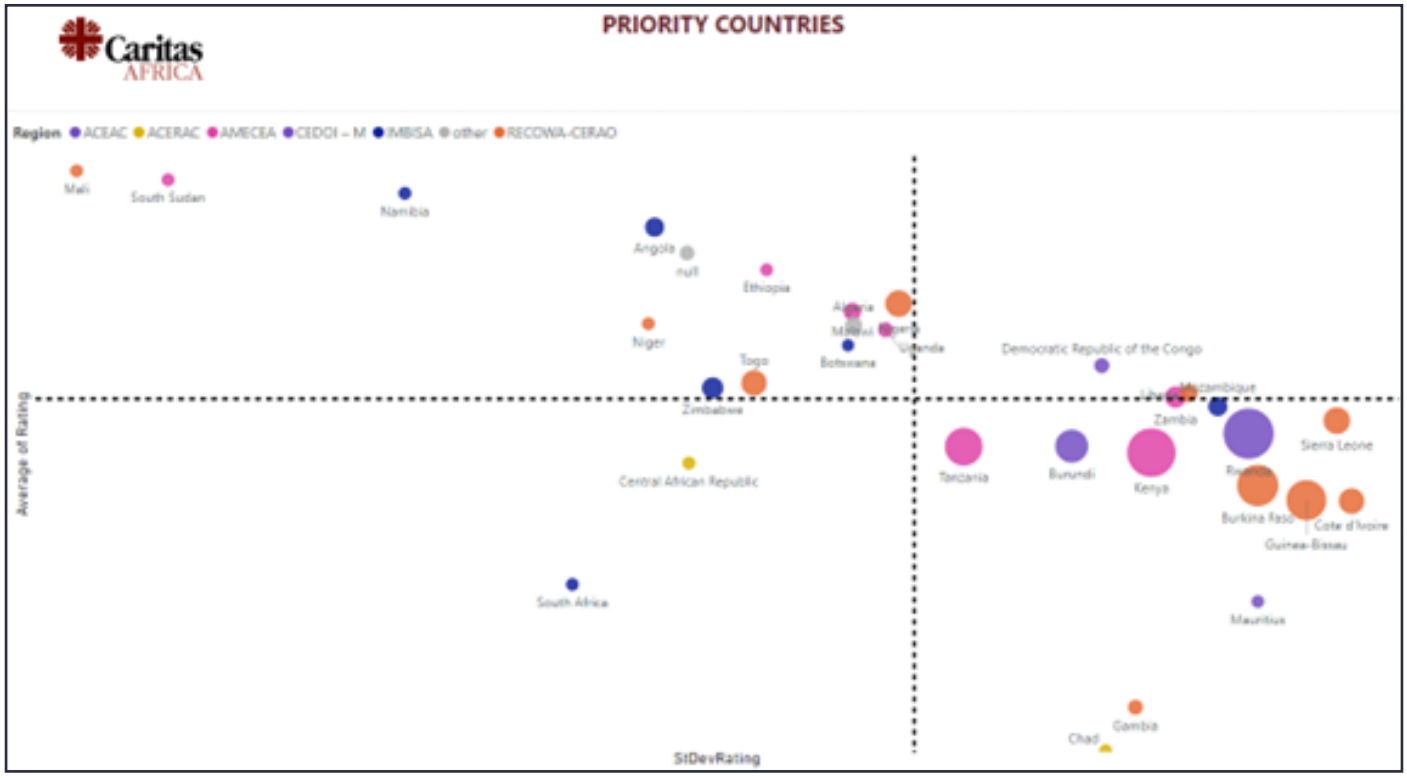


Figure 6, Priority countries

3.5 - Unnesting data leading to statistical significance and skill framework review

Using PowerBI for our data presentation offers a significant advantage: the capability to delve deeper and apply filters to analytical tables and visuals. This allows us to promptly address specific capacity-building inquiries as they arise. Moreover, we have included multiple views that encourage users to engage with the data, and many of the categories have been expanded (or unnested) for enhanced exploration.

Furthermore, even though the statistical differences among the various groups (such as Region or Skill Cluster) may not have been statistically significant, when we unnest the data, we can readily observe variations within each skill cluster. An analysis of variance (ANOVA) in Appendix 3 further validates that the differences between individual skills are significantly more substantial than the differences within the skills themselves.

These findings have practical significance as they enable us to assess and differentiate between strong and weak skills within each skill cluster. To illustrate, in the context of Programme Financial Management, we observe that «Participation in Technical Working Groups (UNOCHA led)» received the lowest rating, averaging at 1.32, in contrast to «Programme/Project Cycle Management,» which averages at 2.48 (Figure 7)

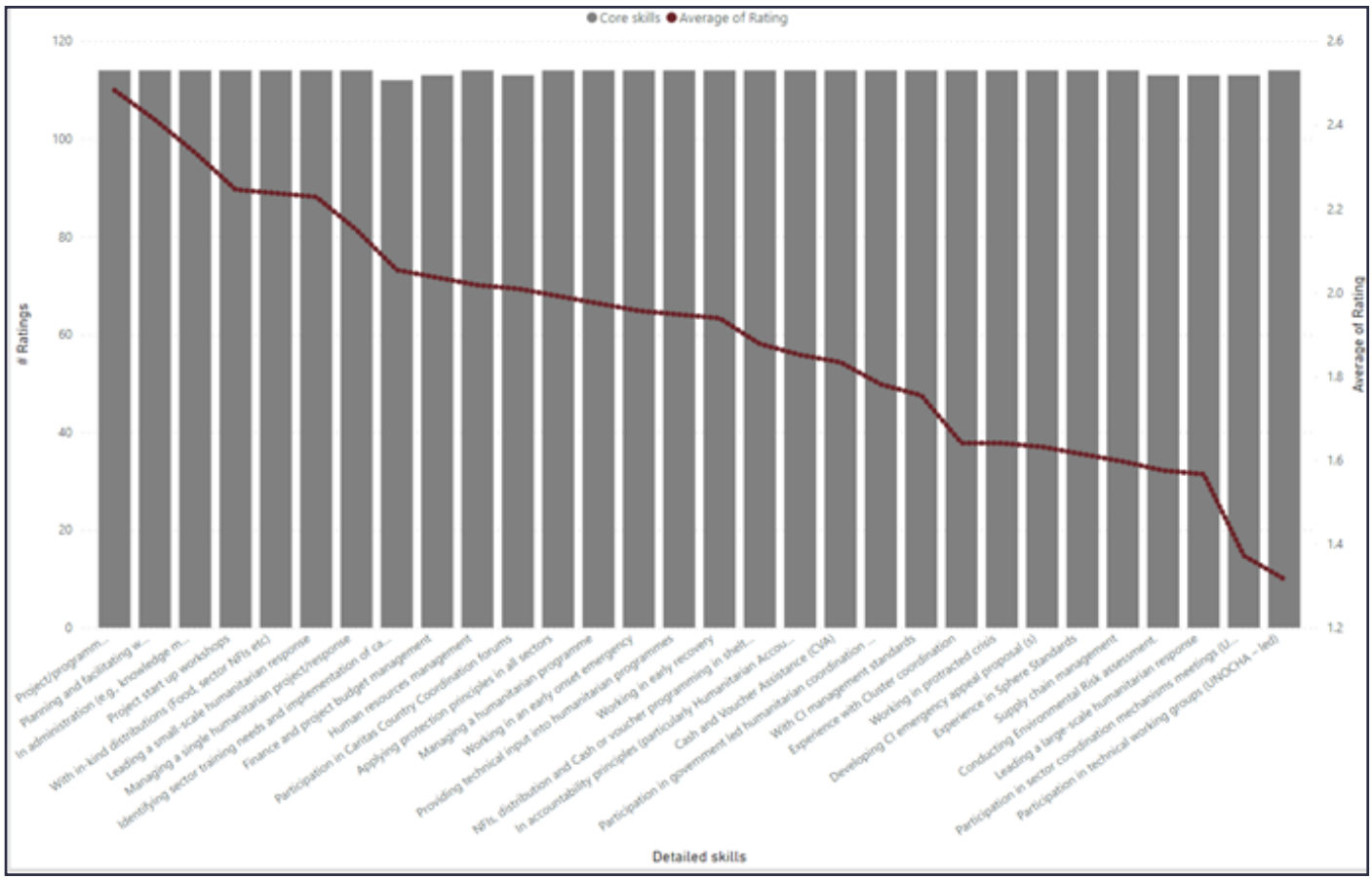


Figure 7: Differences in skills rating nested under Programme financial management

Skill details and identification of strong and weak skills can be found and explored in the available PowerBI dashboards.

4 - Recommendations

1. Resource priority thematic and geographic areas for skill development using quadrant plots. When resources are available but constrained by geographical boundaries, quadrant plots serve as valuable tools to guide the allocation of resources toward the skill areas in most need of development. Likewise, when resources are limited to specific skill cluster, quadrant plots offer insights into which regions or countries stand to benefit the most from targeted interventions.

While this approach may not offer 'one fits all' solution, it can be employed **dynamically to direct resources where they are most urgently required.**

For guidance on utilizing the interactive plots, please refer to Annex 4.

2. Review the existing staff development and curriculum framework, and develop tailored training programmes with a **specific emphasis on enhancing skills that have received low ratings within each technical (skill cluster) area.**

For guidance on utilizing the skills rating reference table and distinguishing between low and high-rated skills, please consult Annex 5.

3. Implement knowledge sharing platforms and cross border collaboration: Implement knowledge-sharing platforms and initiatives to encourage employees to share their expertise and learn from their peers prioritising low rating skills.

Promote and resource cross-border cooperation by utilizing the available dataset to create a searchable database of knowledgeable experts and peers. This database can offer search capabilities based on technical skills, current location, work experience, and language proficiency. Such information can serve various purposes, including cross-border deployment, knowledge sharing, training sessions, and more.

5 - Conclusions

This skills and knowledge mapping exercise has provided valuable insights into the strengths and areas requiring improvement. Leveraging this data, Caritas Africa is well equipped to plan and allocate resources staff development initiatives. This initiative, on its own, positions Caritas Africa for successful collaboration in knowledge sharing within the broader Caritas network.

6 - Annexes

6.1 - Annex 1: Regional variance

Analysis of Variance (ANOVA)

Input Data

Group	N (count)	Mean	Std. Dev.	Std. error
1	9	2.21	0.839	
2	31	1.93	0.905	
3	23	1.882	0.966	
4	40	1.823	1.021	
5	1	1.2	1	
6	2	1.18	0.974	
7				
8				
9				
10				

ANOVA Table

Source of variation	Sum of squares	d.f	Mean square	*F* statistics	p-value[1]
Between Groups	2.62965	5	0.52593	0.569587	0.723111
Within Groups	92.3354	100	0.923354		
Total	94.9651	105			

	Chi square	d.f	p-value[1]
Test for equality of variance	0.0	5	1

		95% CI of individual sample mean		95% CI assuming equal variance	
Group	Mean	Lower Limit	Upper Limit	Lower Limit	Upper Limit
1	2.21	1.56509	2.85491	1.47138	2.94862
2	1.93	1.59805	2.26195	1.57754	2.28246
3	1.882	1.46427	2.29973	1.46647	2.29753
4	1.823	1.49647	2.14953	1.51569	2.13031
5	1.2	1.2	1.2	1.2	1.2
6	1.18	-7.57126	9.93126	-7.45368	9.81368
7					
8					
9					
10					

[1] p-value (two-tailed)

Results from OpenEpi, Version 3, open source calculator--ANOVA

6.2 - Annex 2: Skill clusters variance

Analysis of Variance (ANOVA)

Input Data

Group	N (count)	Mean	Std. Dev.	Std. error
1	68	2.01	0.92	
2	114	1.91	0.94	
3	114	1.9	0.96	
4	27	1.83	1.07	
5	19	1.75	0.93	
6				
7				
8				
9				
10				

ANOVA Table

Source of variation	Sum of squares	d.f	Mean square	*F* statistics	p-value[1]
Between Groups	1.34998	4	0.337495	0.371647	0.828816
Within Groups	306.032	337	0.908107		
Total	307.382	341			

	Chi square	d.f	p-value[1]
Test for equality of variance	0.98239	4	0.912454

		95% CI of individual sample mean		95% CI assuming equal variance	
Group	Mean	Lower Limit	Upper Limit	Lower Limit	Upper Limit
1	2.01	1.78731	2.23269	1.77934	2.24066
2	1.91	1.73558	2.08442	1.73318	2.08682
3	1.9	1.72187	2.07813	1.72318	2.07682
4	1.83	1.40672	2.25328	1.45303	2.20697
5	1.75	1.30175	2.19825	1.2907	2.2093
6					
7					
8					
9					
10					

6.3 - Annex 3: Within skill cluster variance (Programme financial management)

Analysis of Variance (ANOVA)

Input Data

Group	N (count)	Mean	Std. Dev.	Std. error
1	114	2.41	0.71	
2	114	2.48	0.73	
3	114	2.33	0.8	
4	114	2.25	0.83	
5	114	1.95	0.84	
6	114	2.24	0.86	
7	114	1.99	0.86	
8	112	2.05	0.86	
9	114	1.75	0.87	
10	114	2.23	0.89	

ANOVA Table

Source of variation	Sum of squares	d.f	Mean square	*F* statistics	p-value[1]
Between Groups	53.0687	9	5.89653	8.62278	0.00000000000138711
Within Groups	771.362	1128	0.683831		
Total	824.43	1137			

	Chi square	d.f	p-value[1]
Test for equality of variance	11.2106	9	0.261548

		95% CI of individual sample mean		95% CI assuming equal variance	
Group	Mean	Lower Limit	Upper Limit	Lower Limit	Upper Limit
1	2.41	2.27826	2.54174	2.25656	2.56344
2	2.48	2.34454	2.61546	2.32656	2.63344
3	2.33	2.18156	2.47844	2.17656	2.48344
4	2.25	2.09599	2.40401	2.09656	2.40344
5	1.95	1.79413	2.10587	1.79656	2.10344
6	2.24	2.08042	2.39958	2.08656	2.39344
7	1.99	1.83042	2.14958	1.83656	2.14344
8	2.05	1.88897	2.21103	1.89516	2.20484
9	1.75	1.58857	1.91143	1.59656	1.90344
10	2.23	2.06486	2.39514	2.07656	2.38344

[1] p-value (two-tailed)

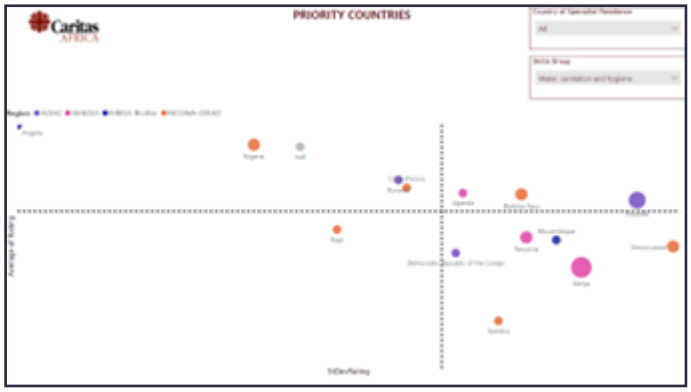
Results from OpenEpi, Version 3, open source calculator--ANOVA
Print from the browser with ctrl-P
or select text to copy and paste to other programs.

6.4 - Annex 4: Using quadrant plots

Scenario 1: you'd like to follow up on the findings of this report and improve the WASH skill proficiency. You navigate to Countries quadrant but find the chart too convoluted.

You can set your filter to WASH and immediately are presented with the countries where WASH skills should be the priority focus area (low lying quadrants are always your focus area).

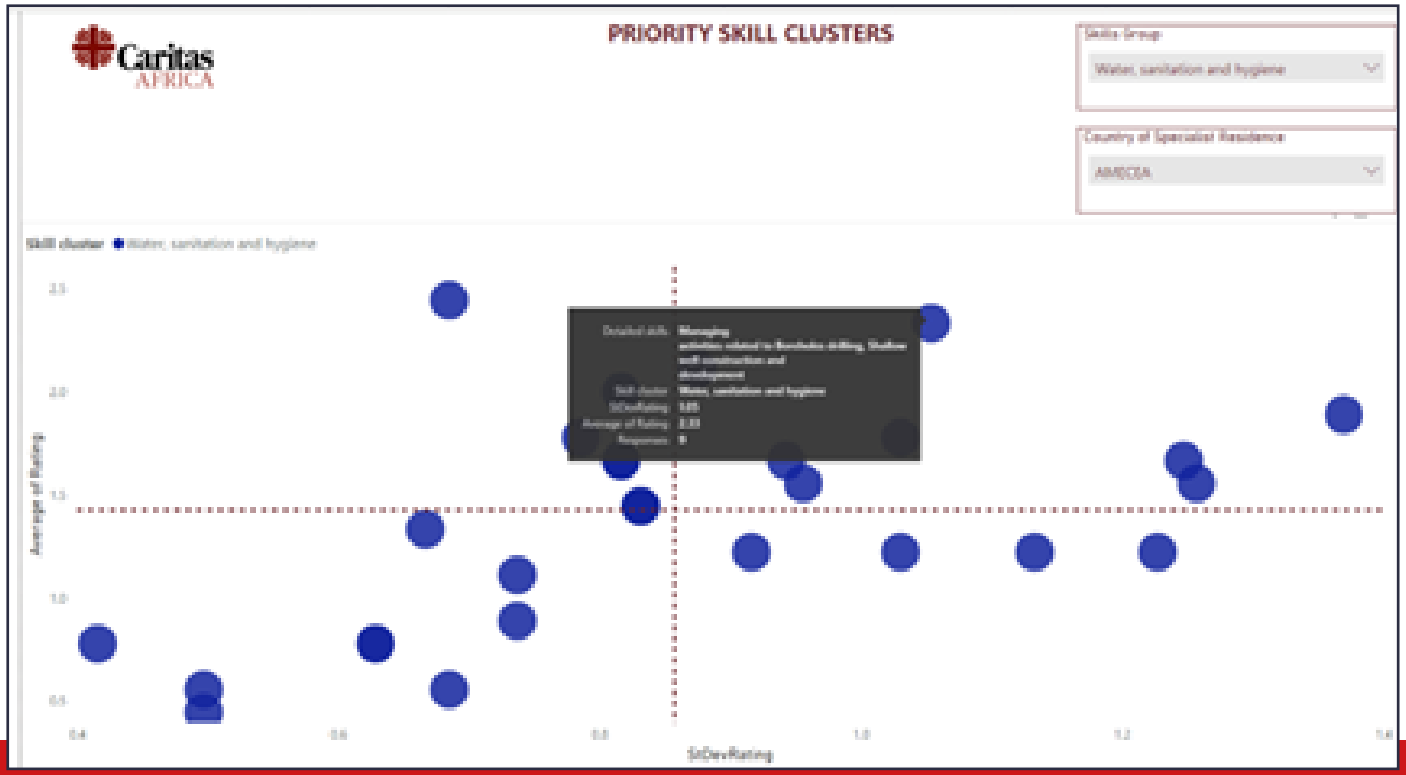




Based on filtering you can easily identify priority skill areas and countries.

You can interrogate Skill quadrant dashboard in a similar way.

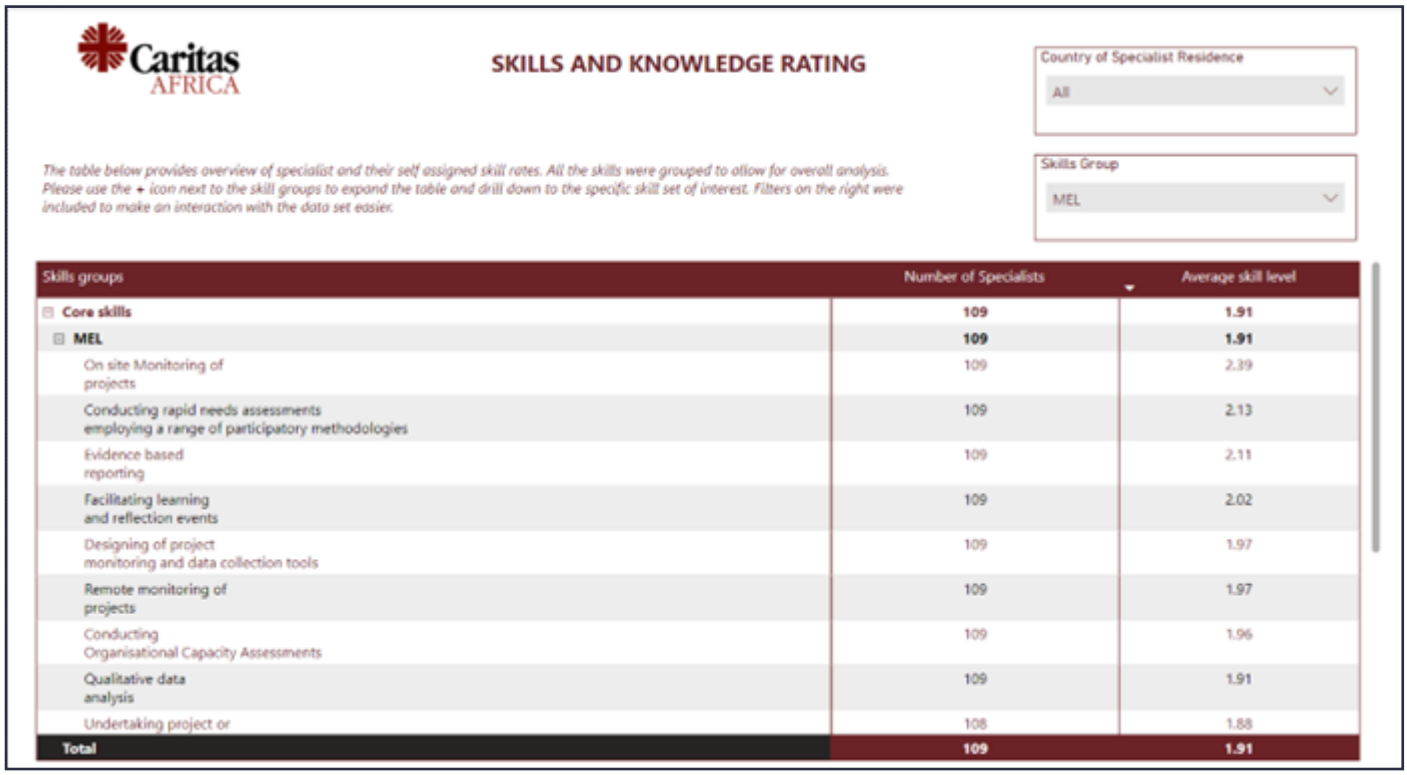
Remember you can access more information within the visuals once you place your mouse on the chart elements (see the image below).



6.5 - Annex 5: Using skills rating tables and charts

When reviewing staff development plans and curriculum framework, it is necessary to drill down within each skill cluster to identify string and weak skills.

These can be done by using the Skills rating table



Caritas AFRICA

SKILLS AND KNOWLEDGE RATING

Country of Specialist Residence: All

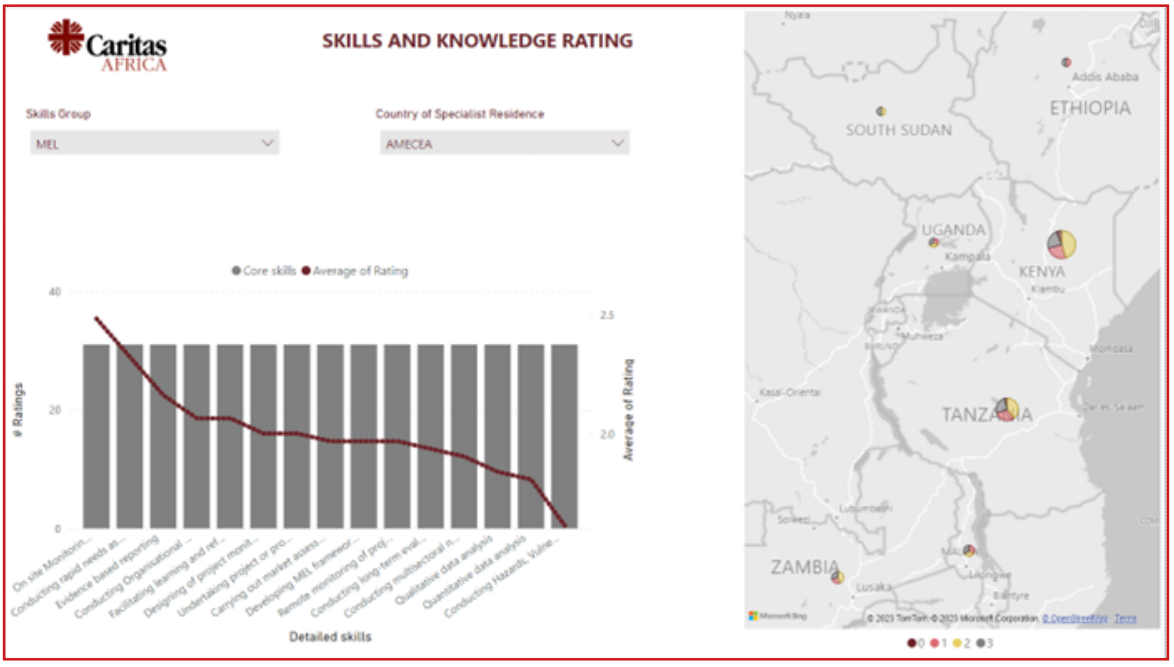
Skills Group: MEL

The table below provides overview of specialist and their self assigned skill rates. All the skills were grouped to allow for overall analysis. Please use the + icon next to the skill groups to expand the table and drill down to the specific skill set of interest. Filters on the right were included to make an interaction with the data set easier.

Skills groups	Number of Specialists	Average skill level
Core skills	**109**	**1.91**
MEL	**109**	**1.91**
On site Monitoring of projects	109	2.39
Conducting rapid needs assessments employing a range of participatory methodologies	109	2.13
Evidence based reporting	109	2.11
Facilitating learning and reflection events	109	2.02
Designing of project monitoring and data collection tools	109	1.97
Remote monitoring of projects	109	1.97
Conducting Organisational Capacity Assessments	109	1.96
Qualitative data analysis	109	1.91
Undertaking project or	108	1.88
Total	**109**	**1.91**

Scenario: I'd like to review the content of MEL training. I select MEL in the provided filters and see the overall average as 1.91. I can order the score in descending order and see that the highest rating 2.39 is recorded against On site monitoring of projects but I can also see that the lowest rating of 1.45 is recorded against Participatory Disaster Risk Assessments. If I am responsible for a specific region or country, I can add additional filter to obtain relevant assessments.

Alternatively, I can navigate to Skills rating chart and set filters to meet by criteria (skills group and region/ country) and obtain the required information of high and low rating skills that way.




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