

***COUNTED BUT NOT  
COUNTED UP:***

***Using existing unanalysed  
data to determine disparities  
in access to/confidence in  
routine childhood  
vaccinations: correlations  
with diversity of ethnicity,  
language and religion***

***Work in progress, research  
continues***

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**VACCINATION ACCEPTANCE  
RESEARCH NETWORK**

**SABIN VACCINE INSTITUTE**



Minority Rights Group is a leading human rights organization focusing on discrimination, exclusion and marginalization impacting on ethnic, religious and linguistic minorities and indigenous peoples.

[www.minorityrights.org](http://www.minorityrights.org)



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# Aim:

- 1) to extract already collected, but unanalysed/ unpublished data in internationally recognized health surveys on routine childhood vaccination rates;
- 2) to disaggregate the data, where possible by religion and ethnicity (*language analysis to follow*)
- 3) *to compare Service Provision data with vaccine uptake data to try to establish relative importance of confidence v access issues*

# Survey Methods

- Review of DHS survey data (*MICS to follow*)
- 40 most recently surveyed countries
  - 30 had a question on religion
  - 20 on ethnicity
  - 34 on language.
- Not all questions meaningful e.g. in Thailand ethnicity question has 2 options 1) Thai 2) other.
- All questions on religion were meaningful
- 12 out of 20 ethnicity questions were meaningful
- 19 out of 34 language questions were meaningful

# Survey Methods

- For only **6** out of **61** questions in total had results been analysed and published.

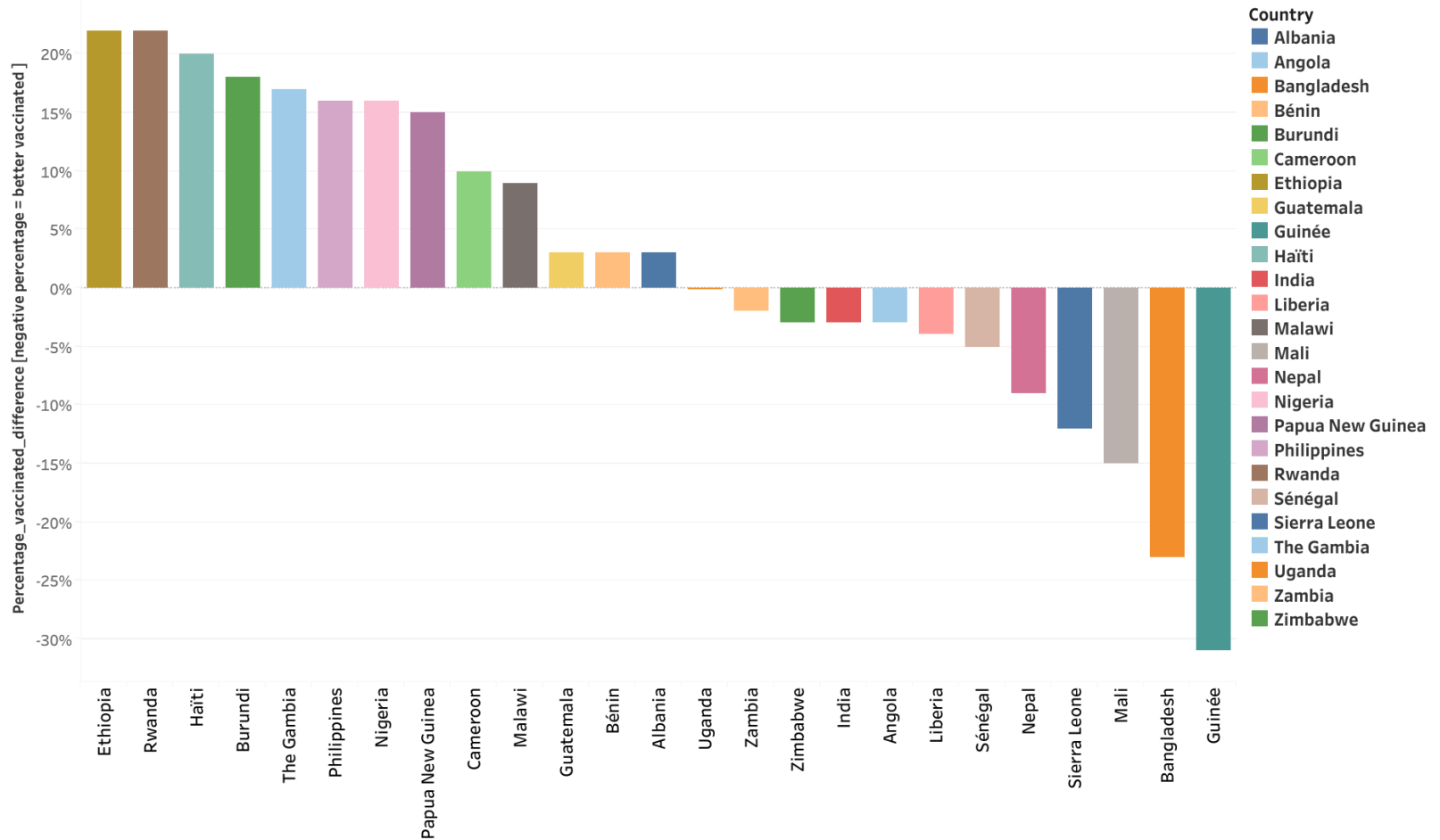
	Question	Meaningful	Published
Religion	<b>30</b>	<b>30</b>	<b>3</b>
Ethnicity	<b>20</b>	<b>12</b>	<b>2</b>
Language	<b>34</b>	<b>19</b>	<b>1</b>
		<b>61</b>	<b>6</b>

- [Note : The DHS over-samples and under-samples the survey population. The figures cited in this presentation are after stratification and sampling weights]

# Religion-wise Analysis

Religion Graph

Total percentage difference between the national mean and religious minority mean, by country.

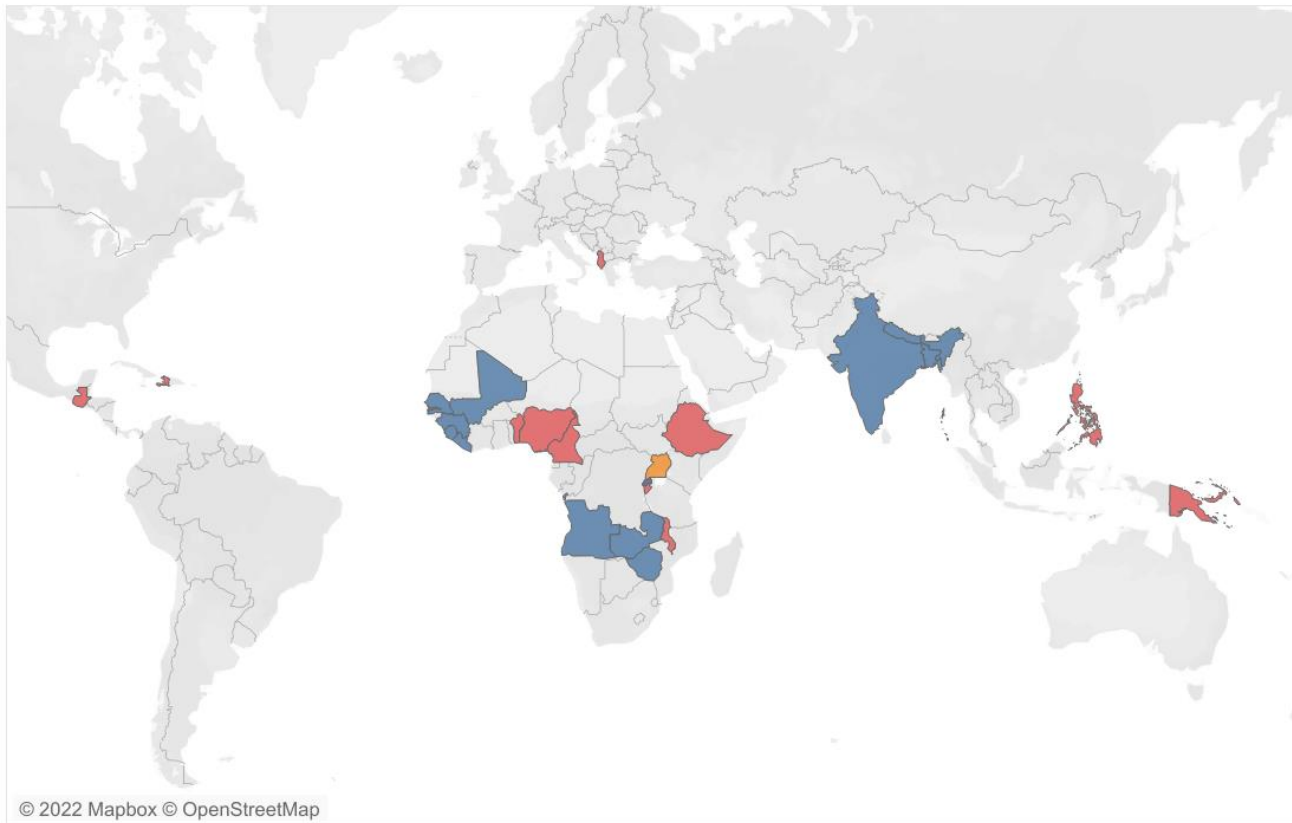


# Religion-wise Analysis

- Wide variation re difference between religious minorities and national average.
- Religious minorities in 13 countries had a **better vaccination rates** than national average
  - half were Muslim majority countries.
  - South- Asia, South-west and West Africa
- Religious minorities in 14 countries had **lower vaccination rates**,
  - 10 had a Christian majority. 7 were African countries

# Religion-wise Analysis

Map of higher and lower religious minority vaccination rates



Higher/Lower vaccinated

- Higher
- Equal
- Lower



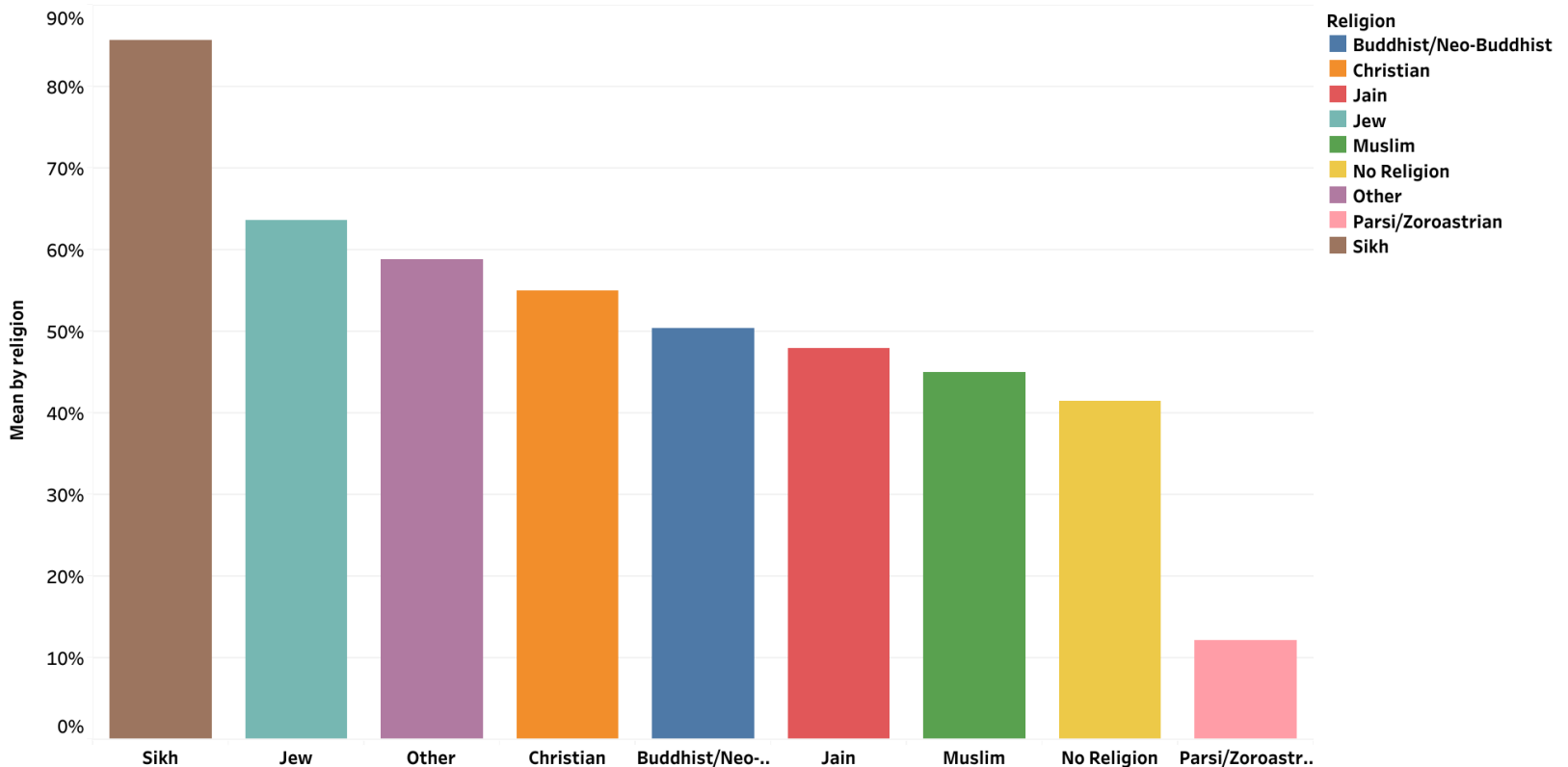
# Religion-wise Analysis

- Countries where religious minorities had lower-than-average vaccination : Rwanda(2014). Guatemala .Malawi. Ethiopia(2016). Burundi. Philippines. Papua New Guinea. Albania. Zambia. Nigeria. Cameroon. Ethiopia(2019). Haiti.
- Countries where religious minorities had greater than average vaccination rates: Zimbabwe. Bangladesh(2014). Angola. Nepal. Uganda. Benin. Bangladesh(2017). Sierra Leone. Senegal .Liberia. Rwanda(2019). India. Guinea.

# India; differences between minorities

Groups that have a lower vaccine uptake are: Parsis, No religion, Muslims and Jain

Differences in vaccine uptake by religion ( India)



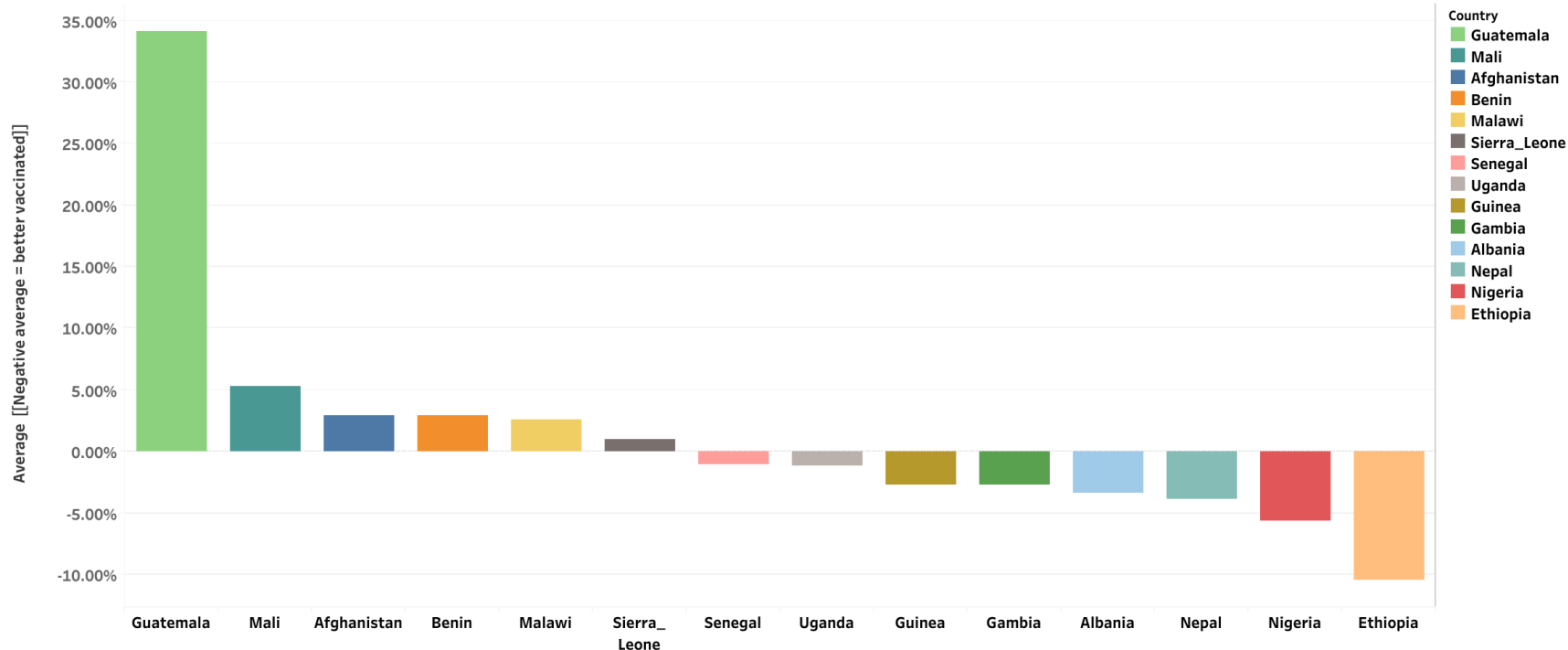
# India; possible confounding factors

- There is a positive correlation between education and vaccination in general
- A correlation between religious group and education level was also found
- However, despite having higher education level, people that follow Jainism have a lower vaccine uptake. This could be due to cultural beliefs and perceptions surrounding vaccination

# Ethnicity-wise Analysis

Amongst the 14 countries analysed, again there was a wide variation in the uptake of vaccinations between the national average and ethnic minorities

Total percentage difference between the national mean vs ethnic minority mean by country



Ethnicity

# Ethnicity-wise Analysis

- Overall, we found a 45.46% difference between the most vaccinated and the least vaccinated minorities in each country.
- Babukusu , Banyaruguru , Batuku , Lendu and Mening were twice as likely to get vaccinated than Chope and Bahehe in Uganda
- Basekto, Bena, Guagu , Sheko, Argoba had 2 times greater vaccination rates than Messongo, Konta in Ethiopia
- The least difference in range between minorities is seen in Albania
- While Creole/Aku Marabout has the most vaccinated minority percentage in Gambia (11% better than the national average), it is the least vaccinated minority (11.7% lower than national average) in Sierra Leone.

# Conclusion

Respecting Sustainable Devt. Goals  
2030 Leave No One Behind and Reach  
the Furthest Behind First

- ❖ Surveys should ALWAYS include ethnicity, language & religion questions
- ❖ Unless there is a clear “do least harm” reason not to, all such data should be analysed and published.
- ❖ Data should be used to inform local and culturally sensitive strategies to increase vaccine uptake