

# How to use and adapt the Muskoka2 global estimates of aid for RMNCH for analyses of individual countries

Webinar recorded Monday 26 July, 2021

on behalf of the Countdown to 2030 Health Financing Data Analysis Centre

Catherine Pitt

*with Peter Binyaruka, Josephine Borghi, Ties Boerma*

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& TROPICAL  
MEDICINE



## To show how to use the ready-made figures and analyses and conduct further analyses using the Muskoka2 Global Excel Workbook

➤ *focusing on the needs of Countdown to 2030 country-focused teams*

- ❖ *This webinar is designed to follow the previous webinar from the Health Financing Data Analysis Centre – please watch that one first!*
- ❖ *A future webinar will demonstrate how to assemble detailed country-specific analyses for those country teams wishing to understand aid for RMNCH in greater depth.*

### Health Financing Analysis for Annual Reviews

Josephine Borghi, Catherine Pitt, Melisa Martinez-Alvarez, Peter Binyaruka, Federica Margiani

# Overview of this webinar

- Muskoka2 methods and results (powerpoint slides)
- Walk through the Muskoka2 Global Workbook (in Excel)
  - General structure
  - Country-specific results
  - How country teams can use the figures, analysis, and data
- Q&A

# Raw data on external financing: the CRS

- The Organization for Economic Co-operation and Development maintains the **Creditor Reporting System (CRS)**, the main source for external financing – or “aid” data
- Data are reported by:
  - 49 bilateral (i.e. country) donors
  - 42 multilateral donors (i.e. institutions such as UN agencies)
  - 36 private donors
- Relatively complete data for years 2002-19; more complete in more recent years
- 200,000 – 300,000 data points per year (!!)
- Covers all sectors (not just health)
- The CRS categorises aid for the health, water and sanitation, and humanitarian sectors according to sub-sectoral areas . . . **but NOT in ways that permit straightforward estimates of aid for RMNCH**

# Muskoka2 estimates of aid for RMNCH

- Muskoka2 is an algorithm applied to the CRS database
- Generates estimates of the monetary value of **aid for**:
  - **Maternal and newborn health**
  - **Child health** (age 1-59 months)
  - **Reproductive health** (of non-pregnant women)
- Includes aid *directed towards* reproductive health and family planning, but *also relevant shares of aid directed towards* HIV, malaria, TB, basic health care, health systems, water and sanitation, humanitarian aid, and general budget support  
→ recognises the value of the wider health system in promoting RMNCH
- Accessible as an Excel workbook

## Estimates of aid for reproductive, maternal, newborn, and child health: findings from application of the Muskoka2 method, 2002–17

Antonia Dingle, Marco Schäferhoff, Josephine Borghi, Miriam Lewis Sabin, Leonardo Arregoces, Melisa Martinez-Alvarez, Catherine Pitt

### Summary

**Background** Four methods have previously been used to track aid for reproductive, maternal, newborn, and child health (RMNCH). At a meeting of donors and stakeholders in May, 2018, a single, agreed method was requested to produce accurate, predictable, transparent, and up-to-date estimates that could be used for analyses from both donor and recipient perspectives. Muskoka2 was developed to meet these needs. We describe Muskoka2 and present estimates of levels and trends in aid for RMNCH in 2002–17, with a focus on the latest estimates for 2017.

**Methods** Muskoka2 is an automated algorithm that generates disaggregated estimates of aid for reproductive health, maternal and newborn health, and child health at the global, donor, and recipient-country levels. We applied Muskoka2 to the Organisation for Economic Co-operation and Development's Creditor Reporting System (CRS) aid activities database to generate estimates of RMNCH disbursements in 2002–17. The percentage of disbursements that benefit RMNCH was determined using CRS purpose codes for all donors except Gavi, the Vaccine Alliance; the UN Population Fund; and UNICEF; for which fixed percentages of aid were considered to benefit RMNCH. We analysed funding by donor for the 20 largest donors, by recipient-country income group, and by recipient for the 16 countries with the greatest RMNCH need, defined as the countries with the worst levels in 2015 on each of seven health indicators.

**Findings** After 3 years of stagnation, reported aid for RMNCH reached \$15.9 billion in 2017, the highest amount ever reported. Among donors reporting in both 2016 and 2017, aid increased by 10% (\$1.4 billion) to \$15.4 billion between 2016 and 2017. Child health received almost half of RMNCH disbursements in 2017 (46%, \$7.4 billion), followed by reproductive health (34%, \$5.4 billion), and maternal and newborn health (19%, \$3.1 billion). The USA (\$5.8 billion) and the UK (\$1.6 billion) were the largest bilateral donors, disbursing 46% of all RMNCH funding in 2017 (including shares of their core contributions to multilaterals). The Global Fund and Gavi were the largest multilateral donors, disbursing \$1.7 billion and \$1.5 billion, respectively, for RMNCH from their core budgets. The proportion of aid for RMNCH received by low-income countries increased from 31% in 2002 to 52% in 2017. Nigeria received 7% (\$1.1 billion) of all aid for RMNCH in 2017, followed by Ethiopia (6%, \$876 million), Kenya (5%, \$754 million), and Tanzania (5%, \$751 million).

**Interpretation** Muskoka2 retains the speed, transparency, and donor buy-in of the G8's previous Muskoka approach and incorporates eight innovations to improve precision. Although aid for RMNCH increased in 2017, low-income and middle-income countries still experience substantial funding gaps and threats to future funding. Maternal and newborn health receives considerably less funding than reproductive health or child health, which is a persistent issue requiring urgent attention.

**Funding** Bill & Melinda Gates Foundation; Partnership for Maternal, Newborn & Child Health.

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### Introduction

In the push towards universal health coverage, focused efforts are needed to ensure that reproductive, maternal, newborn, and child health (RMNCH) receives adequate funding. Although domestic and non-traditional health financing sources have rightly received increased attention in recent years,<sup>1,2</sup> aid remains important, particularly for low-income countries,<sup>3</sup> and is a key pillar in achieving the ambitious targets of the Every Woman Every Child Global Strategy for Women's, Children's and Adolescents' Health (2016–2030).<sup>4</sup> Estimates of aid for RMNCH can be used to hold donors and recipients

accountable and to assess whether aid is sufficient, targeted to need, and effective.

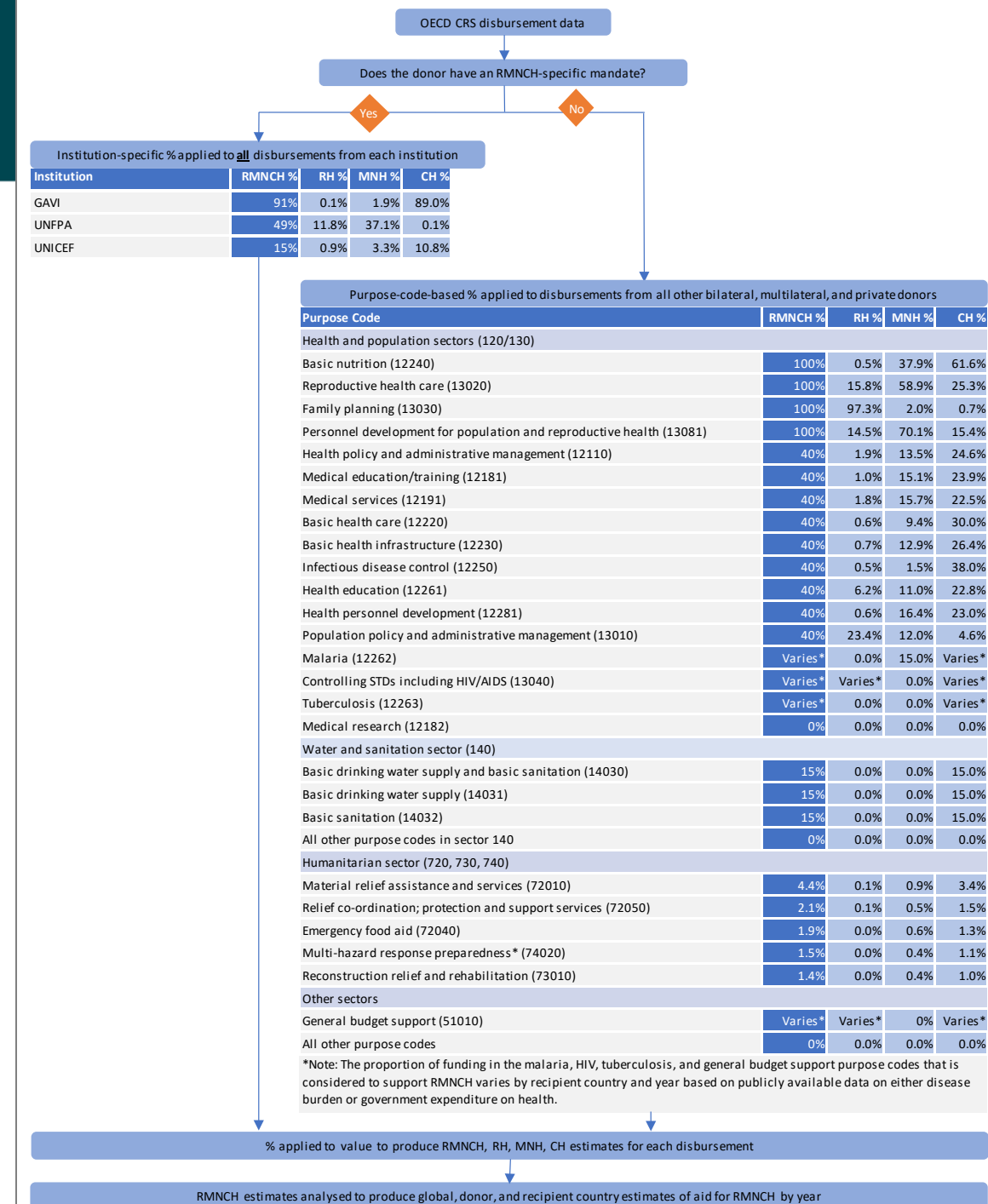
Four methods to track aid for RMNCH have previously been used and compared:<sup>5</sup> the G8 Muskoka method,<sup>6</sup> the Countdown to 2015 approach,<sup>7</sup> the Institute for Health Metrics and Evaluation (IHME) approach,<sup>8</sup> and the Organisation for Economic Co-operation and Development (OECD) RMNCH policy marker.<sup>9</sup> Although all of these approaches are designed to measure aid for RMNCH, their methods and estimates vary substantially. As previously described,<sup>5</sup> any aid tracking approach comprises “trade-offs between simplicity, timeliness,



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# Muskoka2 Flow chart

- The automated Muskoka2 algorithm determines what % of each disbursement reported in the OECD's CRS to count towards RH, MNH, and CH (which together sum to RMNCH)
- Fixed % of all aid from 3 multilateral institutions (UNICEF, UNFPA, GAVI) is assumed to benefit RMNCH
- For other donors, 0% - 100% of each disbursement is considered to support RMNCH depending upon either the purpose code or the recipient and year



# Muskoka2 Global dataset: structure

- Muskoka2 “Global” dataset includes key data for all recipients (i.e. millions of records) for the 2002-19 period, summarized into an Excel dataset of ~230,000 records
- **Indicators produced:**
  - Total aid for ...
    - RH
    - MNH
    - CH
    - RMNCH
  - Aid per relevant population:
    - Aid for RH per woman of reproductive age
    - Aid for MNH per birth
    - Aid for CH per child under 5
- **Estimates disaggregated by:**
  - Year
  - Donor
  - Recipient country or region
  - Sub-sectoral “purpose”
  - Flow type (ODA\* grants, ODA\* loans, private)

❖ *All values reflect disbursements in constant US \$*

\*ODA=Official development assistance



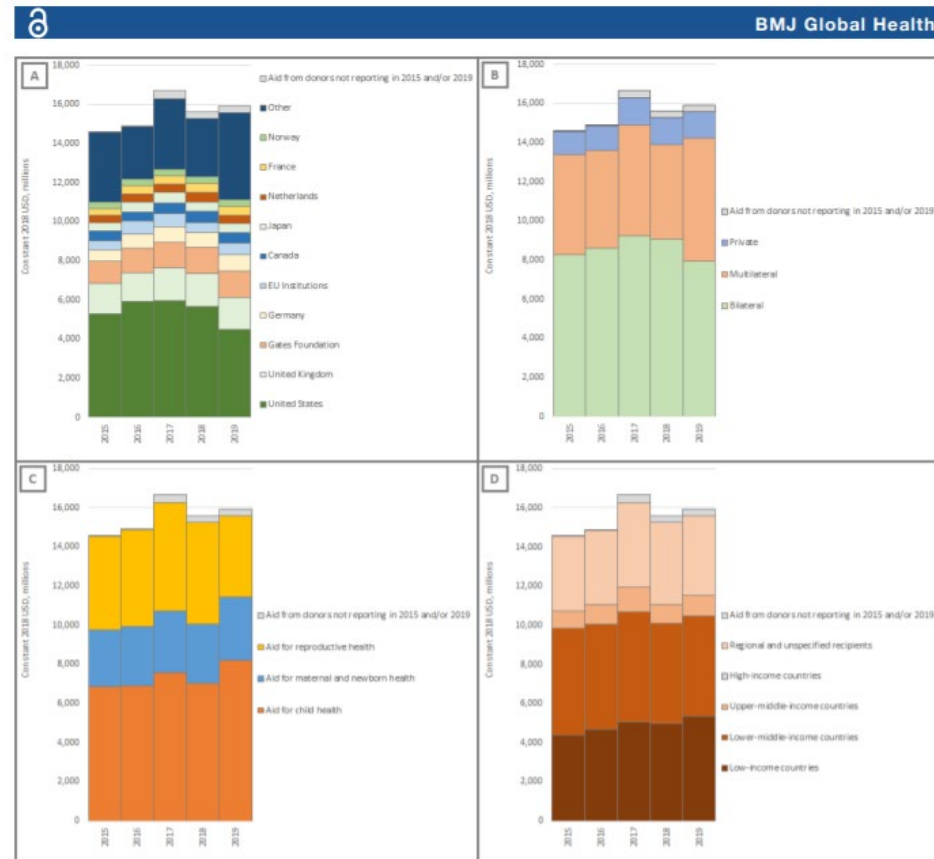
# Muskoka2 Global dataset: Global analyses

## Commentary

BMJ Global Health

## Falling aid for reproductive, maternal, newborn and child health in the lead-up to the COVID-19 pandemic

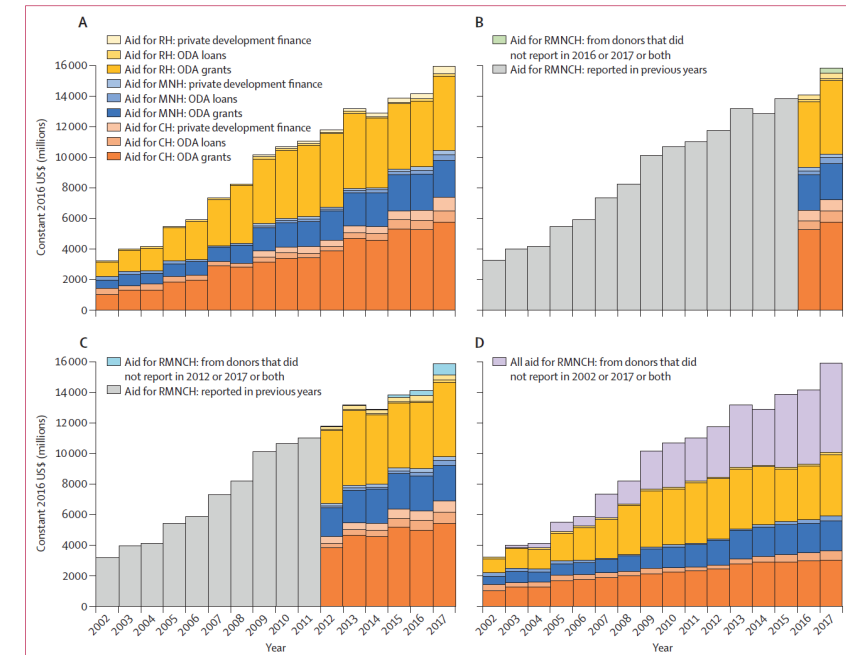
Catherine Pitt <sup>1</sup>, David Bath <sup>1</sup>, Peter Binyaruka <sup>2</sup>, Josephine Borghi <sup>1</sup>,  
Melisa Martinez-Alvarez <sup>3</sup>



**Figure 1** Trends in aid for RMNCH, 2015–2019. Values cited in the text are restricted to donors reporting in both 2015 and 2019 to avoid reporting bias in trends over time, as some donors did not report in all years. Panels show trends in aid for RMNCH: (A) disaggregated by donor, including both direct bilateral disbursements and core contributions to multilateral institutions from the top 10 largest donors over the time period and other bilateral and private donors; (B) disaggregated by type of donor deciding the purpose and recipient of the disbursement; (C) disaggregated by aid for child health, for maternal and newborn health and for the reproductive health of non-pregnant women; and (D) disaggregated by the World Bank country income group classification for recipient countries and regional and unspecified recipients. EU, European Union; RMNCH, reproductive, maternal, newborn and child health; USD, United States dollars.

## Estimates of aid for reproductive, maternal, newborn, and child health: findings from application of the Muskoka2 method, 2002–17

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**Figure 2** Trends in aid for RMNCH by beneficiary group and type of aid flow, 2002–17. Trends are presented for all reported data (A), and for data from donors reporting in 2016 and 2017 (B), 2012 and 2017 (C), and 2002 and 2017 (D). CH=child health. MNH=maternal and newborn health. ODA=official development assistance. RH=reproductive health. RMNCH=reproductive, maternal, newborn, and child health.



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MM-A and JB are joint senior authors.

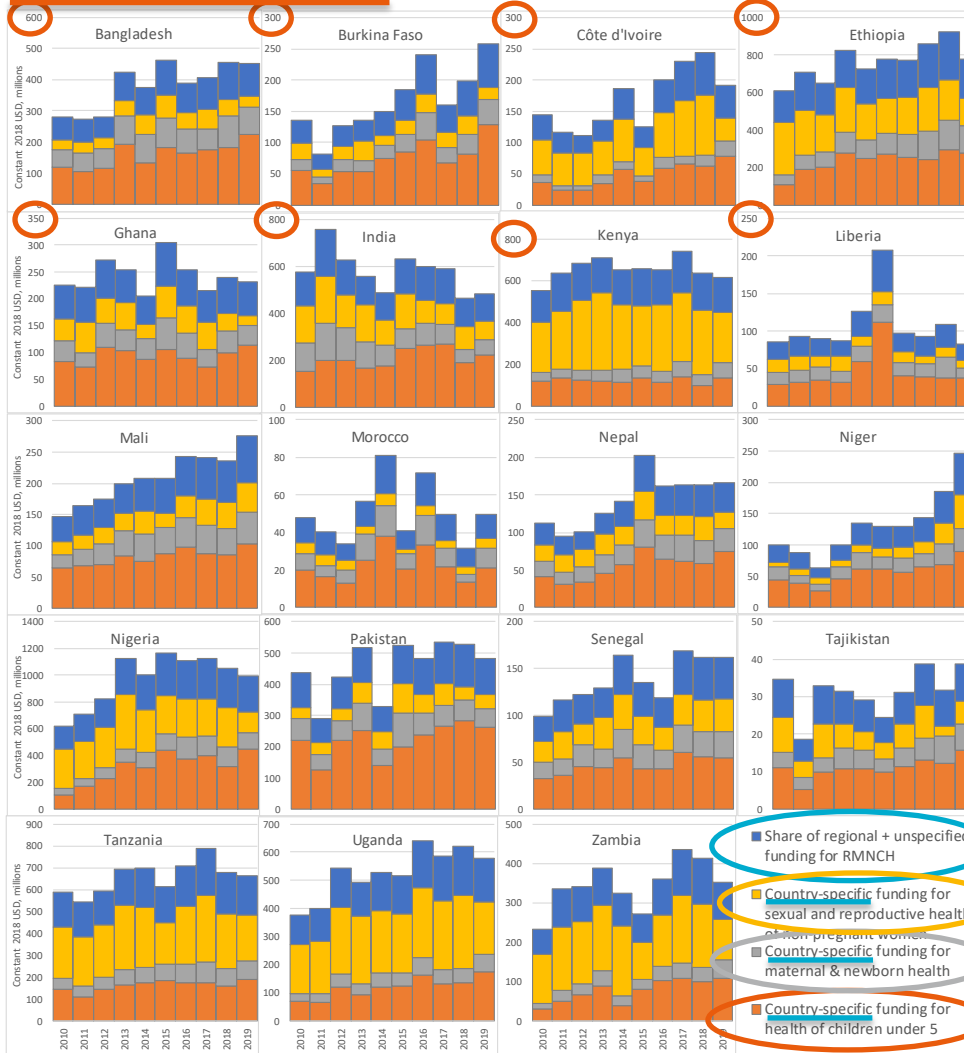
Received 22 April 2021  
Accepted 21 May 2021



# Muskoka2 Global dataset: Country-specific analyses

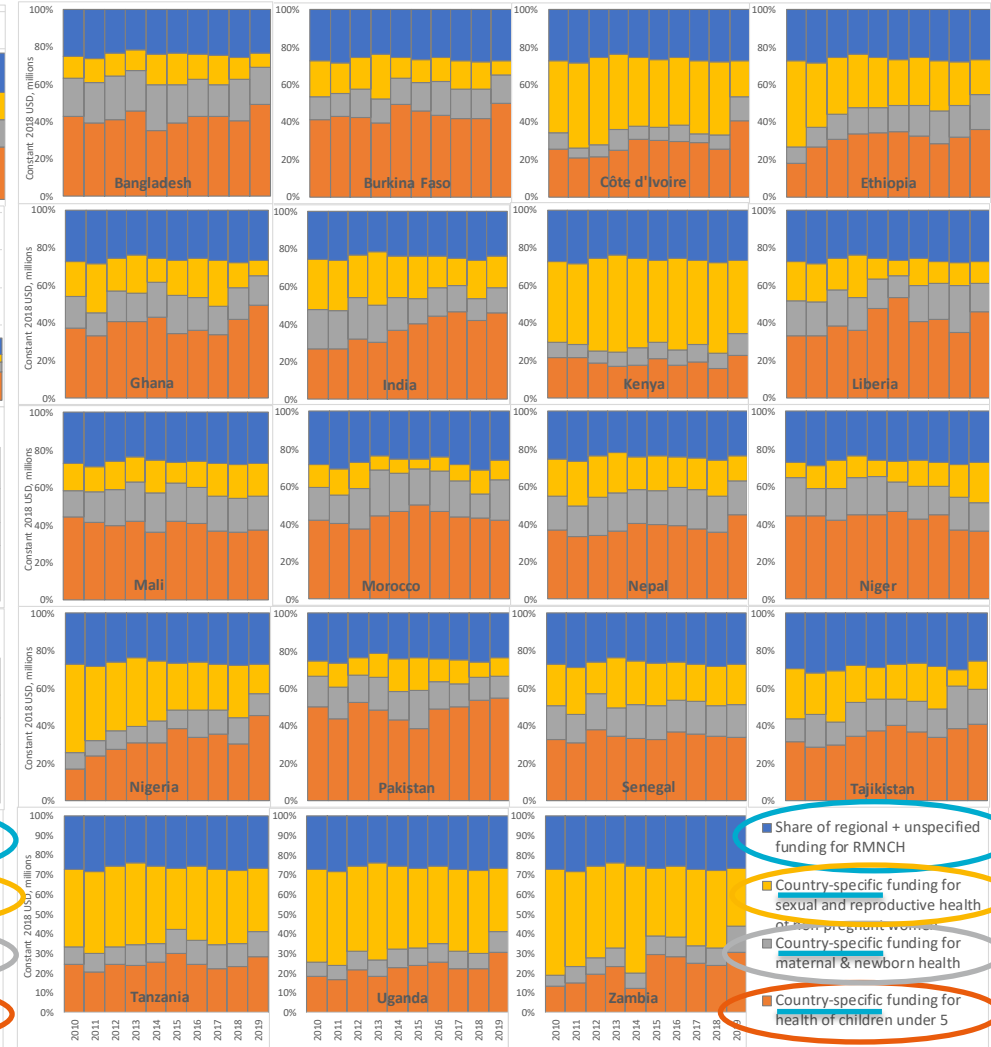
**Figure 5b. Trends in aid for RMNCH for each of the 19 Countdown to 2030 focus countries, 2010-2019**

Total values of aid for RMNCH are presented in constant 2018 USD (millions). To avoid reporting bias, these values are restricted to aid from donors that reported their aid in both 2010 and 2019. For this reason, values are lower than those reported in analyses focused only on more recent time periods, when more donors reported their aid more consistently. Each country is presented on its own vertical axis.



**Figure 5c. Trends in aid for RMNCH for each of the 19 Countdown to 2030 focus countries, 2010-2019**

Shares of total aid for RMNCH are presented. To avoid reporting bias, these values are restricted to aid from donors that reported their aid in both 2010 and 2019.



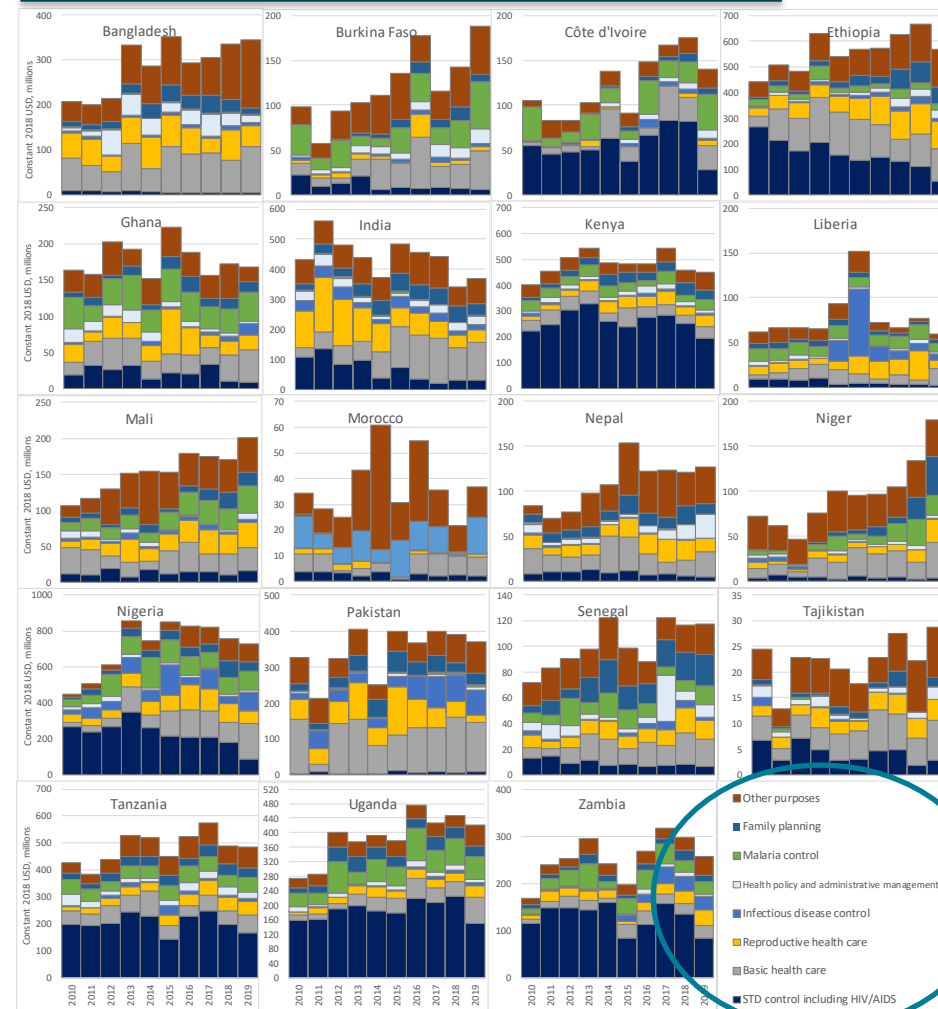
*Disaggregated  
by RH / MNH /  
CH in absolute  
values and as %*

# Muskoka2 Global dataset: Country-specific analyses



*Disaggregated  
by purpose*

**Figure 5d. Trends in aid for RMNCH for each of the 19 Countdown to 2030 focus countries by purpose, 2010-2019**  
Total values of aid for RMNCH are presented in constant 2018 USD (millions). To avoid reporting bias, these values are restricted to aid from donors that reported their aid in both 2010 and 2019. For this reason, values are lower than those reported in analyses focused only on more recent time periods, when more donors reported their aid more consistently. Each country is presented on its own vertical axis. Only aid directed towards specified recipient countries is shown; aid directed towards regional and unspecified recipients are not included. The top 7 purpose codes contributing to RMNCH estimates for all countries over the period are shown alongside aid directed towards all other purposes.

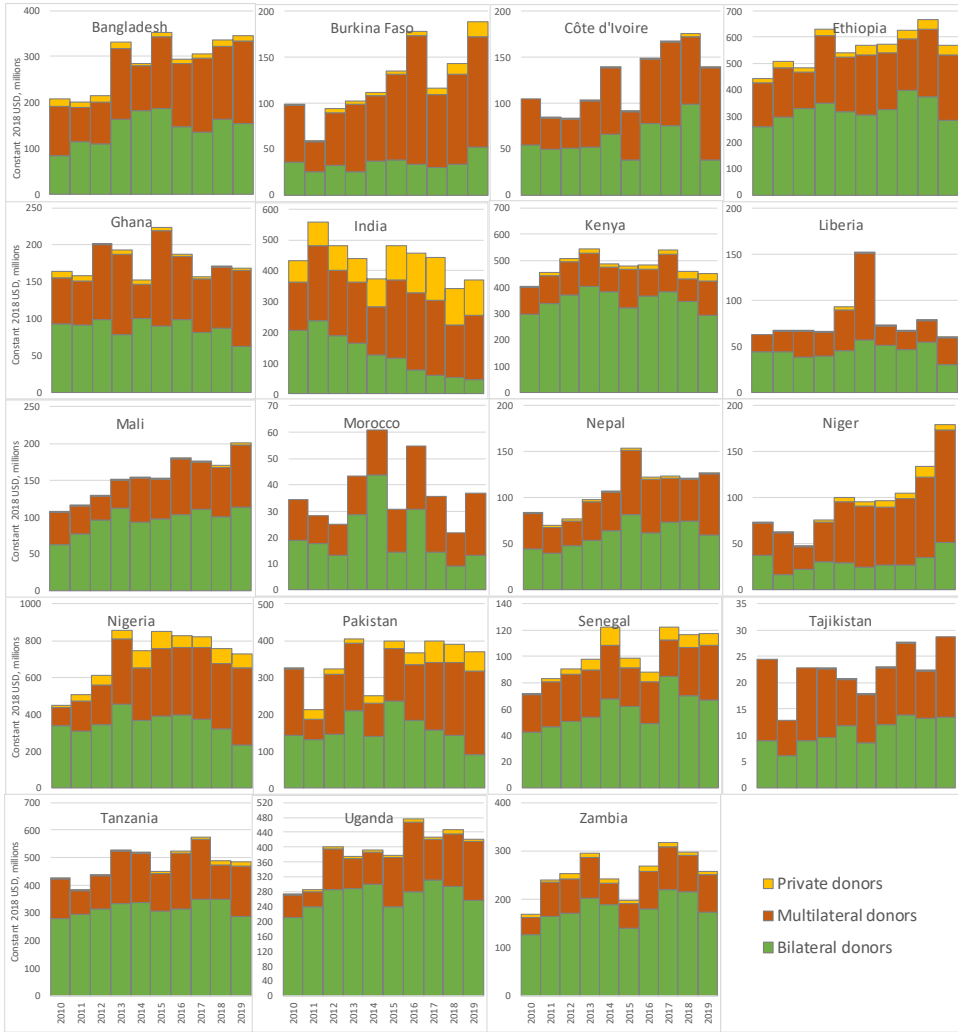


# Muskoka2 Global dataset: Country-specific analyses



**Figure 5e. Trends in aid for RMNCH for each of the 19 Countdown to 2030 focus countries by donor type, 2010-2019**

Total values of aid for RMNCH are presented in constant 2018 USD (millions). To avoid reporting bias, these values are restricted to aid from donors that reported their aid in both 2010 and 2019. For this reason, values are lower than those reported in analyses focused only on more recent time periods, when more donors reported their aid more consistently. Each country is presented on its own vertical axis. Only aid directed towards specified recipient countries is shown; aid directed towards regional and unspecified recipients are not included.



**Figure 5f. Trends in aid for RMNCH for each of the 19 Countdown to 2030 focus countries by donor, 2010-2019**

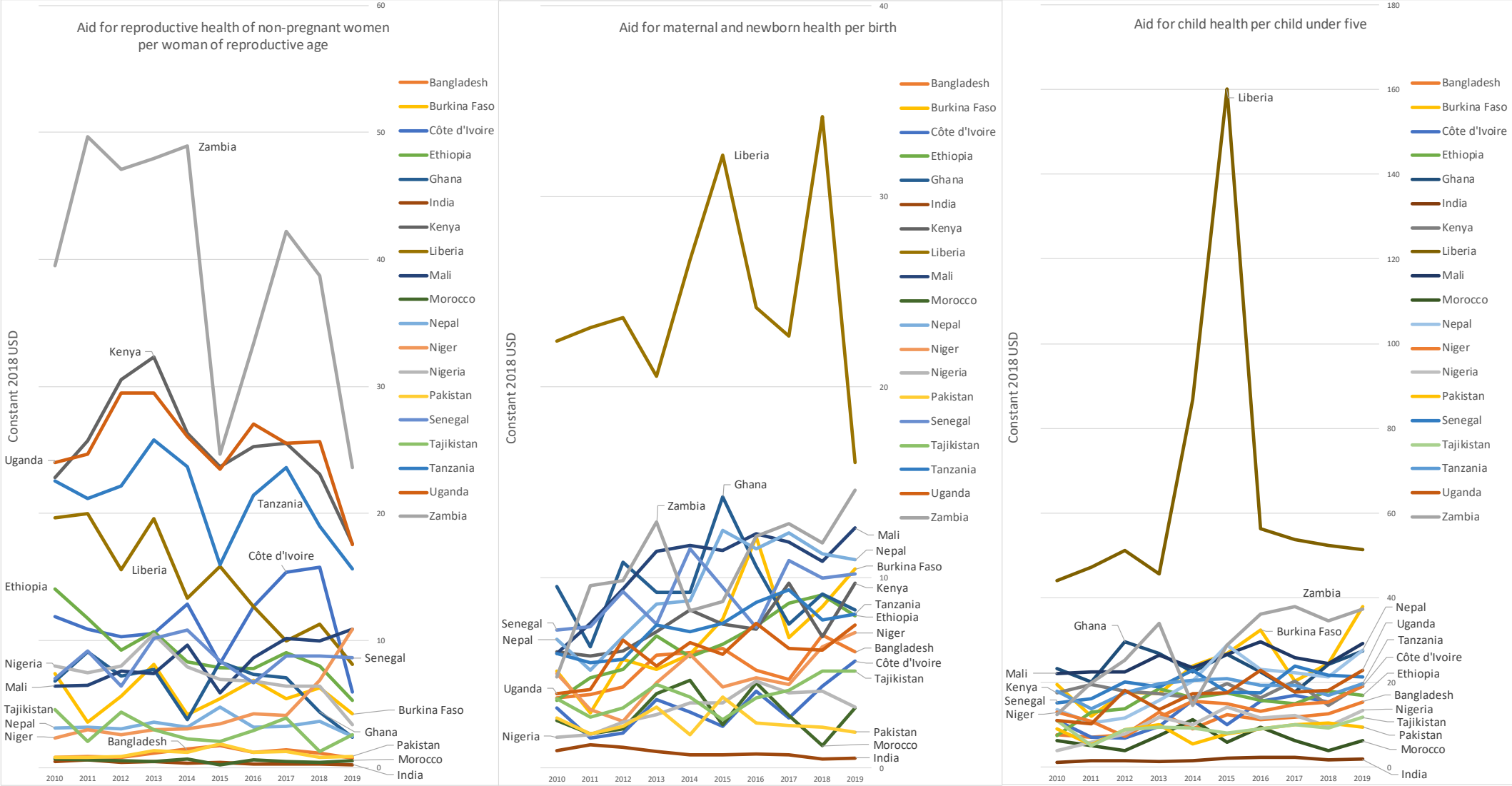
Total values of aid for RMNCH are presented in constant 2018 USD (millions). To avoid reporting bias, these values are restricted to aid from donors that reported their aid in both 2010 and 2019. For this reason, values are lower than those reported in analyses focused only on more recent time periods, when more donors reported their aid more consistently. Please note that each country is presented on its own vertical axis. Only aid directed towards specified recipient countries is shown without shares of aid directed towards regional and unspecified recipients. The top 7 donors for all countries over the period are shown alongside aid from other donors combined.



*Disaggregated  
by donor type  
and donor*

# Muskoka2 Global dataset: Country-specific analyses

**Figure 6. Aid for RMNCH per relevant population for the 19 Countdown to 2030 focus countries, 2010-2019**  
Estimates of aid for RMNCH are disaggregated and presented per relevant population. Figures are on different y-axes. Only aid directed towards specified recipient countries is shown without shares of aid directed towards regional and unspecified recipients.



Aid per relevant population

# Muskoka2 Global dataset: Country-specific analyses

- Country-specific analyses have been prepared for 19 Countdown to 2030 focus countries (i.e. country collaborations and/or MNH exemplars)
  - Total aid for RMNCH in absolute values or as % disaggregated. . .
    - by RH/MNH/CH
    - by “purpose” – i.e. activity area as coded by donors
    - by donor (top 7 + other donors)
    - by donor type
  - Aid for RMNCH per relevant population
    - Aid for RH per woman of reproductive age
    - Aid for MNH per birth
    - Aid for CH per child under 5
- Further analyses are possible within the Excel workbook for those comfortable with Excel graphs and pivot tables

# *A note on reporting bias*

## Problem

- Many more donors report aid disbursed in more recent years than in earlier years
- In some cases, the absence of reporting may reflect that a given donor did not disburse any aid in a given year (i.e. a true 0), but more often, the absence reflects missing data
- To avoid reporting bias, analyses of trends over time must be restricted to aid from donors that reported their aid at the beginning and end of the given time period

## Recommendations

- To analyse trends over time, we recommend the period 2010-19 and restricting to donors that reported in both 2010 and 2019
- Analyses of aid in a single year (e.g. 2019) can use all reported data, as long as there is no comparison with prior years



# Muskoka 2 Country dataset: Uganda

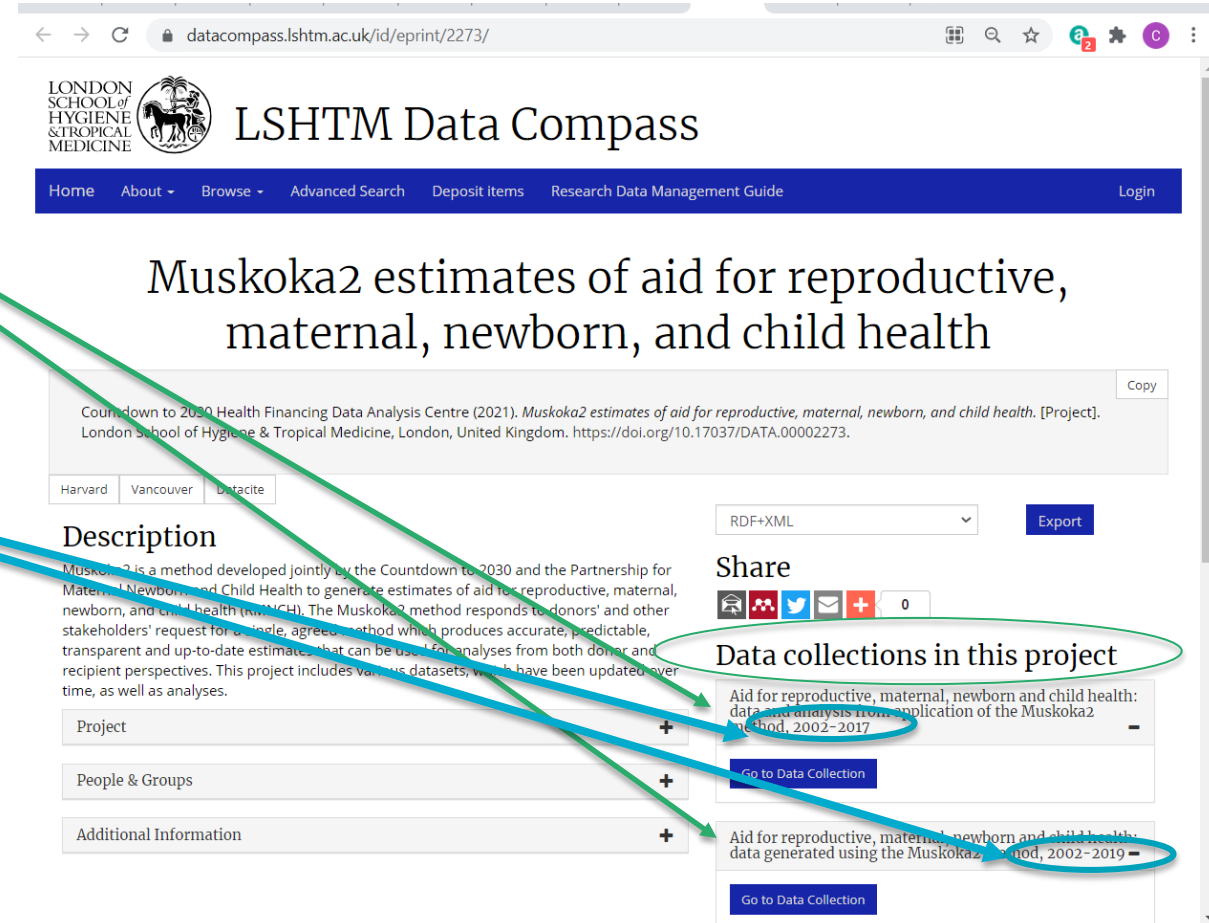
- Slight variation on the global dataset, allowing more in-depth exploration
- Includes all records from the CRS for a single recipient (e.g. Uganda): ~25,000 records for Uganda for the period 2009-18
- Contains additional variables, including:
  - Project title
  - Short description
  - Long description
  - Channel of delivery (Recipient)
  - Modality (Project, basket fund, etc)

***Covered in the  
next webinar!***

# Where to find the Muskoka2 datasets

Publicly available at: <https://datacompass.lshtm.ac.uk/id/eprint/2273/>

- As new datasets become available, they will be added here
- Look carefully at the titles to ensure you are downloading:
  - the most recent version
  - the correct version for your interests – Global, or more detailed workbooks focused on specific countries or other themes



LSHTM Data Compass

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## Muskoka2 estimates of aid for reproductive, maternal, newborn, and child health

Countdown to 2030 Health Financing Data Analysis Centre (2021). Muskoka2 estimates of aid for reproductive, maternal, newborn, and child health. [Project]. London School of Hygiene & Tropical Medicine, London, United Kingdom. <https://doi.org/10.17037/DATA.00002273>.

Harvard Vancouver Datacite

### Description

Muskoka2 is a method developed jointly by the Countdown to 2030 and the Partnership for Maternal, Newborn, and Child Health to generate estimates of aid for reproductive, maternal, newborn, and child health (RMNCH). The Muskoka2 method responds to donors' and other stakeholders' request for a single, agreed method which produces accurate, predictable, transparent and up-to-date estimates that can be used for analyses from both donor and recipient perspectives. This project includes various datasets, which have been updated over time, as well as analyses.

Project +

People & Groups +

Additional Information +

RDF+XML Export

### Share

0

### Data collections in this project

Aid for reproductive, maternal, newborn and child health: data and analysis from application of the Muskoka2 method, 2002-2017

Go to Data Collection

Aid for reproductive, maternal, newborn and child health: data generated using the Muskoka2 method, 2002-2019

Go to Data Collection

Please contact [catherine.pitt@lshtm.ac.uk](mailto:catherine.pitt@lshtm.ac.uk) (en français ou en anglais) for further assistance in accessing the Muskoka2 datasets.

# Muskoka2 global workbook (Excel)

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