

Gender and Intersectionality Matter :

Strengthening Flowminder's impact in data for
development in low- and middle-income countries

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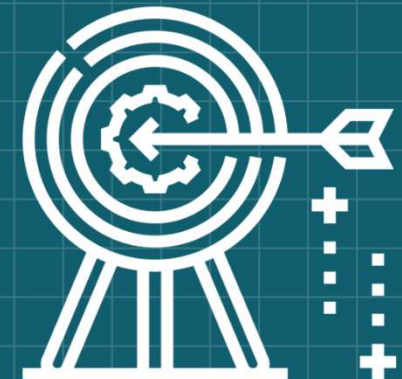
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Agenda

- Introduction via personal reflection
- Key gender and intersectional concepts
- Why gender and intersectionality in data for development
- International standards
- Evidence of what works
- Discussion

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Introduction:
**Making gender and
intersectionality matter starts
with you!**

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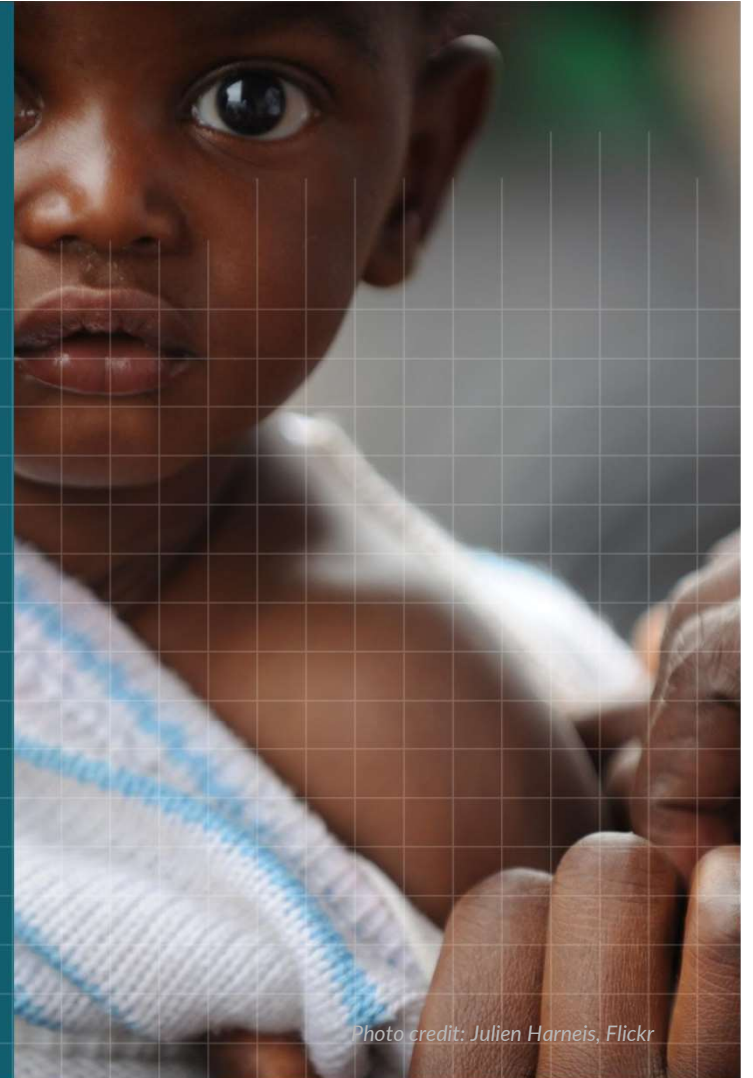


Photo credit: Julien Harneis, Flickr

Reflecting Back: Personal Reflections

Please reflect upon a situation you were in or observed personally, where you felt that tackling gender-based discrimination and or intersecting forms of discrimination (i.e. sexism, racism, homophobia, classism, post-colonial system) was important to your work. Can be Flowminder or a past work or personal experience.

Imagine if you were that person or group of people, what would you expect Flowminder to do about it? Any potential connections to informing ethics in data analysis and use?



Key Gender and Intersectional Concepts

Key gender and intersectional concepts

1. Gender versus sex
2. Gender norms, gender identities and gender identities
3. Gender equity and gender equality
4. Intersectionality
5. Gender Data
6. Sex-disaggregated data
7. Gender-sensitive indicators
8. Gender Integration

1. Gender versus Sex

Sex: The biological difference between women/men, boys/girls and intersex. It is universal, unaffected by culture and geography and is very difficult to change.

Example: Vulnerability of infection to COVID-19, clinical research and treatments are different by sex and age group.

Gender: refers to the social and cultural norms, expectations and beliefs about how men, women, boys and girls are “supposed” to behave. Learned and varied.

Example: While more men are infected with COVID-19, women are projected to suffer more from the social, cultural, economic and health impacts.

Both sex and gender have implications for data for development and humanitarian initiatives.

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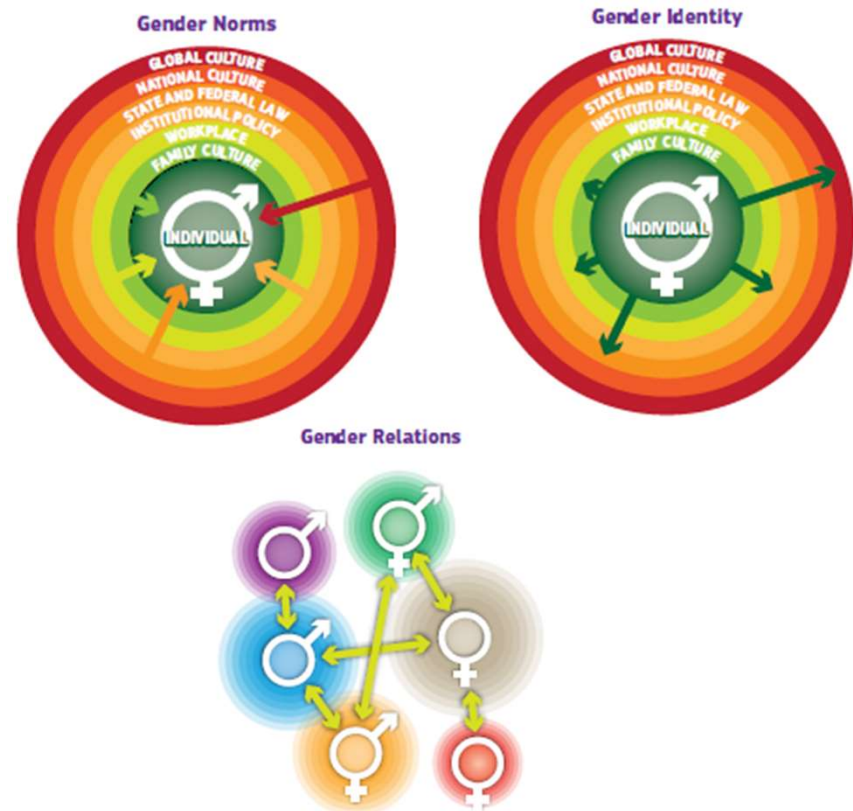
Source: European Commission (2020). *GENDERED INNOVATIONS 2: How Inclusive Analysis Contributes to Research and Innovation: Policy Review.*

2. Gender Norms, Gender Identities and Gender Relations

Gender norms are widely held beliefs within a society or culture about male and female characteristics, acceptable roles and behaviors, and capacities. They often go unquestioned.

Gender identities are how individuals or groups perceive and present themselves in relation to gender norms; context-specific and interact with other identities (i.e. ethnicity, class, age).

Gender relations are social relations between and among women and men based on gender norms and roles; often hierarchical and can create inequalities among groups of men and women i.e. the concentration of women and men in different types of (paid or unpaid) activities.



3. Gender equality versus gender equity

Gender Equality

... refers to women and men, girls and boys having the **same entitlements to all human rights**; to enjoy the same level of respect in the community; and to have equal abilities, power and opportunities



Gender Equity

... is about being **fair** to women and men, girls and boys and may require specific measures to address and correct social, economic, material or political discrimination faced by women and girls and or men and boys.



Think of the data revolution....

Examples of gender inequities?
Examples of gender inequality?

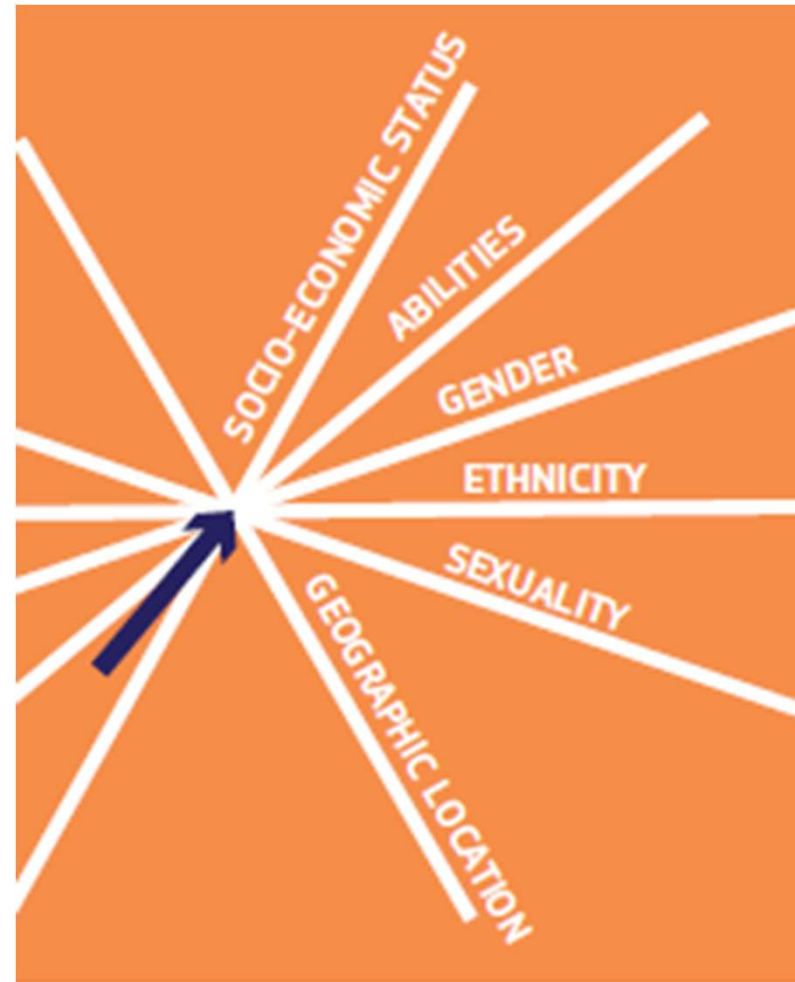
4. Intersectionality

'Intersectionality' describes overlapping or intersecting categories such as gender, sex, ethnicity, age, socioeconomic status, sexual orientation and geographical location that combine to inform individuals' identities and experiences.

Researchers and engineers should not consider gender in isolation; gender identities, norms and relations both shape and are shaped by other social attributes (Buolamwini and Gebru, 2018).

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Case in Point: Gender and Intersectional Bias in Machine Learning

Facial recognition identifies people in crowds, analyse emotion, and detect gender, age, race, sexual orientation, facial characteristics, etc., and are used in recruitment, surveillance etc.

The Problem: Gender and intersectional bias in datasets such as more men and light-skinned.

Impact: Amplifies discrimination of certain groups, unfair, unethical, and violation of rights to fair treatment and social justice.

Solution: analyse gender and intersectionality in machine learning

1. Understand and *identify discrimination* in facial recognition in each step of modeling
2. **Create intersectional training datasets:** i.e. Gender Shades project, Massachusetts Institute of Technology (MIT) (added dataset for four categories: darker-skinned women, darker-skinned men, lighter-skinned women and lighter-skinned men.
3. Establishing *parameters for a diverse set of faces*. Consider transgender women who are transitioning wear make-up.

European Commission (2020)

5. Gender Data

Captures differences and reveals inequalities in the situation of women, men, girls and boys and serves to inform policies and programs that benefit all of society.

- Sex- and age-disaggregated data
- Data that reflect gender issues and inequalities
- Data that highlight the realities and diversity in the lives of girls, boys, women and men
- Data collected using methods and concepts that account for gender biases in classification and collection

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Plan International (2016) *Counting the invisible. Using data to transform the lives of girls and women by 2030.*

The What and Why of Gender Data

Focuses on data around **gender norms, expectations and inequities**; for example:

- Gender-based violence
- Power differences
- Female autonomy
- Access to educational and economic opportunities

Uses a mix of qualitative and quantitative techniques

Gender responsive M&E takes participatory approaches and has intent to challenge inequalities. I.e. Citizen-led data.

- To know if we have **increased women's and men's participation in and benefits from** interventions, especially in areas where they have been historically underrepresented
- To know if we have **reduced gender inequality** (e.g., barriers to access) **or unintentionally exacerbated gender inequalities**
- To **generate evidence** on how attention to gender in programs contributes to more equitable and sustainable outcomes
- To make visible what is invisible.
- To improve equality for all women, men, girls and boys in all their diversity

6. Sex-disaggregated Data

- Understand how **project activities are affecting gender norms and the lives** of men, women and other vulnerable populations.
- **Consider the intersection of identities:** Such as age, ethnicity, race, religion, disability status, etc.



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7. Gender-Sensitive Indicators

- **Measure change in unequal gender power relations:**
 - Girls' empowerment
 - Attitudes of adolescent boys on gender equality
 - Incidence of sexual harassment of girls
- Focus on **Strategic Gender Interests** — Reveals changes in girls/women's positions (how they are valued).
- Measure **EQUALITY of OUTCOME** - not just Equal Opportunities.
- **Include girls'/women's/boys'/men's perceptions** of changes in attitudes, relationships and behaviors.
- Always **sex disaggregated** and can be **quantitative** (for accountability/building credibility)

 **GRID⁺ qualitative** (to add depth)
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A teenage boy dies in accident because he tried to meet peers' expectations that young men should take risks.

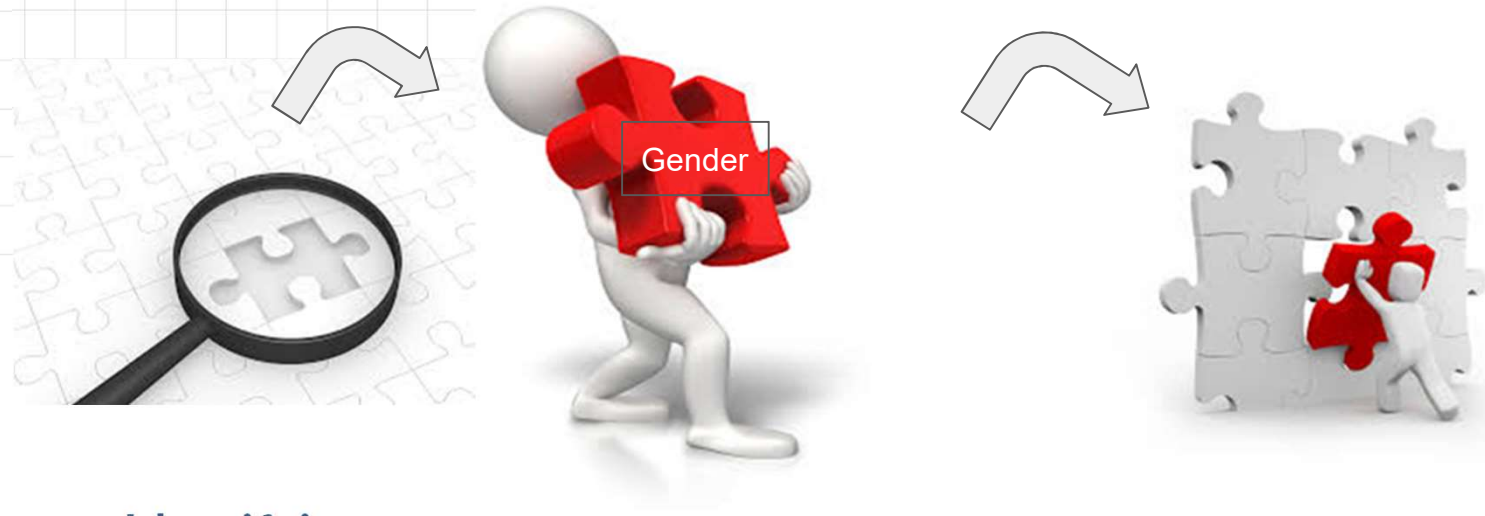


A woman cannot access needed maternal health care because she does not have control of the household money.



A transgender woman has trouble finding services that do not discriminate against or stigmatize her.

8. Gender integration



Identifying:

Specific gender-related and sex-based differences and resulting inequalities

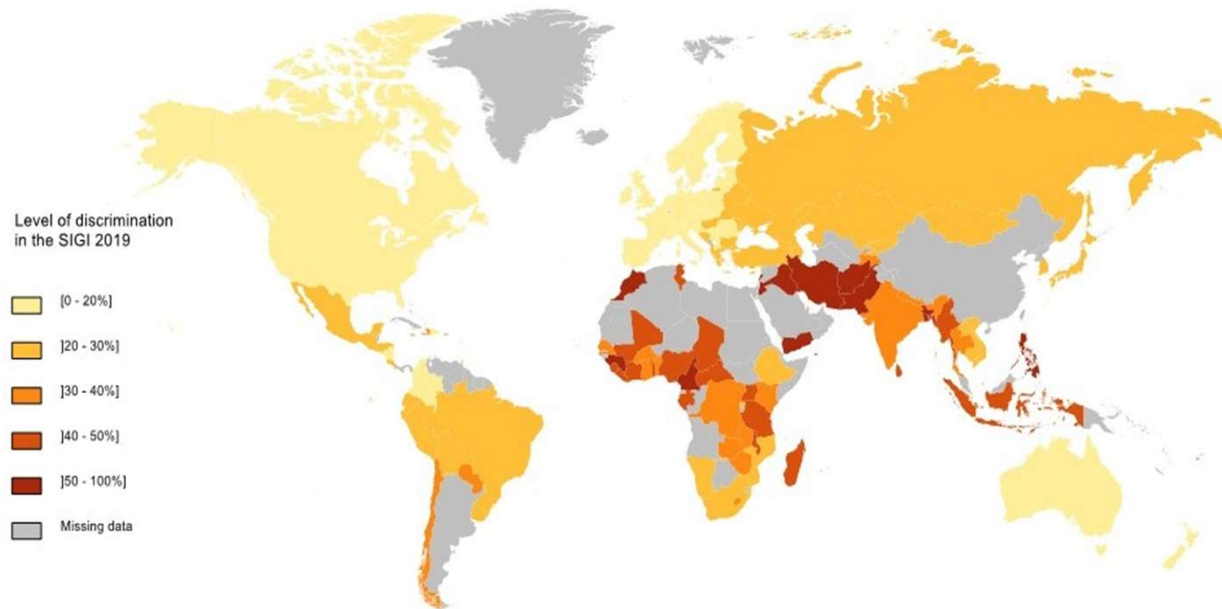
Addressing:

In the design, implementation, and M&E of programs



Why gender and intersectionality in data for development?

The FACTS: Gender Inequality & Low Development Outcomes



Social Institutions and Gender Index Global Report (2019)

The Bottom Line:

No matter which sector, what intervention, unless gender-based discrimination and inequality are addressed:

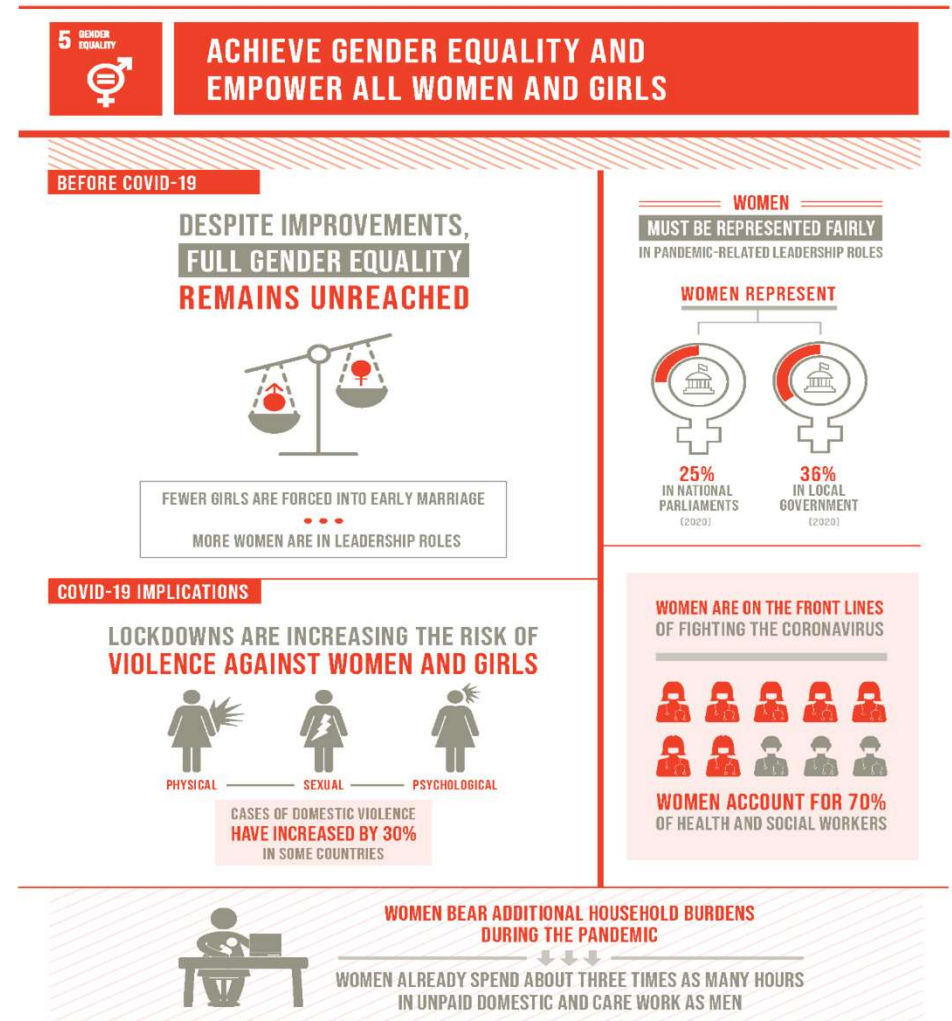
- Results will not be optimal
- Changes will not be sustainable
- Gender equality is indispensable to achieving the Sustainable Development Goals (SDG 5 crosscuts all 16)

Gender and Disease Outbreaks

Gender Data for Identifying Vulnerability, Risks and Impacts

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Gender Data: Challenges

- Lack of global methodologies and measurements (Fewer than half of the Sustainable Development Goals' 231 indicators have global common measurements)
- Gaps in data (Only three indicators of the SDG 5 (Gender Equality) are systematically measured in most countries)
- Biased data collection methods (Data specialist teams are not representative of diversity)
- Biased data (i.e. Assumption that social groups are homogenous (women, men, youth, migrants, refugees))
- Abuse of power in data governance and violation of human rights of most vulnerable

Gender & Big Data offer Unique Opportunities:

Improving the Lives of the Most Vulnerable in all their Diversity

- Help close the gender gap and make visible the invisible
- Provide real-time, situational analysis, granular data that traditional data sets miss.
- Both traditional and big data are needed
- Better informed decision making

There is a role for FM to play in gender data production and in socially-just and gender responsive accessibility and use!

Opportunities

- New information on mobility, social interactions, sentiment and cultural beliefs, and economic activity;
- Early warning of emerging issues and crises;
- Improved understanding of community well-being;
- Understanding of both local impacts and larger geographic patterns;
- Identification of trends and correlations within and across large datasets that would otherwise be unknown;
- Data visualization for more nuanced and accessible insights;
- Opportunities for participatory monitoring, real-time feedback, and learning loops;
- Recalibrate and iterate within the implementation of a program; and
- Improvements in accountability and transparency

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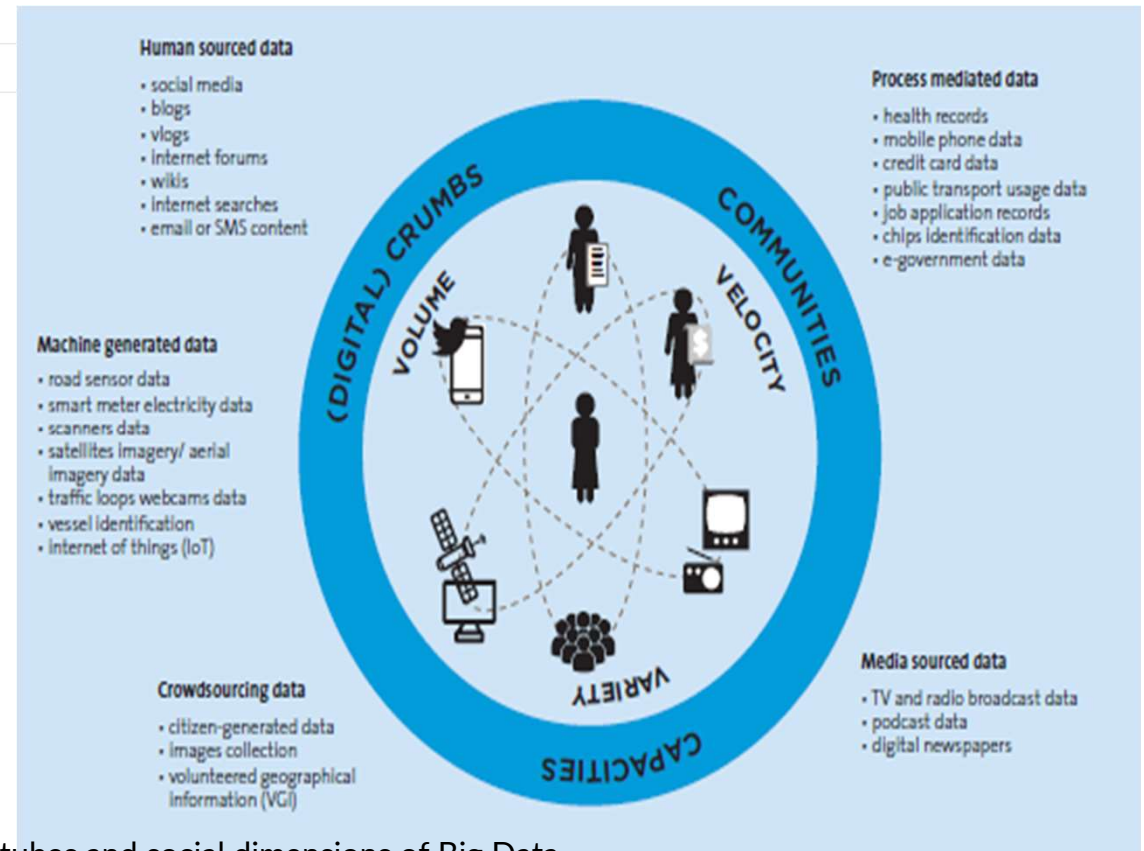


Figure: Types, Physical attributes and social dimensions of Big Data
Source: UN Women (2018) Gender Equality and Big Data



How data science
and analytics can
contribute to sustainable
development



1 NO POVERTY

Spending patterns on mobile phone services can provide proxy indicators of income levels

2 ZERO HUNGER

Crowdsourcing or tracking of food prices listed online can help monitor food security in near real-time

3 GOOD HEALTH AND WELL-BEING

Mapping the movement of mobile phone users can help predict the spread of infectious diseases

4 QUALITY EDUCATION

Citizen reporting can reveal reasons for student drop-out rates

5 GENDER EQUALITY

Analysis of financial transactions can reveal the spending patterns and different impacts of economic shocks on men and women

6 CLEAN WATER AND SANITATION

Sensors connected to water pumps can track access to clean water

7 AFFORDABLE AND CLEAN ENERGY

Smart metering allows utility companies to increase or restrict the flow of electricity, gas or water to reduce waste and ensure adequate supply at peak periods

8 DECENT WORK AND ECONOMIC GROWTH

Patterns in global postal traffic can provide indicators such as economic growth, remittances, trade and GDP

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Data from GPS devices can be used for traffic control and to improve public transport

10 REDUCED INEQUALITY

Speech-to-text analytics on local radio content can reveal discrimination concerns and support policy response

11 SUSTAINABLE CITIES AND COMMUNITIES

Satellite remote sensing can track encroachment on public land or spaces such as parks and forests

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Online search patterns or e-commerce transactions can reveal the pace of transition to energy efficient products

13 CLIMATE ACTION

Combining satellite imagery, crowd-sourced witness accounts and open data can help track deforestation

14 LIFE BELOW WATER

Maritime vessel tracking data can reveal illegal, unregulated and unreported fishing activities

15 LIFE ON LAND

Social media monitoring can support disaster management with real-time information on victim location, effects and strength of forest fires or haze

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Sentiment analysis of social media can reveal public opinion on effective governance, public service delivery or human rights

17 PARTNERSHIPS FOR THE GOALS

Partnerships to enable the combining of statistics, mobile and internet data can provide a better and real-time understanding of today's hyper-connected world



International Guidance on Gender Responsive Data for Development

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Socially-Just Ethical Principles

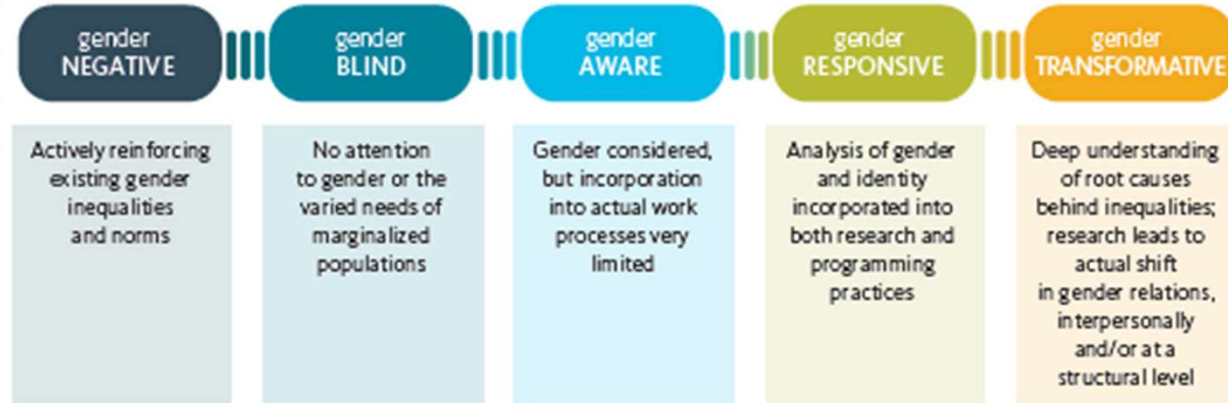
- **Identify and correct bias in big datasets.** Misrepresentation can perpetuate exclusion and discriminatory decision making. Use different types and sources of data such as perceptions-based data, qualitative data and citizen-generated data
- **Respect and protect digital rights. Bottom line is ‘do no harm’ and to ensure accountability.** Respect and protect the rights of the most vulnerable women, men, girls and boys and underserved population groups including their privacy, their rights to participation, rights to informed consent, rights to privacy and rights to security. Ensure **informed consent**
- **Access and Availability** - be mindful that even data used at the community level may still cause harm to identifiable groups (for example, if such groups are targeted in specific contexts).
- **Consider data security and data capacity**
- **Gender inclusive data governance**

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Gender Responsive Scale (International Standard)



Gender Blind or Gender Neutral Approaches Risk

- **Representating** all women as a group, all men as a group and all gender-diverse people as a group (their attitudes, preferences, needs, behaviours and knowledge). We all know women, men and gender-diverse people are completely different
- Reducing observed differences between women and men are solely biological in origin
- **Assuming** observed gender differences hold across cultures; and life conditions and opportunities are similar for women, men, and gender-diverse people
- **Equating** birth sex as a proxy for gender identity in surveys
- **Assuming** certain questions are relevant to only one gender (e.g. survey questions about caregiving relate primarily to women or questions about the strain of physical work primarily to men).

Gender Responsive Programs: Integrate Gender Equality in all dimensions of the project

- **Gender analysis** is a central part of project/program design, implementation and MEL
- **Objectives, outcomes (results) indicators and implementation strategies explicitly confront gender inequalities** that contribute to poorer outcomes
- Root causes of gender inequality (social norms, cultural beliefs, values, policies) that contribute to inequality in the issue in question are addressed head on in the program, and at all levels
- Women and girls and the most vulnerable participate in activities beyond numbers to **voice and influence**
- **Gender equality is everybody's business** & requires: all staff engagement and working with men in all spaces
- **Specific actions** to eradicate gender inequality are required. Equal treatment of all is not sufficient
- Institutional weaknesses & biases are identified and addressed (**partners & beneficiaries**)
- **Partners** are selected based on their capacity and commitment to GE promotion
- A **clear GE strategy** with adequate human and financial resources is set, used and part of MEL
- **Data is disaggregated by sex, age and gender identity** (if applicable) and according to vulnerable or key population

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Sources: Canada's Feminist International Assistance Policy and Toolkit

FM's Mapping for Health in the DRC:

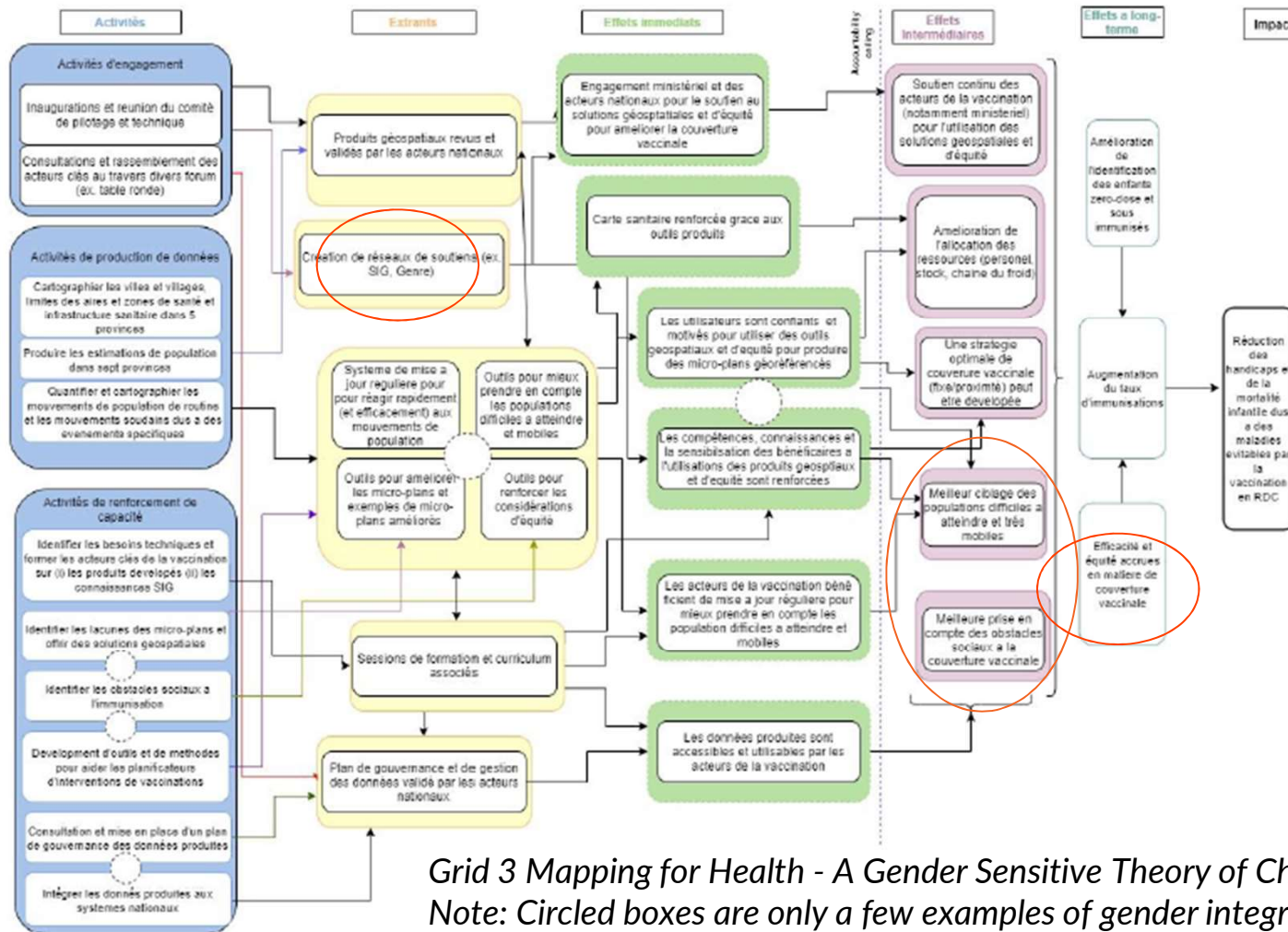
A Gender Responsive Project that integrates a gender component to address key gender and social determinants of low vaccination outcomes

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Grid 3 Mapping for Health - A Gender Sensitive Theory of Change:
Note: Circled boxes are only a few examples of gender integration.

What a gender responsive program can look like...

- **Gender sensitive proposal and performance measurement framework** (have gender sensitive indicators to measure results related to gender (ex: Intermediate outcome: Increased integration of gender-sensitive data analytics into vaccination interventions of the MoH in focal regions))
- Conducted **Gender and Inclusion Audit of Immunisation in the DRC using qualitative and quantitative methods**. Will have participatory multi stakeholder validation. Audit results and recommendations are informing gender component activities.
- Have put in place a **gender architecture** (ex: Engaging women internally and in programming structure (have gender experts (2 female and 1 male), and partnership with women's rights organizations and Ministry of Gender, Family and Children)
- **any staff engaged in gender agenda of project** (Program manager and program coordinator)
- **Gender responsive selection criteria** for all activities

- **Training of trainers and cascading training at central, provincial, zonal and health catchment area levels using participatory methods and follow up** of National Expanded Program for Immunisation and civil society partners in capacity to address gender and intersecting barriers to vaccinations across the program management cycle. Note: using gender audit data and engaged local facilitators (Master trainers of ToT in Kasai and Kinshasa from WROs and PEV or MoH)
- **Developed a gender and social inclusion toolkit; piloting it through the ToT and cascaded capacity building**
- Holding **Multi stakeholder roundtable** for facilitating learning network and policy influencing on gender equality, health and gender responsive immunisation
- **Gender responsive budgeting**



PROMISING CASES FROM AROUND THE WORLD & FLOWMINDER

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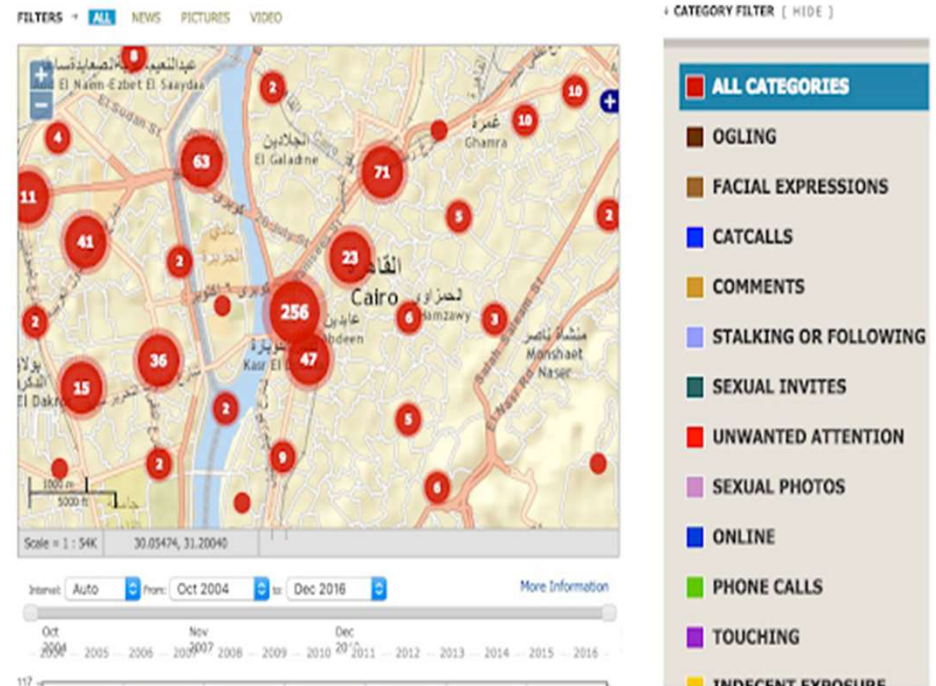
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Geospatial Mapping and Mobile Phone Data: Case of Harassmap to end Gender-based violence

HarassMap is a volunteer-based initiative aimed to end social acceptability of sexual harassment and assault in Egypt (baseline data: 95.3% of women reported having been harassed in public spaces).

Use **geospatial mapping** to generate data on reports of sexual harassment and display them on a searchable map, identifying hotspots where extra caution and police protection are needed. The Harassmap application is one among multiple community interventions to support individuals and institutions to stand up to sexual harassment before or when they see it happen.

Impact: Made the invisible visible and creating a movement of young women and men and broad spectrum of stakeholders to contest normalization of sexual harassment



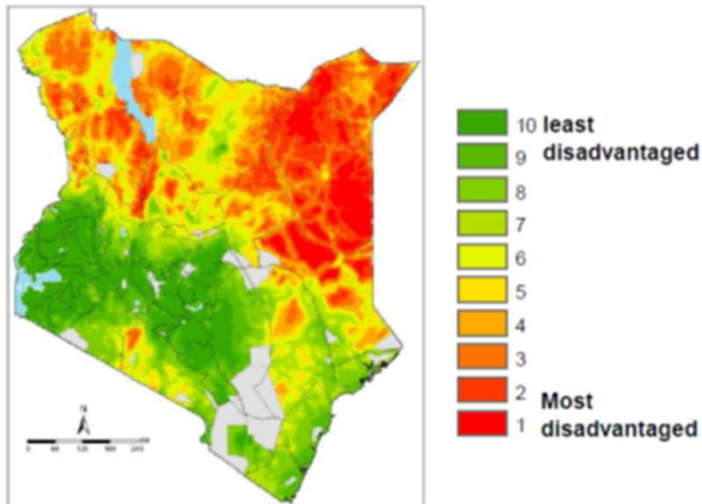
Source: <http://idrc.canadiangeographic.ca/blog/mapping-sexual-harassment-egypt.asp>

Geospatial Mapping and DHS: GAVI-Funded Kenya Wellcome Example

Composite maps of gender-related barriers to immunization

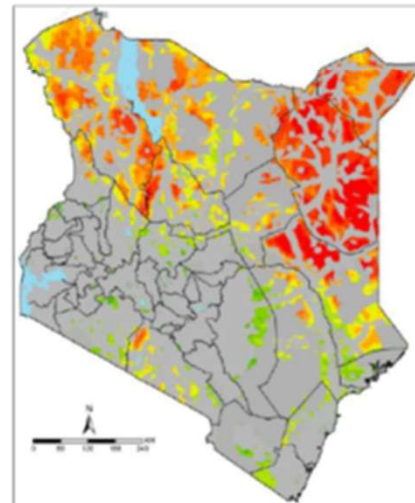
Step 1: composite of education & contraceptive use

Overlay of maternal education and contraceptive use. The overlay shows increased disadvantage from green to dark red based on an equal weights combination deciles of the two layers



Step 2: composite of education and contraceptive use & with poor geographic accessibility

Only areas with >2 hours travel time from the nearest vaccination sites are shown



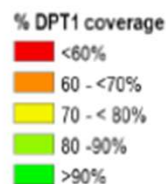
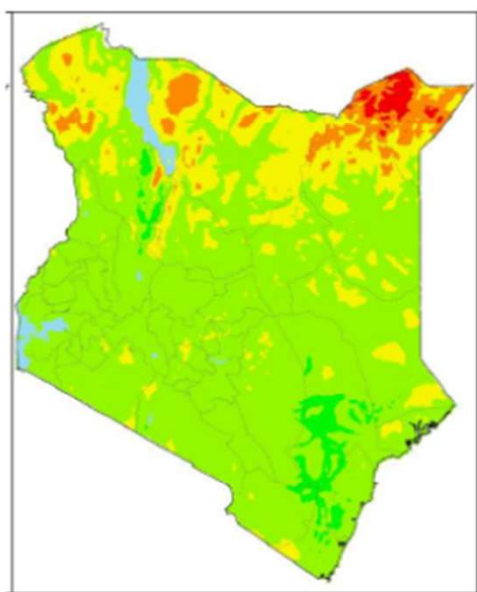
Can be seen as areas where gender-related barriers to immunization overlap to create unfavourable conditions

Low population density areas grayed out (<1 person per Km2)

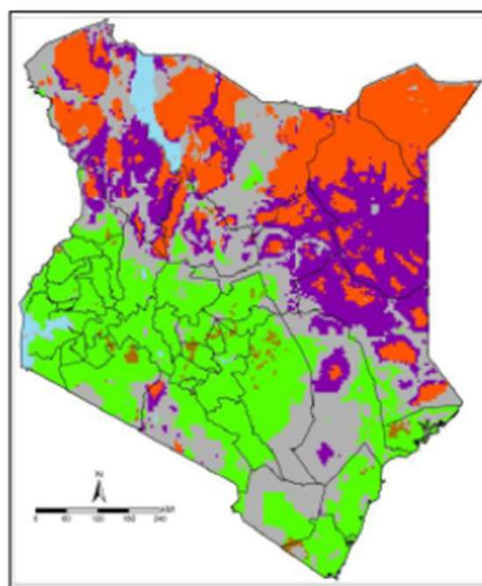
Gender-related barriers to Immunization and DPT1 coverage

Step 3: Overlap of gender-related barriers with immunization Coverage through cross-tabulation

DPT1 coverage

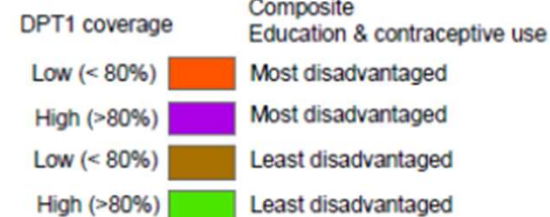
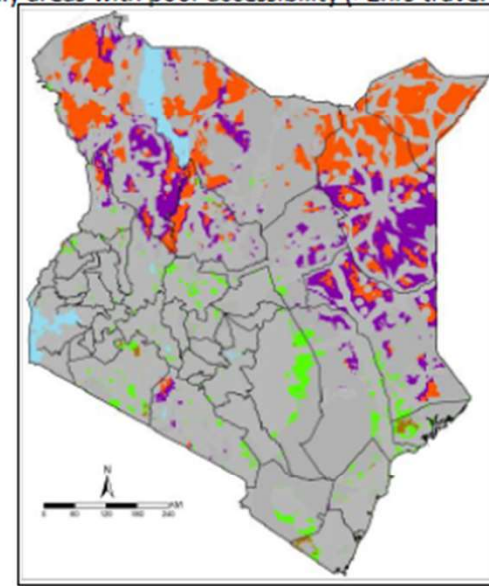


DPT1 coverage
vs education & contraceptive use



North-eastern areas emerge as are of coincidence of gender-related barriers and poor immunization coverage

DPT1 coverage
vs composite education & contraceptive use
only areas with poor accessibility (>2hrs travel time)

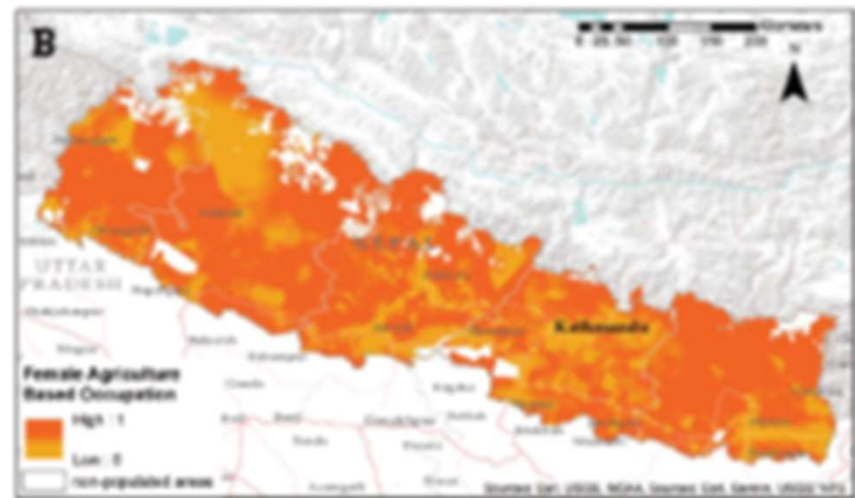


Geospatial Mapping and Mobile Phone Data: Towards High-Resolution Sex-Disaggregated Dynamic Mapping in Nepal

Cell phone call detail records, geospatial datasets, demographic and health data, in Nepal

Flowminder used big data to improve understanding of women's participation in agriculture-based occupations across Nepal, enabling more accurate targeting of interventions. Figure 1 (A) shows the limitations of survey data, which permit only province-level estimates; Figure 1 (B) shows the nuances that emerge from geospatial and cell phone data. Because many forms of geospatial and cell phone data are continuously streaming, these maps update in real time, allowing rapid response to shocks. No traditional data system that currently exists can provide such rich information at scale. Information gathered from cell phone use, meanwhile, can help us learn more about the well-being of millions of individual

women and girls. Figure: Proportion of women engaged in agriculture-based occupations, province level. This is the highest resolution representative data available from the NDHS. (B) High-resolution landscape of women engaged in agriculture-based occupations, from combination of survey, geospatial, and mobile phone data



Gender Data Vulnerable Dashboard to COVID-19: Data2X

Gender Analysis and Data Dashboard of Low- and Lower-Middle Income Countries

Dashboard serves to track which low- and lower-middle income countries are women and girls most exposed to or at most risk to suffer the negative effects of the COVID-19 pandemic and how well these countries are able to address these effects.

Reviewed data from 76 LIC and MIC and developed a list of 26 countries grouped into four clusters according to the crisis severity and whether they score most poorly in terms of women's health, education, and economic wellbeing, a combination of these domains of wellbeing, or availability of gender data.

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Why the dashboard?

- Alert policymakers, donors, and civil society to the vulnerabilities of women and girls in these countries;
- Provide these stakeholders with potentially useful information regarding countries' capacity needs so they can make and advocate for gender-informed resource allocations and;
- Make available a gender vulnerability data dashboard or tool that can be used by different stakeholders to analyze, compare, and forecast country needs from a gender perspective.

Thank you! Questions?

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