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## Girls on the Map: Mapping for Program Planning and Social Change

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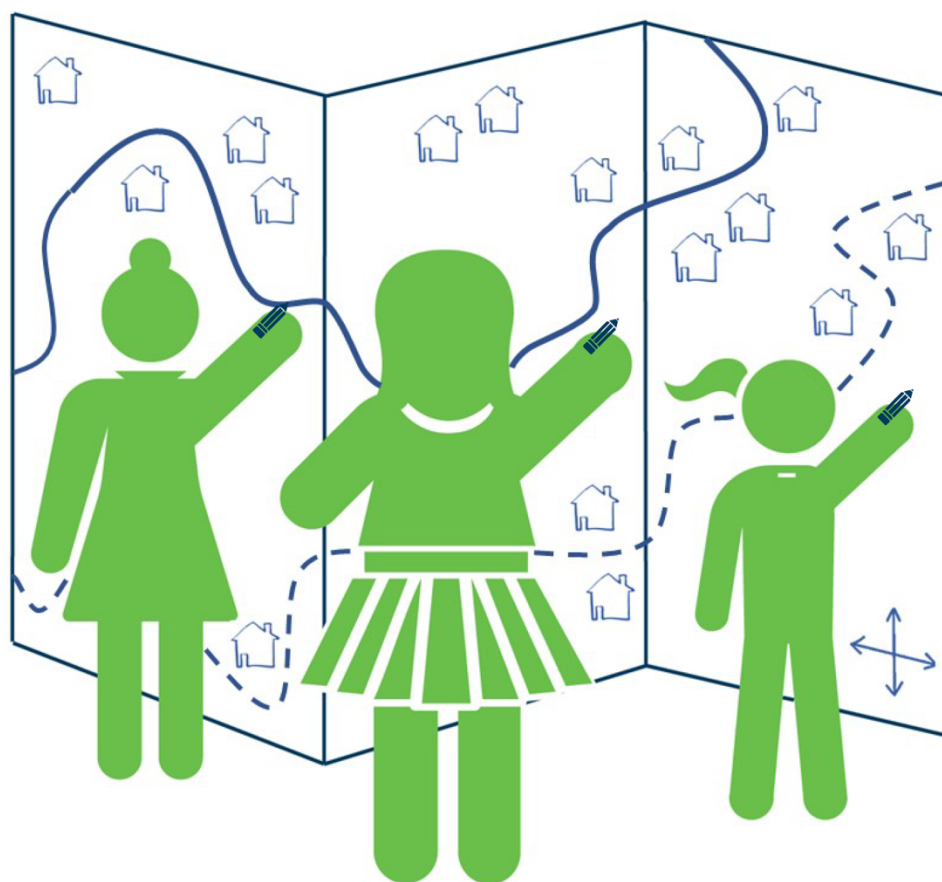
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# GIRLS ON THE MAP: MAPPING FOR PROGRAM PLANNING AND SOCIAL CHANGE

By Eva Roca





The Population Council confronts critical health and development issues—from stopping the spread of HIV to improving reproductive health and ensuring that young people lead full and productive lives. Through biomedical, social science, and public health research in 50 countries, we work with our partners to deliver solutions that lead to more effective policies, programs, and technologies that improve lives around the world. Established in 1952 and headquartered in New York, the Council is a nongovernmental, nonprofit organization governed by an international board of trustees.

The Girl Innovation, Research, and Learning (GIRL) Center generates, synthesizes, and translates evidence to transform the lives of adolescent girls.

The Adolescent Girls Community of Practice, established by the Population Council in 2013, helps strengthen the capacity of different actors to design, implement, and evaluate effective, scalable programs that build the health, social, economic, and cognitive assets of adolescent girls. We work with institutions that range from large multilateral and bilateral organizations and governments to small community-based organizations and national networks.

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# Introduction: Why Maps Matter

The following guide explores how maps can add depth to the learning process as practitioners design their programs for girls. Mapping is a key component of the [Adolescent Girls Community of Practice’s \(AGCoP\) Intentional Design model](#) to guide the design of programs that are driven by evidence. The model leads practitioners through a cycle of information collection and analysis, supporting them in making thoughtful

Maps are tools for practitioners to make evidence-based plans to reach the most-excluded girls.

selections of where to work, with whom to work, when to work, and what to deliver through

their programs to make a real difference in girls’ lives. Programs increasingly recognize the importance of household and community characteristics in shaping girls’ lives, yet it is relatively less common to measure or map community features as part of program planning. Mapping relevant populations of girls and features of the communities they live in can inform where to work, and what further investigation is needed to better understand girls’ needs. This guide is meant to spark interest among practitioners in using maps, to make maps accessible, practical, and useful, and to enhance understanding of how to do this in a way that always keeps girls at the center when making programmatic decisions.

Maps are more than just a way of representing physical space on a page. **The process of mapping can also be a tool for social analysis and critical thinking about how communities are organized and resourced (or not), and who can access its benefits (or not).** Historically, who maps an area, what is depicted, and where boundaries are drawn have often been products of power dynamics.<sup>1</sup> For example, adolescent girls – often a population with low power - and what matters to them, have not always been “on the map.” This is especially true for girls who are younger (10-14 years old) or marginalized due to additional characteristics such as their race or ethnicity, disability, poverty, or sexuality. Participatory mapping exercises that actively engage these marginalized groups and learn about their lived experience can reveal what the community looks like to them – what is inaccessible, what is unsafe, and what is needed to make a community work for them and for all.

## What is the Adolescent Girls Community of Practice?

The Population Council’s Adolescent Girls Community of Practice (AGCoP) supports its partners in bringing effective programs for adolescent girls to scale. The Council established the Community of Practice in 2013, building on 15 previous years of research on the conditions of girls at the highest risk of the worst outcomes. The Population Council has published a series of practical tools and resources, program content, reports and research, and webinars to support girls’ programs. We are committed to providing and supporting the thoughtful use of tools: As of 2022, the AGCoP has worked with over 100 partners in 44 countries to reach girls in higher concentrations with measurable results, building the foundation for effective, scalable programs for girls. The Council’s efforts have helped to shape policies and programs of nongovernmental organizations, international agencies, and governments around the world to improve girls’ lives.

The importance of the characteristics of a place are often overlooked in programming for girls, yet the influence of communities on health and social outcomes is well-documented. **To be truly transformational, programs must consider the social determinants of health, moving beyond an individual-only focus to work at (at least) two levels**—that of the individual girl and that of the community (ideally also including others in her ecosystem

<sup>1</sup> See for example, the history of mapmaking during colonial expansion periods, or modern-day maps with scant information on [informal settlements and slum areas](#).

like parents and other influential figures or gatekeepers). Making maps of who lives in a community and what resources exist can help situate where the most excluded girls are in relation to those resources and an existing or intended program's reach. Understanding individual and contextual factors is particularly important during times of crisis and societal transition, when much is in flux at all levels.

Maps, especially when accompanied by discussion about what is or is not depicted depending on the perspective of those mapping, can be powerful tools for understanding place-related contextual factors. Such **social cartography** uses maps as a medium to spark discussions, illuminate underlying inequalities, and spur social change. **Participatory discussions make maps powerful tools for revealing inequities between and within places, leading to better understanding of the lives of girls and helping programs make strategic plans to benefit girls and their communities.**

Understanding inequity is a first step toward addressing it, making communities work for everyone who lives there, including marginalized girls.

Throughout the last decade of the AGCoP's support to partners we have emphasized the importance of working in "walkable" communities. We define the area in which a girl can theoretically safely walk to access community services, facilities, and opportunities as her "walkable" community. That said, by saying walkable, we do not mean to exclude those who do not have the physical ability to walk (please see box "The 'Walkable' Community for more). "Walkable" communities are defined here as local areas that are generally within a 3–4-kilometer (2–2.5 mile) radius, though these are likely to differ in rural compared to densely-populated urban areas. Developing girl-only spaces within this "walkable" community builds a place to develop girls' protective health, social, economic, and cognitive assets. Girl-only platforms also serve as a hub from which programs can facilitate girls' access to existing resources within the community.

Now more than ever, **understanding local realities is critical to effectively meet the needs of girls, particularly those who are marginalized or excluded from community resources.** Maps—using available data or locally-collected information—are powerful tools practitioners can use as part of that process. Using a combination of sub-national and local information can help programs and funders get to the right places to reach girls who are often left behind, while increasing value for money by investing time and money in those who will benefit most.

Enclosed in this guide is an overview of the basic ways maps can be used to make strategic choices about planning programs with and for girls, helping prioritize where to work, with whom, and when. Its central audience is community-based practitioners. It includes:

- How to generate maps, making creative use of available data on individual and contextual factors to inform where to work (Section 1: Using Maps to Select Where to Work);

#### The "Walkable" Community

The Population Council's Adolescent Girls Community of Practice uses the term "walkable community" to distinguish between administrative boundaries and the community as experienced by girls. We recognize that in many places a sizable proportion of people in this space are not mobile in the sense of "moving freely and easily," through physical disability, social limitations, or other factors. The term walkable community is not meant to exclude girls with mobility limitations of any kind. Indeed, considering what a walkable community means, seeing and devising strategies to overcome barriers to participation by all girls, is a key part of the Intentional Design process.

Source: Intentional Design Guide (2021)

- How to use community-level maps to reveal power relationships among and within households and raise questions about the best ways to reach invisible girls (Section 2: Using Community-Level Maps and Related Learning Tools to Enrich Program Planning);
- How to use participatory mapping exercises – such as the Girl Roster and the Community Resource Scan – to reveal program coverage and access limitations of segments of adolescent girls (Section 3: Understanding Girls’ Realities: Participatory mapping and Discussions);
- And how to bring this information together to anchor advocacy for better/fairer programs to reach the most excluded adolescent girls and promote their voice and leadership (Section 4: Using maps for advocacy and planning).

Throughout this text, we will reference relevant, open-source materials, including those in the AGCoP’s preeminent guide to the Intentional Design approach [\*Intentional Design: Reaching the Most Excluded Girls in the Poorest Communities: A Guide for Practitioners and Advocates.\*](#)

# Section 1: Using Maps to Select Where to Work

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## Choosing the Right Data

Existing data can be used to highlight broadly where issues that affect girls are most common, helping plan for where programs should work. Nationally representative surveys like the Demographic Health Surveys (DHS)<sup>2</sup> and Multiple Indicator Cluster Surveys (MICS)<sup>3</sup> are useful sources for data that can be used to generate maps. A useful resource for the most up-to-date mapped DHS data is the Spatial Data Repository<sup>4</sup>, which makes DHS spatial data (meaning it links the data to relevant geographic levels so it can be easily mapped and analyzed) available for many indicators within and across countries. For users who would like to generate basic maps using DHS data, the DHS Program STATcompiler<sup>5</sup> is the best place to start. More advanced users can download the full datasets and do their own analyses. Such surveys are important sources of information, comparable across time and place, and can be used as a starting point to understand subnational variation in issues that affect girls.

However, large data sets like these have their limitations. In some countries, large data collection efforts like the DHS are done infrequently, meaning that the latest data may be several years old. Nationally representative datasets can miss small but important marginalized subpopulations, given differences in who responds to surveys. But even older data can be useful to map as it can be illustrative of meaningful differences across places and simple analysis can still generate girl-relevant information.<sup>6</sup> If, for example, several years ago an issue such as the prevalence of child marriage or adolescent pregnancy was high in one region compared to another, that difference is likely to persist. As has been seen throughout the Covid-19 pandemic, emergencies often exacerbate social and economic inequalities, having negative implications for women and girls. Surveys may ask key questions of people 15 and older, or only report the experiences of the household head for the desired indicators. Additionally, **analyses at the household level often obscure intra-household differences, ignoring the experiences of girls, particularly populations like very young adolescents.** Such limitations mean that in some cases, the best way to learn about girls' experiences will be to collect the data yourself, or partner with a group that has relevant local information.<sup>7</sup>

## Focusing at the Most Useful Geographic Level

While some countries are riskier environments for girls than others, **national-level data can conceal important differences between and within countries.** Visual representations of information that shows spatial relationships, like maps, are often more useful than the same information shared using a chart or a table. For example, seeing how neighboring areas on a map may or may not share similar characteristics can make for more efficient programming, allowing programs to tailor efforts to the specific needs of an area that is unique and clustering the approach in areas with shared needs. In turn, this can be useful for designing programs that are scalable to other areas with similar characteristics.

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<sup>2</sup> <https://dhsprogram.com/>

<sup>3</sup> <https://mics.unicef.org/>

<sup>4</sup> <http://spatialdata.dhsprogram.com/data/#/single/surveys>

<sup>5</sup> <https://www.statcompiler.com/en/>

<sup>6</sup> See the Population Council's [Adolescent Experience In-Depth Guides](#) for examples of analyses of DHS data that highlight girl-relevant information.

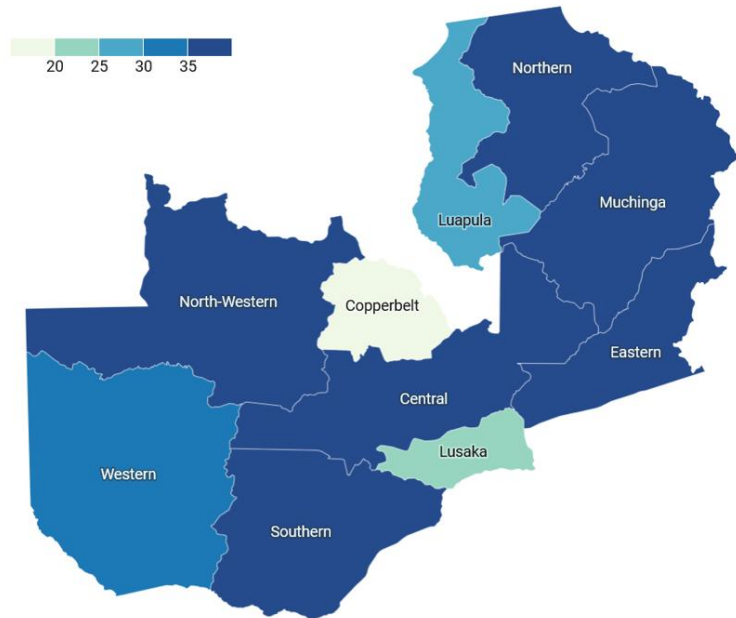
<sup>7</sup> For example, [fraym.io](http://fraym.io), which uses available data and artificial intelligence to generate local-level information.



Girls' needs vary sub-nationally, and there are often stark differences between the lives of girls in, for example, urban versus rural areas, or between neighborhoods within cities. At minimum, provincial-level or state-level analyses should be considered. However, **to be most useful for program purposes, such data should be analyzed at small, programmatically relevant geographic levels, like the county or sub-district.** Map 1 shows how analyzing data at different geographic levels will lead to different conclusions.

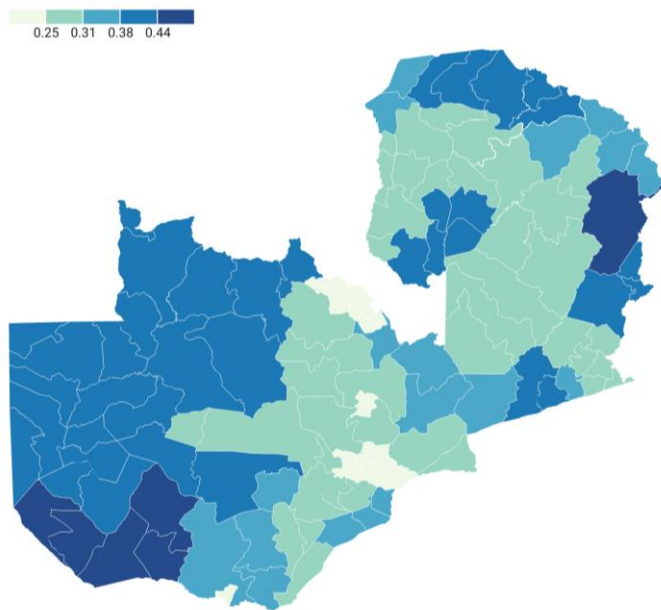
The map shows the prevalence of adolescent pregnancy by province in Zambia; darker blue areas have higher prevalence. Outside of the Copperbelt and Lusaka provinces in Zambia, over 25% of young women have experienced a pregnancy by age 18 in the remaining provinces. The need for programs is high

Map 1. Prevalence (%) of adolescent pregnancy by province, Zambia, for girls 20-24 who gave birth by age 18



Source: [Population Council, UNFPA, and Government of the Republic of Zambia. 2017. "Adolescent Pregnancy in Zambia." Lusaka, Zambia.](#)

Map 2. Predicted probability of adolescent pregnancy by district, Zambia



Source: [Population Council, UNFPA, and Government of the Republic of Zambia. 2017. "Adolescent Pregnancy in Zambia." Lusaka, Zambia.](#)

across the country. However, when looking at the more detailed district-level map (Map 2) of similar information in Zambia, it becomes clear that the provincial-level averages miss variation within the provinces; the southernmost districts of Western Province and one district within Muchinga Province (Chama) have the highest predicted probabilities of adolescent pregnancy. The more localized details of Map 2 therefore lead programs to better focus their efforts.

To understand an issue in any detail, provincial- and district-level analyses are only a broad beginning, though they can quickly highlight in what districts the situation of girls requires the most urgent attention. Provincial or even city-level averages too can hide programmatically relevant information at smaller area levels. To be most useful for program planning, maps should be analyzed at the smallest-available administrative boundary level, or collected independently, since most large-scale data

collection efforts do not make small area data publicly available. Actionable information at a local level is vital even for those programs that will eventually be operated at a large scale within a country, since varying local conditions will determine program priorities and approaches in each area. Further work will be needed to understand places that maps begin to highlight as hotspots.

Relevant intra-community differences may be revealed. For example, while major cities may have better overall indicators for a particular outcome, city-level data can hide important variation within the city in, for example, access to food, green space, and health care. There are likely pockets within even well-off areas where girls are being left behind. **Mapped information can help programs learn where and how different segments of girls need support, helping decision-makers like program planners, policy makers and funders make well-informed investments for girls.**

### Choosing the Right Indicators: Conventional versus Innovative Ways of Thinking about Risks for Girls

To the extent that programmatic energy and, by extension, maps, focus on girls, there is a tendency to depict negative trends such as early school leaving, child marriage, HIV prevalence, and the like. Considered by themselves, maps like these can be helpful for basic identification of hotspots for certain outcomes.

However single-issue maps do not tell the full story about girls' experiences and how different segments of girls experience the community. Instead, they can even reinforce narrow thinking, programming in silos, and foster ill-conceived or stigmatizing labels of vulnerability.<sup>8</sup> **Single-issue maps often do not convey the multiplicity, interconnectedness, and relevant drivers of the issues girls face.** Maps that show multiple outcomes at the same time can be more useful, highlighting where there are areas characterized by general disinvestment, particularly when it comes to girls. Multifaceted maps are also more reflective of the current state of knowledge about what risk factors lead to negative outcomes for girls. Research shows that issues like early school-leaving, early pregnancy and child marriage are often the products of social isolation and economic exclusion, so household-level data can be useful to find places where multiple issues related to exclusion overlap.

### Less-conventional metrics can help highlight underlying structural drivers of vulnerability

Even maps that just focus on one circumstance that can be risky for girls can be illuminating, if the measure is chosen with care. Poverty, food insecurity, and breaks in schooling can place girls, particularly those who are the most marginalized in a society, in situations threatening to their rights, health and well-being. Available data therefore can be used to probe deeper into precursors, such as school leaving and food insecurity, that can lead to issues of concern like child marriage and early pregnancy.

Food security, for example, can quickly escalate in a crisis, compelling households to force girls into unsafe work, sexual exchanges, or advantageous (to the household) marriages that are risky to the girls' health and well-

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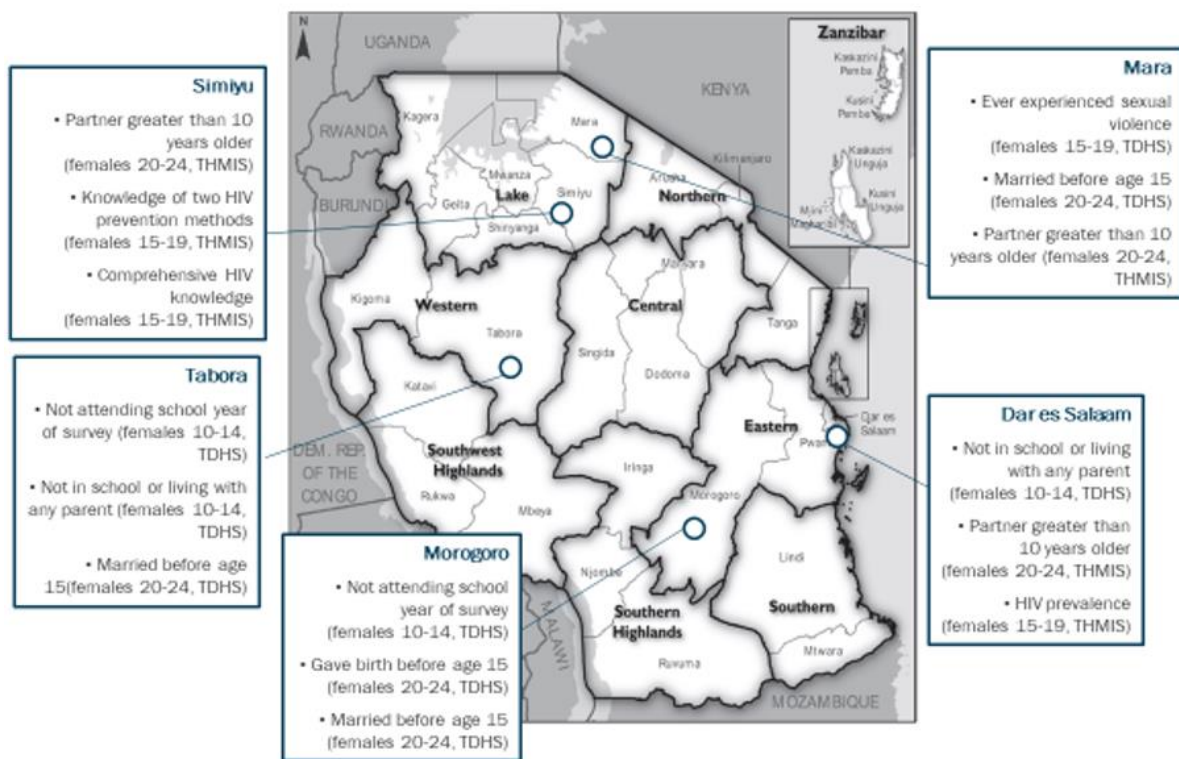
<sup>8</sup> For further discussion, please see Chapter 1 of the Intentional Design Guide "Optimizing Investment in the Most Excluded Girls in their Home Communities".

being.<sup>9</sup> Information about what sub-national areas were already home to many food-insecure families can help a program understand where extra support for girls could be helpful now that those same households are in crisis.

Combining subnational data on social and economic issues can reveal where the highest risk environments for girls are found, revealing multiple layers of exclusion and disinvestment in girls to help decide where to work.

Let’s consider two examples of multifaceted maps. Map 3 shows areas in Tanzania that are characterized by high HIV risk for adolescent girls and young women, but go deeper to highlight the factors, like child marriage or having a partner 10 or more years older, or being out of school, that underlie HIV risk in those areas. The map shows that different risks are more common in certain areas, which can lead to more nuanced programmatic strategies.

Map 3. Mapping co-occurring health and development outcomes: Extreme hotspots for HIV risk for adolescent girls and young women, Tanzania



Source: Population Council, Tanzania Commission for AIDS (TACAIDS), Zanzibar AIDS Commission (ZAC), UNICEF Tanzania. 2015. *The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People, Tanzania 2009-2012*. Dar es Salaam: TACAIDS.

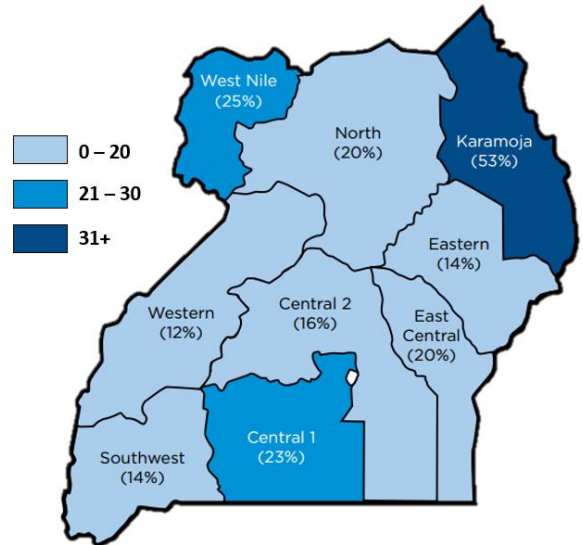
<sup>9</sup> For example: <https://www.icrw.org/files/images/Child-Marriage-Fact-Sheet-Poverty.pdf>; Mourtada, R., Schlecht, J., & DeJong, J. 2017. A qualitative study exploring child marriage practices among Syrian conflict-affected populations in Lebanon. *Conflict and Health*, 11(1), 27; Kamndaya, M., Kazembe, L. N., Vearey, J., Kabiru, C. W., & Thomas, L. 2015. Material deprivation and unemployment affect coercive sex among young people in the urban slums of Blantyre, Malawi: A multi-level approach. *Health & Place*, 33, 90-100.

Map 4, from Uganda, shows an example where researchers combine individual, household and community level factors into indices that highlight girls' vulnerability. The index includes data on education, child marriage, childbearing, high-risk sex, HIV, living arrangements, parental education, and access to water and sanitation. Combining these into a vulnerability score shows that the sub-region Karamoja is a hotspot for girls aged 10 to 19 facing extreme vulnerability, with more than twice the proportion of girls categorized as "off-track" than the two next highest sub-regions.

Household-level information can obscure the situation of girls unless their specific experience is drawn out from the data

Haiti was highlighted in a 2020 report by Oxfam as being one of the world's top hunger hotspots. In 2019, even before the shock of the COVID-19 pandemic, 3.7 million people (35% of the population) were facing crisis-level hunger or worse. Efforts to mitigate hunger often function by distributing food to the household head and assuming that everyone in the household will benefit. However, girls often bear the

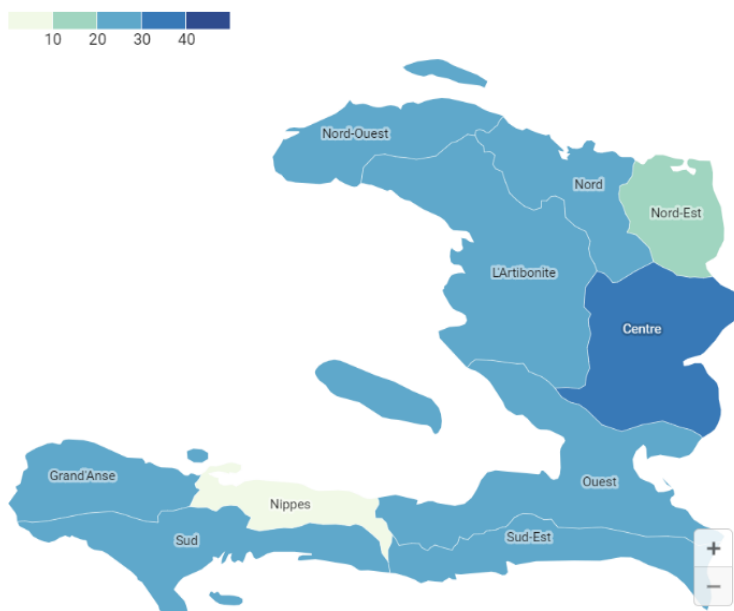
Map 4. Sub-national concentrations of "off-track" girls based on individual, household, and community dimensions of vulnerability in Uganda - % of girls aged 10-19 experiencing extreme vulnerability



Source: Amin, S., Austrian, A., Chau, M., Glazer, K., Green, E., Stewart, D., and Stoner, M. (2013). Adolescent Girls Vulnerability Index: Guiding Strategic Investment in Uganda. New York: Population Council.

brunt of problems in times of household stress, being the last to eat and receiving the least in a family, facing food insecurity the fastest in a crisis. Therefore, household-based food security initiatives and the complementary household-level data used to track food distribution can actually hide the situation of girls in places where intra-household allocation of resources tends to leave girls out.

Map 5. Adolescent girls in Haiti face high levels of food insecurity - % of girls 15-19 who went without food in the past day



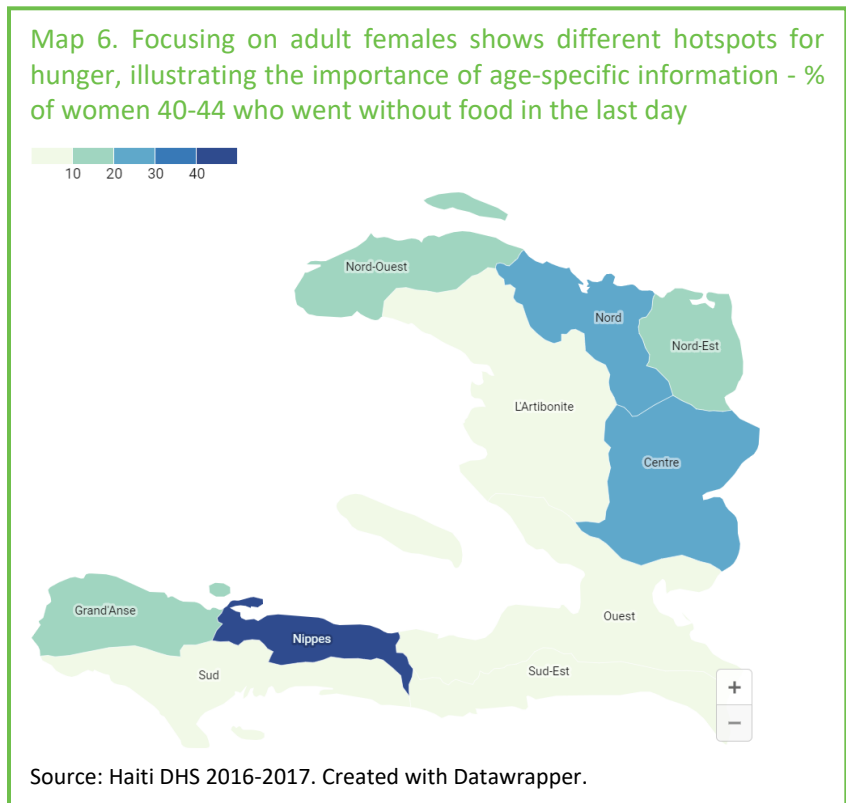
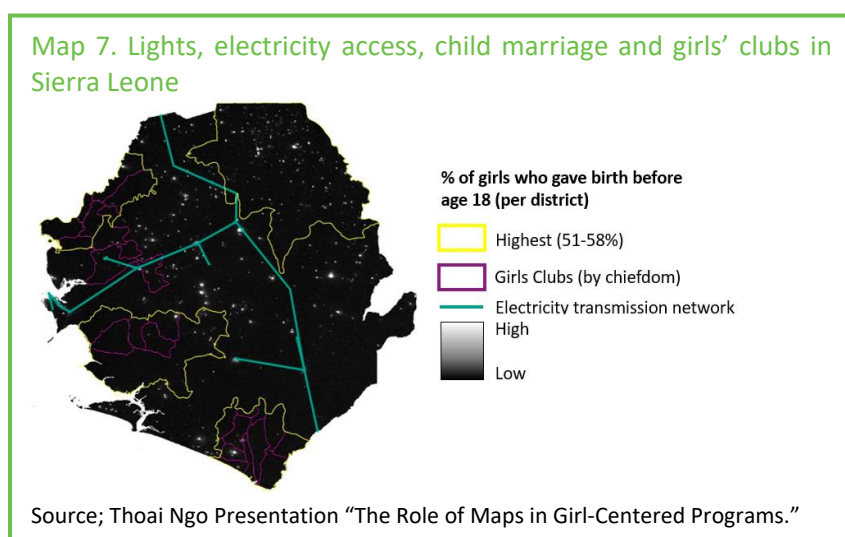
Source: Haiti DHS 2016-2017. Created with Datawrapper.

Maps 5 and 6 show how basic analysis of DHS data was able to reveal hotspots for hunger among adolescent girls, and how these patterns differed from the responses of older adult women (40-44) in the same households. (These ages were chosen for illustrative purposes, but the variations are likely to be seen with other ages as well.)

Among older adolescent girls 15 to 19-years-old in the Centre Department, almost 40% of girls report going without food in the last day, while this experience is much less common in the Nippes Department. In contrast, among older adult women 40 to 44-years-old in Map 6, going without food is most common in Nippes. Further, the percentage of women in this age group who report going without food is lower for almost every department compared to adolescent girls.

More conventional indicators, like which districts have the highest rates of early childbearing, can have more meaning when overlaid with resource access metrics, like proximity to electrical grids, as can be seen in Map 7 from Sierra Leone. The yellow-bordered areas indicate places where 51% to 58%

of girls gave birth before age 18. The teal lines show the electrical grid; it is evident that the areas with highest rates of early childbearing are those off the electrical grid. Access to electricity is far from universal and can be costly and unpredictable. Though electricity deficits are not typically thought of as a key indicator for girls' well-being, it can be quite meaningful for their lives. Lack of electricity can mean reduced hours of light available at



home to study or do chores, or increased need to travel simply to charge a mobile phone, for example. This map also shows where girls' clubs were active. By combining information on access to electrical grids and safe spaces for girls, local practitioners can understand whether they are reaching girls in the areas that need such spaces and can lead to strategies to better meet girls' needs. As a result, the organizations decided to experiment with solar power to light their sessions, using d-lights and solar panels to provide energy for girls' clubs.<sup>10</sup>

<sup>10</sup> See brief ["Can adolescent girls' safe space clubs effectively run solar-powered mobile phone charging stations in rural Sierra Leone?"](#) for more information.



## Section 2: Using Community-Level Maps and Related Learning Tools to Enrich Program Learning

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After using subnational maps to select where to work, further localized mapping of program-relevant information can add a layer to your learning process. Given that local-level information to make evidence-based program decisions often does not exist (at least in a form accessible to the general public), advocates and practitioners will need to collect what they need themselves. This section briefly describes tools and participatory exercises that can be used. Note that much more detailed information can be found in the Intentional Design Guide.

- The Girl Roster™ (an open-source tool with mapping capability designed by the Population Council), that helps you locate and sort girls 6 to 24 years old into key segments by different categories – age, schooling, marital and childbearing status, and living arrangement (living with parents or not);
- The Community Resource Scan – a process for gathering girl-relevant information about the physical features of the local community;
- And participatory mapping exercises that can shape program decisions, so they more appropriately meet girls’ needs.

### Mapping Basics: Practical and Ethical Considerations

Before diving into these tools and exercises, it is worth highlighting a few key principles. As with any information-gathering effort, it is important to **be purposeful about what you map and how you present it**. Creating a map that reflects on an explicit theory of change or illuminates an ongoing concern will be more useful than one that shows every feature of a place without purpose. Practitioners planning to map an area should aim to be strategic in choosing what to map, adding information and context that cannot easily be found elsewhere. For example, mapping a community in a way that reflects the experiences of girls will likely be more illuminating than one produced by adults or community leaders.

Maps are most useful when the features mapped are selective; too much information can clutter a map, obscuring the information you want to highlight. It is often better to show a series of maps that deliver one or two key messages than to overload a map with data. Clear titling and consistent color schemes can also help draw attention to the points you hope to feature.

**Defining a community is notoriously complex.**<sup>11</sup> The concept of what the community is socially may sometimes be more useful for mapping than thinking of a community within official administrative boundaries. People of different ages, genders, and other social characteristics will often define the boundaries of their community in quite different ways that may be more relevant for program planning than administrative boundaries. That said, administrative boundaries can be helpful for understanding what resources and entitlements girls in a community should have access to and can be useful for advocacy for claiming their rights to those resources.

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<sup>11</sup> For examples, see Chapter 8 of the Intentional Design Guide or Coulton, C. J., Korbin, J., Chan, T., & Su, M. (2001). Mapping residents’ perceptions of neighborhood boundaries: A methodological note. *American Journal of Community Psychology*, 29(2), 371–383.

It is our recommendation to **start by delineating the general boundary of the “walkable” community**, the community as it is organized socially and that could be accessed on foot within a reasonable time (this will differ depending on the context). The size of the walkable community is likely to be different for each person, depending on age and other considerations. Existing physical or digital maps can be used to mark the outer boundary and to divide the community into sub-areas to be mapped by your team.

Mapping a densely populated urban community will be different from mapping in a rural area with fewer landmarks where community resources and dwellings are more spread out. Mapping large or densely populated areas can be done in a way that breaks them up into smaller sub-areas, so that the key information you are searching for does not get lost. For example, a team may want to focus on areas with water deficits, or areas outside an administrative boundary where people are living but not served by services.

**Mapping the community, like any work with girls and other marginalized young people, should always prioritize girls’ safe participation**, both physically and emotionally. In some circumstances, this may mean it is safe for groups of girls (in the company of a mentor or other adult to physically walk around the community and make a map using an app that records locations. In other situations, it may only be possible to map a community by memory or without devices, using basic materials like pen and paper. When information gathered from a mapping exercise is shared more widely in a community, it is more appropriate for that to be done by a mentor, not an adolescent girl, so sensitive information she or her peers may have shared will not be traced back to them.

Additional measures can be taken to mitigate girls’ risk. For example, when collecting GPS coordinates the exact locations of individual households can be protected by using large icons, heat maps, or “jittered” data points (a process of slightly moving data points using random noise to hide exact locations, or to make visible overlapping points) rather than small points that would make individual buildings recognizable to people who live in the community. In the case of the Girl Roster, the GPS coordinates are deliberately made imprecise so that (except in very low-density areas) only the general vicinity of the household rather than the exact location is given.

### Mapping Basics: Choosing Software for Map Visualizations

There is a long history of participatory mapping in health and development work, and any mapping exercises can certainly be done using paper or other materials. However, the ease of digitizing information makes it easier to quickly update and share, and as such can be beneficial if resources permit. Making a digital map (even after an exercise where information was collected on paper) can also give the information more clout when shared with decision-makers, since it can feel more official than a hand-drawn map.

Many different options are available for mapping information relevant to girls’ programs, both free and paid. New tools are constantly becoming available, given the active engagement of the open-source mapping community. We highlight a few popular tools here and encourage you to find what works best for your team, based on purpose, and the time, skill, and financial investment required.

Applications like Google Maps are widely available and free. The two tools highlighted here (Girl Roster and Community Resource Scan) include automatic connections to Google Maps. Applications like Datawrapper can help quickly visualize information from secondary data sources or data you have collected yourself. A sophisticated option that requires more specialized skill is ArcGIS, which has free tiers available on ArcGIS

online. A free version with many of the same capabilities is QGIS. Purpose-built apps like Mapeo<sup>12</sup> and Mapswipe<sup>13</sup> can also be useful for mapping a community. Many data collection tools like Ona<sup>14</sup>, Magpi<sup>15</sup>, Kobo Toolbox<sup>16</sup> and others include mapping features.

## Selecting with Whom to Work: The Girl Roster

The Girl Roster is a brief household questionnaire developed by the Population Council that asks basic information about girls – age, schooling, marital, and childbearing status, and living arrangement (whether living with parents or not) to get a quick snapshot of the lives of girls in a community. The Girl Roster, an open-source tool used on Android phones, is a programming, not research, tool intended to provide actionable information for program planning. The information collected can be rapidly mapped and analyzed, sorted to create different profiles (“segments”) of girls that may be relevant for program planning. For example, one can visualize the population of out-of-school 10-14-year-old girls or girls under 18 who are married. It can also be modified to capture each girl’s participation in existing or past programs, if relevant. All the information collected is geotagged, making it easy to generate maps showing where segments of interest live within a community.<sup>17</sup>

The Girl Roster can help show where different segments of girls live in relation to each other and sometimes reveals previously hidden populations of girls.

**The mapped information may also show geographic clusters of affected girls and households with relevant characteristics for localized priority attention.** One key feature of the Girl Roster is that it gives practitioners a sense (with both numeric and geographic parameters) of the girls who live in the community, to better plan what success in recruiting would mean. For example, if the Roster exercise finds that out of 1000 girls in a community 500 of them are out of school, but a program isn’t reaching any out-of-school girls, additional recruitment efforts are needed. Otherwise, a program is clearly reaching a select, and better-off, group of girls, rather than those who would likely benefit most from a program.

## Using maps to find clusters of populations of interest for programs

Map 8, from a remote rural town in Haiti, highlights households that have girls from ages 10-14. Those dots in blue are households with girls who are in school, and the red dots are households with girls who are not in school. In this community 15 households have girls who are 10-14 and out of school and 5 households have girls who are 10-14 and in school. While there are out-of-school girls throughout the community, more of them are found in the northern part of the mapped area. It might be interesting to learn where these girls live in relation to the school as perhaps their distance from the school building could be one reason they do not attend.

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<sup>12</sup> <https://docs.mapeo.app>

<sup>13</sup> [mapswipe.org](https://mapswipe.org)

<sup>14</sup> <https://ona.io/home/>

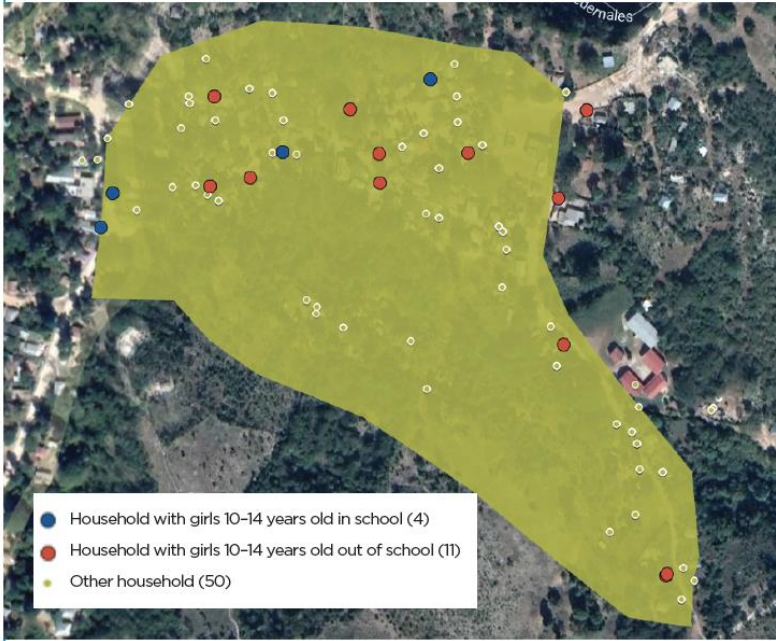
<sup>15</sup> <https://www.magpi.com/>

<sup>16</sup> <https://www.kobotoolbox.org/>

<sup>17</sup> For more details on how the Girl Roster works and the generation of information it collects, please see Chapters 4 and 5 of the Intentional Design Guide. If you are interested in accessing the tool, please contact the AGCoP at [communityofpractice@popcouncil.org](mailto:communityofpractice@popcouncil.org).



Map 8. Households where out-of-school girls live in one part of Haiti



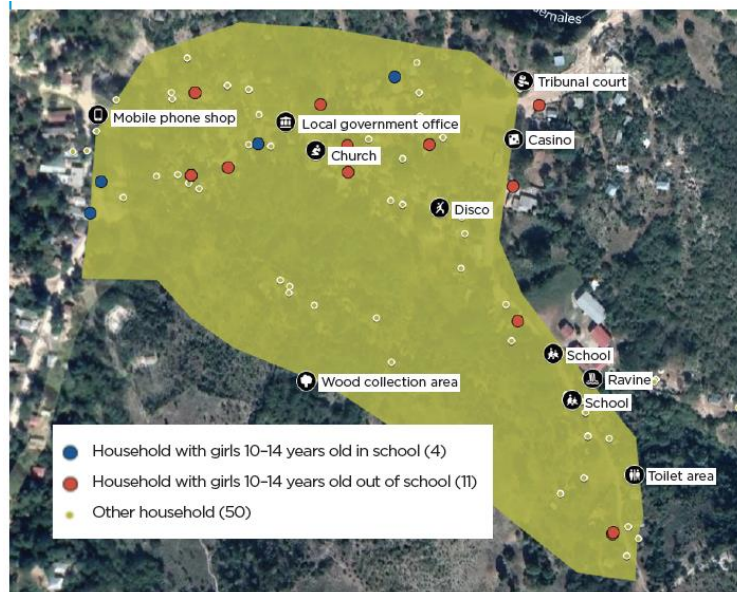
## Understanding the Community: The Community Resource Scan

While there are many active efforts to map communities, particularly in crisis situations, **few of these are girl-centered** – not in terms of capturing their experience nor in asking them directly for their insights- and as such will often miss the resources, entitlements, and facilities (as well as hazards) that matter most to girls and define their everyday lives. Community mapping exercises are more likely to reflect the perspective of the more powerful. Mapping may also focus on physical structures, lack a gendered or age-differentiated perspective, and start and stop at the household door, overlooking the heterogeneity of the

household members’ varied experiences. All of these biases render girls and young women less visible.

A girl-centered Community Resource Scan is one way of understanding more about the resources and potential resources in a program community that could be meaningful for girls’ lives. The exercise involves moving around the community with a phone and marking locations of places that are or could be important for girls. A scan will typically include obvious resources like schools, health centers, banks, markets, and other facilities, along with less-obvious resources like a wood collection area, a mobile phone charging center or a beauty parlor that may be frequented by and consequential to girls. Vacant or unused buildings or outdoor areas can also be mapped, since those could be repurposed to be girl-friendly spaces for meetings or other relevant activities.<sup>18</sup>

Map 9. Overlaying Girl Roster information with a Community Resource Scan can show where girls live in relation to community resources



<sup>18</sup> For more information on the Community Resource Scan and other community mapping exercises, please read Chapters 3 and 6 of the Intentional Design Guide.

While such an activity can be done very usefully with simple pen and paper, using phones to geotag the locations means that the map can be added as an additional layer and compared to the locations of girls found using the Girl Roster (Map 10). Such layering can show where girls may be close to or physically separated from the assets in a community that could be beneficial to them or their families. Having a digital map can also give the information extra clout when shared with community leaders.

In the community depicted in Map 10, one observation is that most girls live at a distance from places like the school (which they should have easy access to), and the majority of 10-14-year-old girls in this community are, indeed, out of school. Further, girls – who are often tasked with responsibilities such as wood collection – would have to travel quite a distance to reach places like the wood collection area in this community; in other words, where girls are likely to go frequently might actually be unsafe to travel to. Such information is useful for program planning and for safeguarding.

## Section 3: Understanding Girls' Realities: Participatory Mapping and Discussions

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Understanding communities, and how different segments of girls are included or excluded from community resources is more important than ever, as the COVID-19 pandemic keeps more people closer to home. Girls have specialized knowledge about their lives, their communities, and the risks they face. **If a girl can't walk to it, often for her it doesn't exist.** And even if a girl can walk to a resource, like a clinic, or a food distribution point, it may not be safe or socially accessible for her. Therefore, maps that show physical proximity alone are not always sufficient to understand a girl's true access to a resource. Girl-driven mapping, led by and with particular segments of girls engaged at every step, can illuminate these gaps. In mapping exercises like the Community Resource Scan, conversations with girls are therefore key to understanding the segment and place-specific impacts of their exclusion in the community. Such exercises will reveal nuances in access, places they know of but which they perceive or have experienced as dangerous to their health, safety, and well-being.

Participatory exercises make mapped information come alive with what matters to girls. They can help programs understand girls' safety within and access to their communities.

Discussions with girls about what to map and why can highlight matters to them, like a particular bridge where they feel unsafe, or recreation areas where, while others have fun, girls are instead facing harassment and other dangers. It is almost always useful, depending on the nature of the question or the role that mapping is intended to play in program planning, to have girls grouped by age and other relevant characteristics (e.g. marital status, schooling, employment, ethnicity, etc.), to work together to make maps that reveal contrasts of what constitutes "the community" to them and its available resources.

Participatory exercises like a Safety Scan<sup>19</sup> – where girls can rank places by safety at different times of day, in different seasons, or whether it is safe to go alone or in groups – or even a simple ranking of accessibility give an added dimension to practitioners' understanding of the mapped resource. Mapping with space for discussion and reflection allow programs to base plans in girls' realities and build strategies to serve them locally.

**Mapping exercises can help programs learn more about when girls' lives start to change, and therefore when to intervene – early enough to make a difference.** Maps like these powerfully tell stories about girls' ability to engage with their worlds, and to understand when programs would be best positioned to intervene, which is often at younger ages than most programs operate.<sup>20</sup> As an example, Maps 10 and 11 show the results of two mapping exercises done by the *Abriendo Oportunidades* program in Guatemala where girls participating in the program were actively involved in the exercise.<sup>21</sup> The upper part of the map shows different places in the community categorized as being safe (green), sometimes unsafe (yellow), and always unsafe (red) by adolescent girls. The results of the map were discussed with adults in the community, who incorporated in their own

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<sup>19</sup> See the [Girl-Centered Programming Toolkit](#) for more on this exercise.

<sup>20</sup> Kelly Hallman, Nora Kenworthy, Judith Diers, Nick Swan, Bashi Devnarain. 2015. "The Shrinking World of Girls at Puberty: Violence and Gender Divergent Access to the Public Sphere among Adolescents in South Africa," *Global Public Health: An International Journal for Research, Policy and Practice*, Vol 10(3): 279-295. <http://dx.doi.org/10.1080/17441692.2014.964746>

<sup>21</sup> For more on this project, please visit Chapter 8 of the Intentional Design Guide.

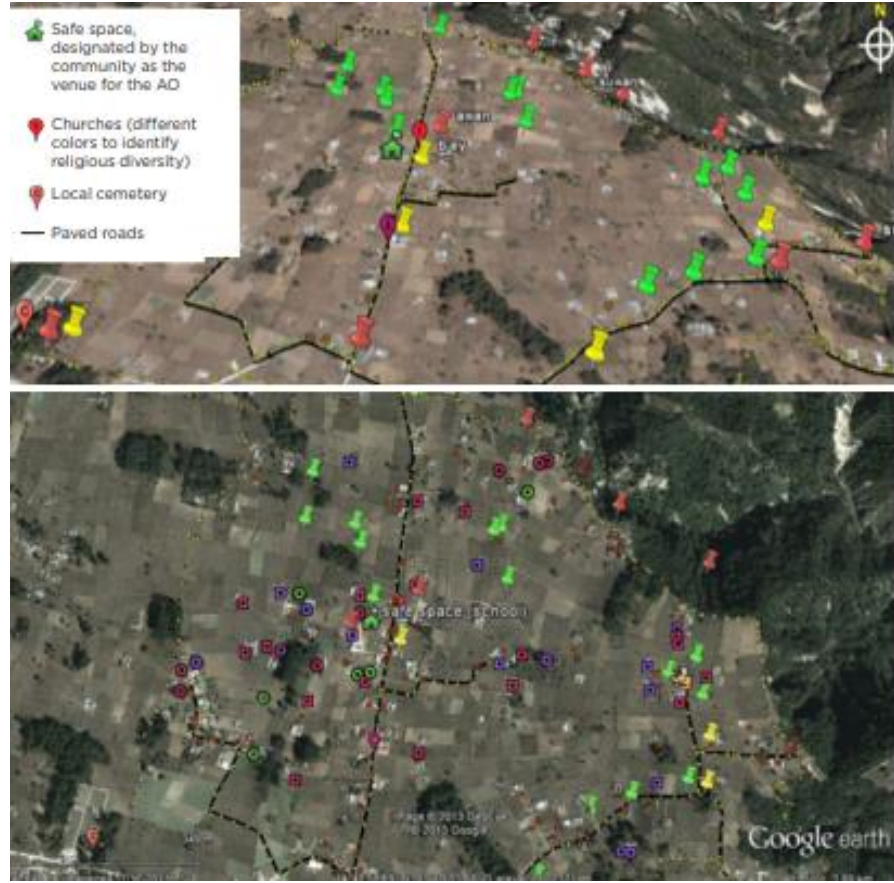


perceptions to the map leading to a combined map (at bottom) that reflected girls' and adults' perceptions of the community. This spurred reflection about girls' experiences of violence by community members, opening their eyes and deepening their appreciation for the value of the safe spaces created. It also enhanced community support and engagement, serving to improve safety and further plans for violence prevention.

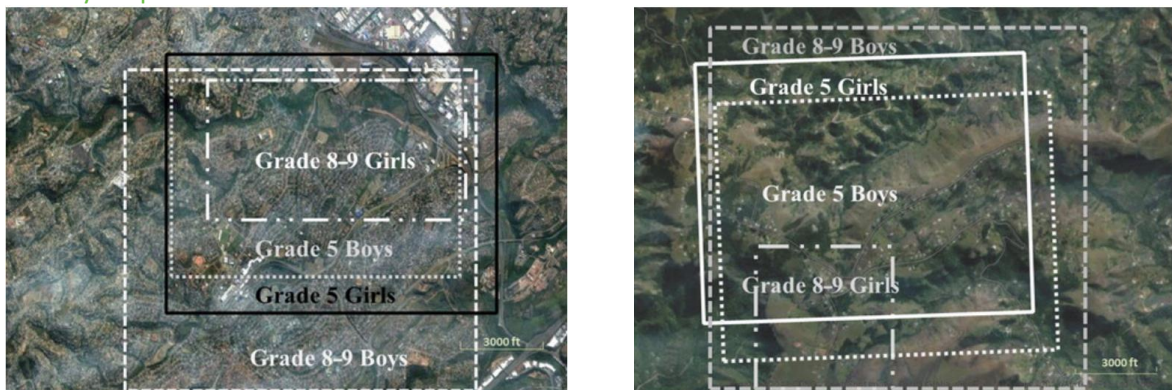
Maps 12 and 13, from participatory mapping done in South Africa, shows how girls' physical access to their community shrinks dramatically after puberty. Girls and boys of different ages from one rural and one urban community were asked to draw the area that constituted their community, ranking places by safety.

Researchers took their paper maps and used the places depicted to compare the sizes of the areas drawn by each group. In both the urban and rural communities, girls' access to physical space shrinks during puberty, while boys in the same places see their worlds expand.

Maps 10 and 11. Girls' perceptions of safety in Guatemala, contrasted with that of adults



Maps 12 and 13. Girls' lives shrink after puberty in both urban (left) and rural (right) South Africa, while the world of boys expands



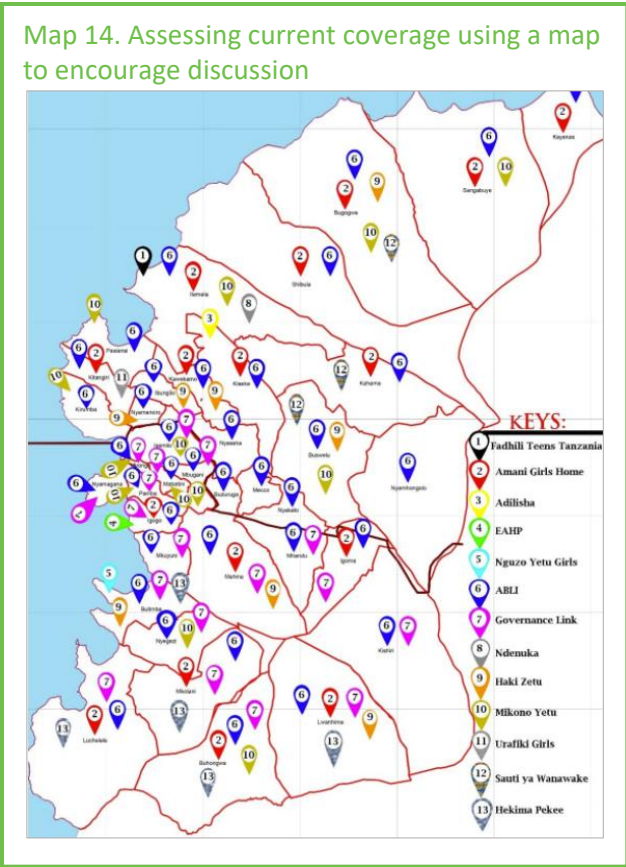
Source: Kelly Hallman, Nora Kenworthy, Judith Diers, Nick Swan, BashiDevnarain. 2015. "The Shrinking World of Girls at Puberty: Violence and Gender Divergent Access to the Public Sphere among Adolescents in South Africa," *Global Public Health: An International Journal for Research, Policy and Practice*, Vol 10(3): 279-295. <http://dx.doi.org/10.1080/17441692.2014.964746>

# Section 4: Using Maps for Advocacy and Planning

Finally, **maps can identify the current coverage of existing programs, allowing for greater coordination and opportunities to bring the work to scale.** In the AGCoP’s experience, mapping where each program works is often a useful way to begin a workshop with organizations from across a country or region that are already implementing programs or planning work with girls. A simple inquiry into where they are planning to or are currently working can generate a map that shows not only overlap – and therefore, opportunity for collaboration; it can also identify gaps where, in spite of a high need for girls’ programming, there is no one working. This too helps plan for coordinated action.

Mapping can be a helpful tool for assessing current coverage of programs and identifying potential partners for coalition-building and planning for scale.

Map 14. Assessing current coverage using a map to encourage discussion

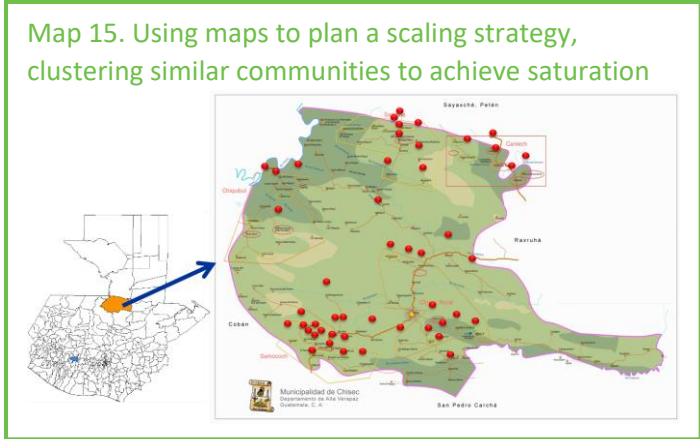


An example from Tanzania, Map 14, shows the coverage of the Mwanza region’s SMASH Community of Practice. Comprised of 17 organizations, SMASH works throughout the region to create a platform where members can share experiences, knowledge, and tools, strengthen the capacity of advocacy services, and support girl-led programming. When first assembled in early 2017, this mapping process was one of the first steps they took, coordinating for collective action. Such work creates opportunities for lateral support and social density, leading to a community of organizations that can relate to and support each other, increasing access to quality services for the most excluded populations of girls. Overlaying maps like these with data on girls can show areas that would benefit from intensified investment.

Maps can also be used to plan for scaling out programs. In Guatemala, the *Abriendo Oportunidades* program used

maps to plan their strategy for scale, clustering communities so that in each district at least 40% of the communities were invited to participate in the program (Map 15). This allowed the program to have greater reach and was also strategic for helping make the case for greater investments in those areas by the government.

Map 15. Using maps to plan a scaling strategy, clustering similar communities to achieve saturation



# Conclusion

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Making maps should not be an end in itself, but rather a step that produces opportunities for more inclusive learning reinforced by visual tools. The participatory process mapping ideally includes is important for making meaning of information and rendering girls' and young women's lives more visible and actionable.

**As maps become an ever more ubiquitous way of depicting the world, its people and resources, programs have an opportunity to map communities from the perspective of key populations of often-marginalized girls, revealing the world she lives in, and making it easier to develop and refine programs that reflect and improve her reality.** This may take the form of using available data to consider how girl-relevant indicators vary within a country, or groups of girls collecting local information themselves. All of these approaches share the same goal: helping practitioners and communities see the world from a girl's point of view and improving her ability to thrive where she is.