PROCUREMENT GOVERNANCE FOR HOME GROWN SCHOOL FEEDING PROJECT LEARNING SERIES

SNV

Accessing the Future: School Feeding Data Goes Online

2016 CASE

Accessing the Future:
School Feeding Data Goes Online

SNV

SNV is a not-for-profit international development organisation. Founded in the Netherlands 50 years ago, we have built a long-term, local presence in 38 of the poorest countries in Asia, Africa and Latin America. Our global team of local and international advisors works with local partners to equip communities, businesses and organisations with the tools, knowledge and connections they need to increase their incomes and gain access to basic services – empowering them to break the cycle of poverty and guide their own development.

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(Cover) *Pupils take their lunch of githeri at the school compound.*

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Governments rely on accurate statistics to monitor the quality of their public education services and to make informed decisions on how they invest in their students and education infrastructure. In Kenya—where the government is working towards universal primary education—reliable statistics enable officials to report on successes or identify areas for additional investment. Since the introduction of free primary education in Kenya in 2003, enrollment increased from 5.9 million pupils in 2003 to 10.2 million in 2013.[1] Complementary programs, like Kenya's Home Grown School Meals (HGSM) programme, which fed 813,000 pupils in 2015, incentivise enrollment and retention.

1 http://www.ke.undp.org/content/dam/kenya/docs/MDGs%20Report/MDG%202014.pdf

Margaret Mampesi, a cook at Chumvi Primary School, Laikipia County, preparing lunch for pupils.

The Problem

Despite substantial increases in HGSM enrollment, the Ministry of Education, Science and Technology's (MoEST) approach to data collection and analysis leaves room for improvement. Head teachers submit paper reports to their sub-county education officers monthly, after which data is aggregated at the national level for analysis and funding decisions. However, after these reports are submitted, the data from individual schools is unavailable to other ministries or county officials, communities, or the public, preventing local analyses or action to address student enrollment, teacher-to-student ratios, education services, and school infrastructure.

In Laikipia County, this approach to monitoring education services presented a problem to teachers and county officials alike. Teachers were often asked to provide the same information to different government officials, creating an extra reporting burden. County education officials in charge of collecting data each term did not have a mechanism for analysing data among schools or over time, and even the governor lacked access to data on education in the county. Furthermore, information about the HGSM programme—including school feeding days planned versus funded, number of pupils fed, and how and from whom food is procured—was not systematically collected at the county level, making it challenging to assess the program's impact on pupil retention and local economic development.

SNV's Procurement Governance for Home Grown School Feeding (PG-HGSF) project piloted an online data management tool for schools in Laikipia County to field test a more accessible and transparent approach to improving data collection, storage and retrieval. The goal of the pilot was to equip all stakeholders, which included public, private and community actors, with accurate and accessible data for effective evidence-based planning and monitoring of public education and HGSM in the county. The pilot, implemented through two rounds of data collection in 2014 and 2015, collected information from all 278 public primary schools in Laikipia; built the capacity of the county Information and Communications Technology (ICT) office and MoEST departments to collect and analyse data; and provided the governor a centralised platform from which to base funding decisions. Part of PG-HGSF's social accountability component includes improving information flows related to school feeding programmes. To this end, the pilot published and made data about HGSM available online to the public in Kenya for the first time. This case study presents how the online data management tool was piloted in Laikipia County, and key lessons to sustain the pilot, or scale the initiative to cover all of Kenya.

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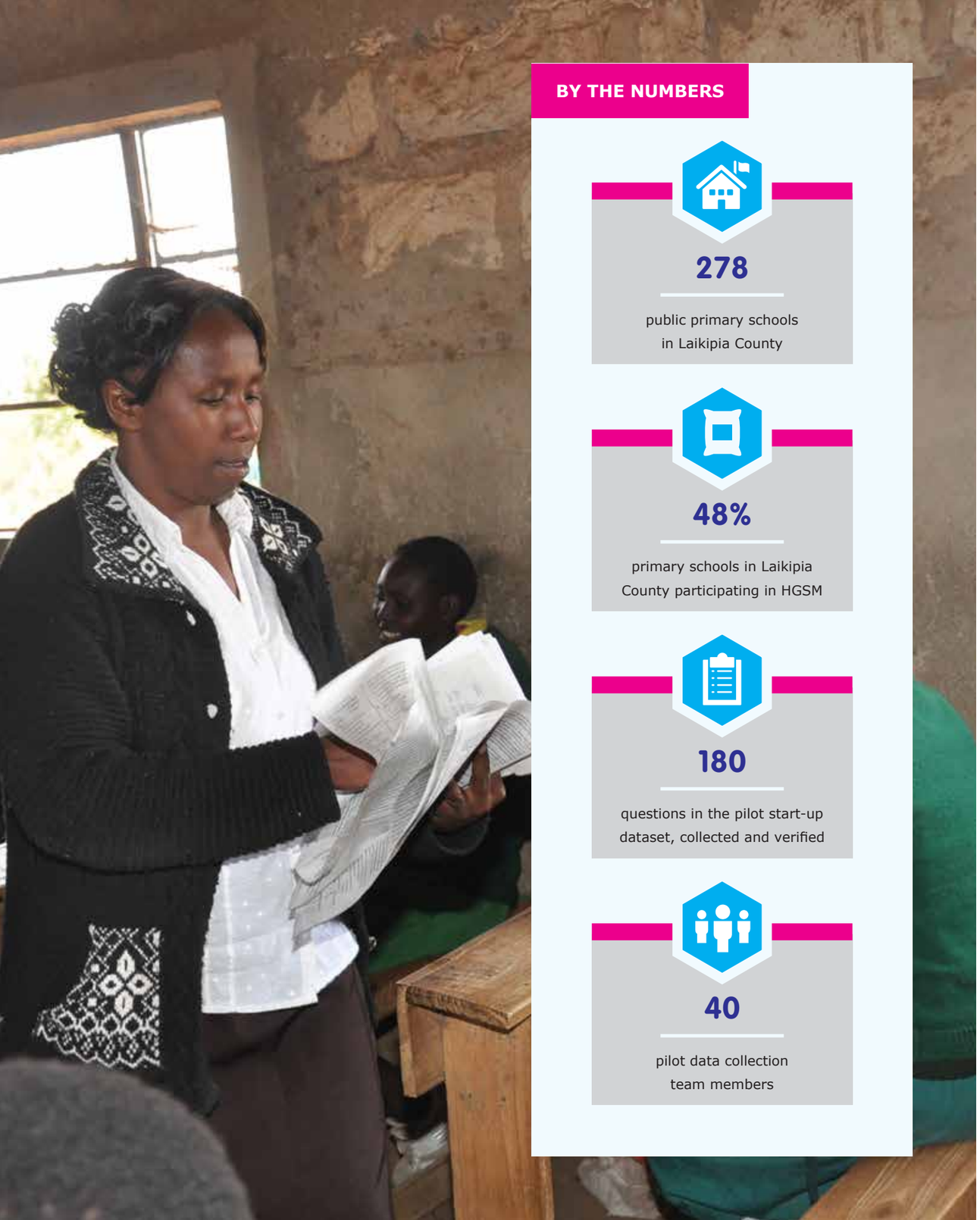
The Pilot

The online data management tool was designed in collaboration with the Laikipia County Government and MoEST, SNV, and aWhere, an agricultural data management provider whose online platform Dev aWhere hosts Laikipia County's data. The pilot was composed of a start-up phase and an implementation phase, with activities in each phase dedicated to questionnaire development; data collection, entry, and verification; analysis and use. Two teams of stakeholders were formed to facilitate data collection and management, while SNV and aWhere complemented these activities throughout with technical support.



BY THE NUMBERS

278

public primary schools in Laikipia County

48%

primary schools in Laikipia County participating in HGSM

180

questions in the pilot start-up dataset, collected and verified

40

pilot data collection team members

PILOT START-UP

The project kicked off with stakeholder discussions to solidify MoEST and Lakipia County Government support for the pilot. The first decision was to identify end users as well as the data required by those users. Primary platform users included Laikipia County Government employees and the MoEST representatives in charge of overseeing education services in the county, while secondary user groups included national MoEST officials, civil society organisations, parents, producer organisations and other potential suppliers, as well as donors and implementing partners. While SNV's primary objective for the pilot was to collect data on HGSM schools and promote the programme's good governance, all schools in the county were included in the data collection to ensure buy-in from county stakeholders and to provide a foundation for scaling the pilot.

Stakeholders adapted the national school mapping survey conducted by MoEST in 2007 to form the basis of the questionnaire in order to leverage geographic coordinates already collected by the government and to structure the pilot to conform to national data reporting requirements. The questionnaire was supplemented with additional data specific to the primary users' needs, including data on HGSM, school health indicators and school infrastructure. Representatives from aWhere and SNV provided input on the questionnaire to ensure consistent responses (for example, eliminating open text fields in favour of pre-determined response options when possible) that would equip the county with high-quality, previously uncollected information about their HGSM schools and the impact that HGSM can have on local agricultural producers.

The pilot's 40-member data collection team facilitated comprehensive data gathering from the schools. The team, led by county MoEST officials Ndung'u Patrick and

Catherine Muringo, the deputy head teacher at Chumvi Primary School, Laikipia County in class.

Ayub Hassan and composed of District Education Officers and teachers, was responsible for all data collection and verification. Before the data collection commenced, all team members participated in training sessions on data management best practices to ensure that all collectors focused on gathering accurate, reliable, complete, and timely data during the collection period. The first round of data collection was conducted over two weeks in December 2014 via paper questionnaires sent to head teachers, the completion of which was overseen by members of the data collection team.

The data collection team used the questionnaires to populate an Excel-based data entry template that corresponded to the questionnaire and was designed to minimise data entry errors. The template included data validation techniques to limit responses and conditional formatting to highlight missing entries. aWhere provided in-depth training to the data collection team on the proper use of the template to ensure rigorous data quality during the entry process. Because an essential step in the data management process is cleaning and verification, aWhere worked closely with the team to review, clean and verify data. Patrick and Hassan leveraged their extensive knowledge of the education system, familiarity with Laikipia County schools, and relationships with District Education Officers and head teachers to verify and correct every questionable or missing data point in the 180-question dataset, resulting in a 100% response rate.

To facilitate data uploading and usage, the pilot's data management team led by the Director of ICT for Laikipia County Government Sammy Linus Maina, managed and analysed the data in the online platform to generate outputs and reports. In December 2014, aWhere trained the 13-member team in data management best practices and use of the platform for loading, analysing and sharing data visualisations. The first dataset from Laikipia County, titled 'Education & Home Grown School Feeding Programme: Laikipia County Baseline — 2014,' was published in February 2015 and made publicly available through the Dev aWhere platform. The dataset covers all 278 public primary schools in Laikipia, 48% of which participate in HGSM. The robust dataset allowed users to engage the information to create real-time specific charts, or to map indicators of interest. Following the publication of the data, the data management team together with aWhere published ten analyses for county executives to start interacting with a variety of data in a user-friendly way.

NEXT STEPS

A second round of data was collected by the team in fall 2015, based on a shorter questionnaire removing fixed data points, including geographic coordinates and school addresses that do not change from year to year. The adapted questionnaire was completed by the head teachers of 96% of the county's schools; this time, with only remote assistance from the data collection team. As of December 2015, the team had entered the second batch of data into the template, and at the time of this writing, are in the process of cleaning and verifying the results. Meanwhile, the data management team continues to support the county government's use of the platform for budgeting and decision making.

RESULTS

Following the publication of the first dataset, the online data platform is now providing accessible and high-quality information on public education in Laikipia County, including — for the first time — data specific to

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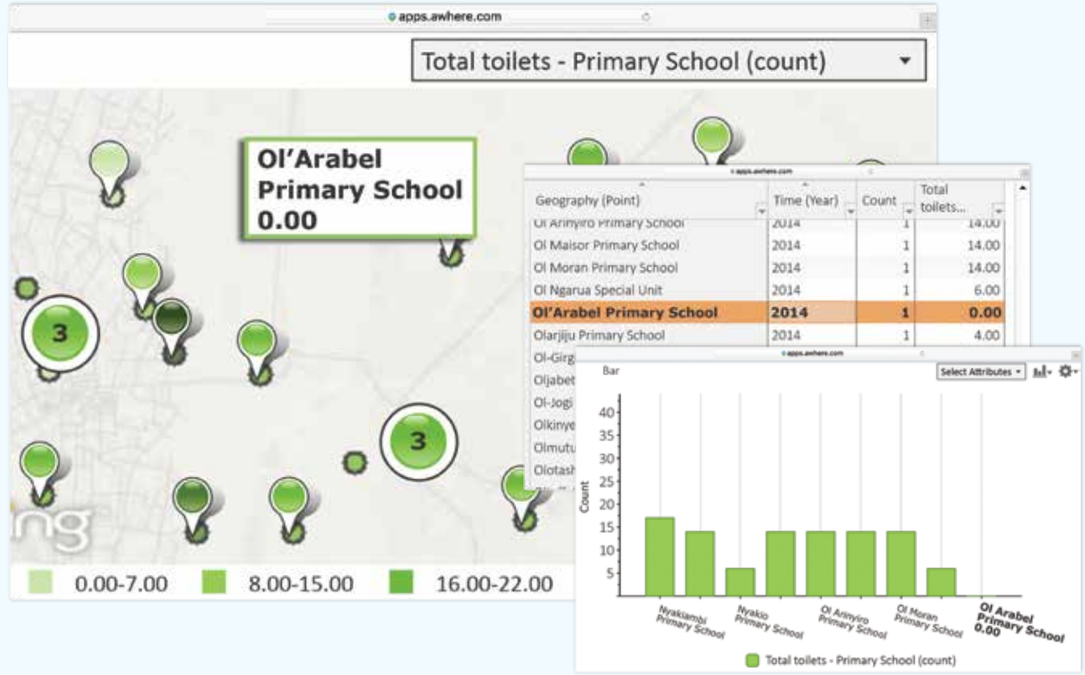
HGSM schools. Furthermore, the availability of data is supporting accountability and evidence-based decision making at multiple levels of governance.

Equipping Laikipia County with data for budgeting and decision making

While Laikipia County Governor Joshua Irungu does not have a direct role in overseeing primary education services, he is the closest governmental official to community members. As a result, communities often turn to him with concerns about the county's schools and education services. The online data management tool enables the governor to serve as an effective conveyor of this information to the national government by providing him with evidence to back up community concerns and effectively advocate for MoEST to address them. For example, while MoEST funds toilet facilities at all schools, parents have reported some schools with inadequate facilities, which was corroborated by national officials using the online pilot data.

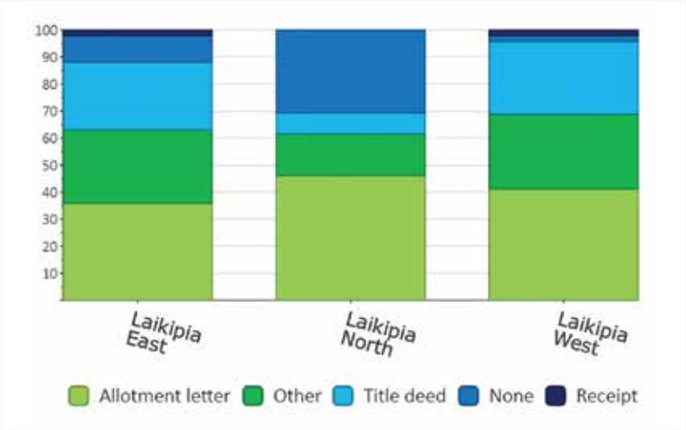
Armed with data, the governor's office can validate the concerns of the parents and elevate the issue to MoEST or address it through county funds. At the county level, the platform has been used to check overall as well as HGSM school enrollment figures, the location of schools, the infrastructure of Early Childhood Development centres, and to monitor girls' attendance in an area of the county populated by nomadic populations. Following the January 2015 'playground protests' in Nairobi, during which pupils protested the acquisition of their schools' playground by a private developer, Governor Irungu requested a report on the land tenure of all county schools, data which was already in the platform. Based on this information, he met with the Land Administration Division of the Ministry of Land,

EXAMPLES FROM THE PLATFORM



The Platform Displays Data in Chart, Map, or Table Format

Here, for example, it appears that Ol'Arabel Primary School lacks toilet facilities, enabling the county government and MoEST to collaborate to resolve the issue.



Land Tenure

Supporting efficient and accountable education services in Laikipia County.

With over 30% of schools in Laikipia North having no land ownership doacumentation, this sub-county will be closely monitored by the Land Administration Division of the Ministry of Land, Housing & Urban Development.

Housing & Urban Development to start the process of issuing title deeds to schools so that a similar situation would not affect Laikipia County. The governor is also starting to share his county's experience, starting with a presentation at the 2015 Global Child Nutrition Forum, which inspired even greater investments in the county's school feeding efforts. Following the forum, the county started developing a work plan to introduce school feeding at all Early Childhood Development centres in the county, which are not explicitly funded through the current HGSM programme.

For the MoEST officials at the county level, access to reliable, well-organised data has reduced their reporting burdens considerably. Questions from national government officials that previously required consulting head teachers by phone can now be answered by the data at hand, increasing efficiency for officials while not distracting head teachers from their classroom responsibilities. Detailed requests from the Teachers Service Commission—the organisation that employs all teachers in Kenya—are also easily answered, including the number of teachers at a specific school, county-wide staffing levels, payroll and certification information. The data also supports compliance with presidential initiatives, such as the school electrification programme, which aims to connect all public primary schools with electricity. The officials can now easily monitor the schools that are not yet connected, and take measures to support their inclusion in the electrification programme.

With respect to school feeding, the officers now have a way to monitor HGSM expenditures, procurement methodologies, and total students benefiting from the programme. For example, the officials can see which schools are conducting open procurement processes, as required in the HGSM procurement guidelines, versus those issuing sole-source contracts. Officials can also monitor the prices paid for essential HGSM foodstuffs, like maize and beans, to prevent inefficiency or fraud. Patrick and Hassan both reported consulting such data prior to meeting with staff at the schools they oversee to guide discussions. As additional information is uploaded to the online platform, they will be able to track indicators over time to assess impact of the HGSM program on enrollment and retention, as well as the extent to which the programme supports the local economy by purchasing foodstuffs from farmers. With less time needed to identify data, these officials can focus instead on monitoring the status of their schools and supporting quality education services.

Empowering multiple actors for accountability

With more than 50 public employees contributing, the pilot activated and empowered new accountability actors in Laikipia County, at different levels of governance and with job functions not typically associated with government accountability. The high quality of the data, discussed during all trainings, became a shared goal for pilot stakeholders to ensure the usability of the data and to enable stakeholders to investigate issues with confidence. The accessibility of the data also contributed to mobilising new accountability actors: for the first time, county employees and county MoEST officials were able to interact with Laikipia's primary education data through the online platform. This ease of access supports an encouraging environment for accountability, with multiple actors engaging with the data, questioning results, and bringing concerns to the attention of officials with the capacity to address them.

The completeness of the 2014 dataset would not have been possible without the dedication of County MoEST officials Ndung'u Patrick (pictured) and Ayub Hassan, who ensured that every school in Laikipia County completed the questionnaire.

Lessons Learned and Recommendations

As a pilot, the online data management tool was meant to serve as a learning opportunity for all involved. As such, there were several recommendations based on lessons learned.

- **INVOLVING MULTIPLE STAKEHOLDERS TO PLAN FOR SUSTAINABILITY:** The pilot was strengthened by the involvement of a diverse group of stakeholders, including Governor Irungu's office, Laikipia County's ICT department, and county MoEST officials. Among the secondary stakeholders are MoEST officials, the County Ministry of Finance and Planning, SNV, and aWhere. Together, these stakeholders successfully generated support for the pilot and promoted using the online platform.

  Non-government participants, such as parents and other community members, are also vital secondary stakeholders, and have a strong vested interest in the success of the project and in its sustainability. Among their duties, they can monitor basic education services and serve as additional public accountability actors. As the tool is sustained and/or expanded, it will be valuable to consider how to engage these non-governmental stakeholders in a discussion of the data, particularly when the public's access to computers and the Internet is limited. As project support for the pilot draws to an end, the ability of all of the stakeholders to use the online platform will help the county justify sustaining it in the future.

County officials, like Director of ICT Sammy Linus Maina, can monitor public education services and HGSM from their browser.

- **CLARIFYING ROLES AND RESPONSIBILITIES:** While the pilot startup activities were conducted by two teams with distinct roles and responsibilities, the implementation phase has suffered from a lack of clarity over funding for the staff time required to keep the platform up to date. As a result, some tasks were delegated to junior staff members that did not participate in the startup training, particularly for data entry, which resulted in a greater number of errors that had to be corrected during the data cleaning process for 2015 data. Establishing clear roles and responsibilities beyond the pilot phase will be necessary to sustain the tool.

  Providing the right data to the right people: The information collected for the online data management tool has the potential for many applications, depending on the user, but not all require the online functionality. In fact, for the county-level MoEST officials, the data in Excel format is generally sufficient to meet their monitoring needs. For county leadership, however, the map and chart functionalities available through the online platform provide visual examples for use in front of national ministries and for public presentations, comparisons across schools or sub-counties, and for decision making based on a better understanding of bottlenecks. The visualisation can also draw attention to local sourcing issues. For example, if it is observed that almost all schools in a particular region source from traders, this awareness can mobilise change to include more smallholder farmers.

- **ON DATA MANAGEMENT:** The pilot revealed some room for improvement in the data collection methodology and method of managing and sharing data in Excel format. With respect to data collection, the pilot team used paper questionnaires which, despite instructions, permit respondents to complete as they see fit. Transferring this data collection to a digital format, via a mobile or online application, would set parameters and limitations for each field, and would also streamline the data management process. Managing and sharing data, prior to uploading the data to the platform, also proved to be problematic due to version control and managing the input of multiple data collectors. It is recommended that the current Excel template used in Laikipia be transferred to an online file that the data collection team can contribute to, while other stakeholders can still access and view, if not edit.

  On the content of data collected: While stakeholders agreed to use the MoEST questionnaire as the basis for the online data management tool, supplemented with additional questions, stakeholders can and should revisit the questionnaire fields to evaluate the necessity of some questions, or the need to include others. Reflecting on the kind of data visualisations or data comparisons that decision makers would be interested in tracking, can help inform this review. Likewise, stakeholders can review the wording of questions based on their experience validating the data reported during previous rounds and/or provide additional instructions for those responsible for filling out the questionnaires. The timing of the data collection should also be synchronised with the desired content to be collected; for example, to correspond with the academic year as opposed to the calendar year.

- **ON SUSTAINABILITY:** The platform will not maintain itself and must be sustained by champions within the county with the financial resources to support it. Primary stakeholders should maintain

A hand-written list showing enrollment figures for Laikipia Central Primary School. The pilot made this data available online for all primary schools in the county.

the structured working groups from the pilot to coordinate efforts, ask questions, provide support, and invite partners to additional trainings. The primary stakeholders must ensure that the platform is incorporated into Laikipia County's 2016 budget and work plan. The County and Ministry of Education must commit resources of both money and time to maintain the platform. While there are no fees for using the Dev aWhere platform, it takes time to collect, verify, clean and upload data. These responsibilities could be incorporated into existing roles, or by hiring additional resources to maintain the tool. Demonstrating how the data is being used to support decision making will further the case for sustained use of the platform and data.

- **ON BRINGING THE PILOT TO SCALE:** With MoEST officials at the national level expressing interest in the online platform, the Laikipia County pilot team should share their experience to support other counties' interested in replicating it. For the pilot, all questionnaires for all schools were disseminated at the same time, which meant that all following steps in the process — data collection, entry, and verification — also occurred at the same time for 100% of the schools. To bring this pilot to scale, stakeholders can learn from the Laikipia County experience to identify data gaps and any misleading wording in question prompts. Likewise, the existing data entry template can be adapted for additional counties to minimise data entry errors.

> While this particular pilot focused on education, the tool could be expanded to cover other types of information, such as health and agricultural data.

Pupils at Chumvi Primary School, Laikipia County.

Offices of the County Government of Laikipia. The County Government is a critical stakeholder in adopting, sustaining and expanding the platform.

Conclusions

The pilot provided a valuable opportunity for Laikipia government and MoEST Laikipia County officials to identify, organise, and utilise information and data from the county to strengthen the design of the existing programs, monitor progress, and share data with stakeholders in the national government. Available online, the data also promotes transparency by giving parents, teachers, and community members equal access to information about public education and HGSM in the county. While this particular pilot focused on education, the tool in place — with proper resources to maintain it — could be expanded to cover other types of information, such as health and agricultural data. In order for the data management tool to be sustainable, it must be adopted and utilised by the county to support ongoing, evidence-based decision making.

Procurement Governance for Home Grown School Feeding Project Learning Series

DOCUMENTS

Challenges and Opportunities: Smallholders and School Feeding Initial Baseline report

Analysis of Supply Chain Studies for Home Grown School Feeding

Inclusive Procurement and Transparency: Connecting Smallholder Farmers to School Feeding

Producer Organisations: Going into Business with Formal Markets

Social Audits: Speaking up for Home Grown School Feeding

Structured Demand Markets and Smallholder Farmers: Relevance and Access

CASES

Turning Challenges into Change: How Social Audits are Improving School Feeding in Sissala East

The market for our food is right here with us: A Case Study from Kenya on Social Audits for School Feeding

Mobilising communities around school feeding: A public restitution in Dogoni, Mali

Linking school feeding caterers to finance: Loan opportunities enabling caterer purchases from smallholder farmers

Ghana matchmaking events: Building links between farmers and school feeding caterers

Knowing the source of the food: Matching smallholder farmers to the school meals market in Kenya

Matchmaking Events Connect Farmers with the School Feeding Market in Mali

Grain Banks in Ghana: Credit for Caterers Brings Farmers into the Market

Procurement Governance for Home Grown School Feeding
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