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Geo-Enabling initiative for Monitoring and Supervision (GEMS)

Overview

The Geo-Enabling initiative for Monitoring and Supervision (GEMS) was launched by the FCV Group to systematically enhance Monitoring and Evaluation (M&E) as well as supervision in FCV settings. This is achieved by building capacity among clients, partners, and Bank teams on the ground, to leverage field-appropriate technology for digital data collection and analysis. Using these tools and methods allows operations to enhance the transparency and accuracy of M&E and increase the accountability of third-party monitoring (TPM). At the same time, GEMS provides platforms for remote supervision, real-time safeguards monitoring, and portfolio mapping for coordination across projects and partners.

Rationale

Fragility and violent conflicts do not only result in destruction, displacement, and devastation, but also often lead to access constraints on the ground, for security-related and logistical reasons. A lack of physical access and insights into specific dynamics and needs in FCV contexts effectively inhibits operational engagement, precisely in some of the areas where development interventions are most critically needed.

Not least given the significant allocation of IDA resources to FCV contexts, there is urgent demand by clients as well as WBG Global Practices (GPs), and Country Management Units (CMUs) for methods and tools that enhance transparency, efficiency, and effectiveness of interventions in regions with limited physical access. As the WBG pivots towards a risk-based approach to FCV, the systematic use of Information and Communications Technology (ICT) is crucial along the risk chain, from preparedness and prevention, to recovery and reconstruction. In response to this demand, the GEMS methodology has been developed to provide World Bank project teams, client agencies, and partner organizations with timely access to invaluable field information from areas that cannot regularly be accessed. In brief, the GEMS methodology allows development practitioners *to have eyes on the ground, where we cannot always have boots on the ground.*

The FCV Group developed the GEMS initiative in close cooperation with the WBG's Geospatial Operations Support Team (GOST) and as a centerpiece of its implementation support offering. It aims to build capacity among clients and enable GPs and CMUs to effectively and sustainably leverage low-cost, 'simple-enough,' and field-appropriate technology for their operational requirements in terms of supervision, M&E, safeguards monitoring, security assessments, TPM, beneficiary engagement, and portfolio mapping.

The strategic focus on capacity-building stands in contrast to providing one-off support or costly service contracts with external firms and aims to provide for client-ownership, sustainability, and scalability. As demonstrated below, this method proved successful in getting real-time information from areas with access constraints, in more effectively supervising operational engagement on the ground, and in enhancing coordination between operations.

Application of the GEMS methodology

Implementation in Practice

The core of rolling out the GEMS method is a series of 3-day hands-on trainings with two main objectives:

(a) Building capacity among government agencies, WBG Task Teams, Country Teams and partners to use simple ICT tools for digital data collection and analysis independently and sustainably, customized to their specific project needs.

(b) Implementing the system across country and regional portfolios to allow for real-time supervision and coordination of operations via a centralized platform that registers all projects on an interactive map.

The training covers everything needed for project teams and CMUs to run the system independently: (a) Data platform creation and administration; (b) digital questionnaire design and deployment; (c) in-field project data collection (incl. 'field exercise'); (d) geo-mapping and analysis of collected data within the application; (e) data export, spatial/Excel analysis; and (f) creation of a customized data architecture.

Use of GEMS for Supervision and TPM

The established platforms and methods taught during the trainings enable project teams to use open source tools for in-field collection of structured digital data that automatically feeds into a centralized M&E system. The integrated data can include any kind of indicators, based on tailor-made forms; photos, audio, videos; time and date stamps; bar code scans; and GPS coordinates that allow for automated integration of the information in interactive maps.

In addition, a framework is established through which the respective portfolios can be systematically supervised and geo-mapped. This allows the CMUs and project teams to obtain real-time information on interventions in areas with access constraints, while enhancing data integrity across the project cycle.

The semi-automated transmission of structured data from the field in real-time implies that GEMS can significantly enhance the transparency and accountability of TPM activities. Meta data that gets recorded through the underlying system, in addition to indicators and photographic evidence, allows to track the exact location and date/time of data collection activities. Therefore, in combination with respective enumerator training and protocols, GEMS enables project teams to 'monitor-the-monitors' and get access to direct field data in near real-time, rather than solely receiving aggregated periodic reports.

Flexible M&E and Training of Trainers

After the intensive hands-on training workshops, each participant should have the necessary skills to use the ICT tools and methods flexibly for the benefit of their project's M&E system and supervision needs, while being able to scale and multiply the system further. To consolidate the capacity created among clients through the interactive workshop, all participants receive detailed step-by-step manuals and user guidance notes on the technical and data governance aspects of the system.

To this end, the GEMS team has prepared a variety of documents in English and French, which are customized to implementation contexts and distributed to training participants, TTLs and CMUs. This material allows participants to refresh their skills and train other colleagues who might benefit from the system. Moreover, the documents provide guidance on specific operational applications of the system for the respective projects.

Centralized information and "crash courses" on GEMS will also be offered via the Open Learning Campus. However, these centralized workshops do not substitute, but instead complement the in-country training sessions, as building capacity among clients themselves is crucial for the sustainable use of the method.

Status Quo of GEMS Roll-Out

Implementation with WBG Teams and Partners

The deployment of the GEMS initiative is fully demand-driven and the team has received numerous support requests from CMUs and operations across sectors and regions. As of May 2019, GEMS has been implemented in 20 countries, with over 1,100 client staff and about 290 WBG-funded projects having completed customized capacity-building training. Given the impact of the GEMS initiative on operations in FCV contexts, the team received a VPU award in the Spring of 2018.

To establish practical tools for coordination of interventions, also an increasing number of external partners have been involved in GEMS implementation. This includes regional and bilateral donors, UN agencies, as well as NGOs. Strategic partnerships have been created with AFD, GIZ, and KfW who received dedicated training, as well as with UNHCR, for a

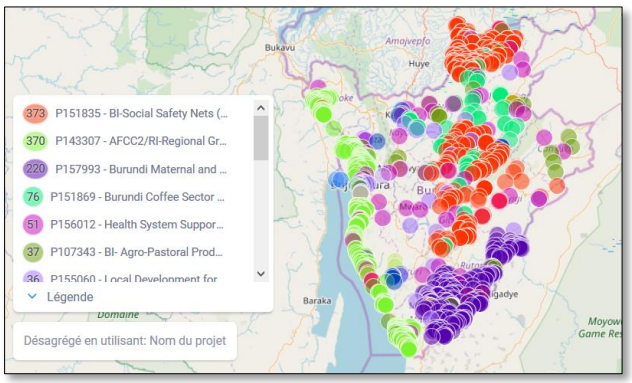
coordinated implementation.

Examples of Ongoing GEMS Use by Clients

Examples for the use of GEMS in the field include remote supervision and enhanced M&E of project implementation, safeguards monitoring, beneficiary engagement, portfolio mapping and security assessments in Azerbaijan, Burkina Faso, Burundi, CAR, DRC, Indonesia, Kenya, Mali, Mauritania, Myanmar, Niger, Nigeria, Pakistan, South Sudan, and Uganda.

In this regard, the use of GEMS can be beneficial at any stage of the project cycle. For instance, in Niger, GEMS informed a baseline study on host communities to plan a displacement project; in Burundi, Mali and the DRC it is used to geo-map the active portfolio; in Uganda, it constitutes the backbone of project M&E systems; in Myanmar and the DRC, it helps monitor safeguards compliance; and in Azerbaijan it serves as a post-implementation citizen engagement and grievance redress tool that is open for everyone to access through an interactive project map.

Example: Interactive Burundi portfolio map



Links to Other Programs

Given the versatility of the ICT tools used and the capacity-building approach, the GEMS initiative can inform and be embedded in a variety of work streams that rely on access to real-time data. In this regard, the GEMS team is working with the FCV Implementation Pilots to streamline the use of the method for supervision. This is also in line with an existing cooperation with the European Space Agency (ESA) that aims to support the systematic use of satellite-based remote sensing for project monitoring, a technology that is complementary to GEMS.

Further use cases relate to core WBG monitoring requirements, beyond supervision in areas with limited access. For instance, an ongoing collaboration with the ITS innovations Lab aims to build replicable methods of using simple ICT for Citizen Engagement and Grievance Redress Mechanisms in low-capacity environments. The team is also exploring collaboration possibilities with safeguards teams to systematically build client capacity in implementing the new Environmental and Social Framework (ESF). A further use case under assessment is the coordinated mapping of service providers for victims of gender-based violence (GBV).

Lessons Learned

Limited Technological Capacity in FCV Contexts

Developing countries, in particular fragile and conflict-affected states, often have low capacity in terms of digital infrastructure as well as ICT skills among government employees. Therefore, tools and methods that depend on sophisticated technology and the steady availability of network connectivity face limitations in terms of effectiveness on the ground. In addition, available budgets among clients are often limited and costly contracts with technology providers may not be sustainable.

This issue is inherently addressed by the design of the GEMS method as well as the ICT tools used as part of this activity. A central element of the method is to use 'simple-enough,' low-cost tools and procedures that are appropriate for the most fragile environments with low capacity. Technically, the GEMS method is based on the use of cost-free software and common smartphones that allow for offline field data collection (i.e., no internet or network connectivity are required in the field).

Data Protection

Potential risks related to data protection are inherent to digital data collection and storage. This can be of particular concern in FCV contexts when the collected data might contain information related to for instance conflict activities, sensitive survey responses, or personally identifiable information (PII) of victims, such as displaced populations.

The open source data collection and analysis platform "KoBo Toolbox" (based on Open Data Kit - ODK) used for this activity is provided by the Harvard Humanitarian Initiative. The tool and servers comply with the latest industry standards in terms of data protection, including the EU's General Data Protection Regulation (GDPR). Users retain full ownership of all submitted data, which is hosted on password-protected, encrypted accounts. The data contents are neither accessed by the platform provider, nor shared with any third parties. For additional data protection, the GEMS team also has an agreement with UNHCR to use their server, which enjoys diplomatic immunity, for

PII or any data related to displacement.

Privacy Protocols

During the GEMS capacity-building workshops, the clients are also trained in best practices regarding data collection and privacy. This includes, among others, guidance in the following points:

- The teams must adhere to the specific legal requirements of the respective country.
- GPS coordinates must not be collected for host locations of displaced populations of less than 250 people of concern (based on UNHCR guidelines).
- GPS coordinates of individual homes or households should only be collected in exceptional circumstances and must never be shared publicly.
- Before taking photographs of people, enumerators must always obtain their consent and have them sign a respective digital form.

Sustainable Use and Scaling

A potential risk is that clients are not using the ICT tools and methods efficiently and sustainably for the benefit of their respective development interventions. This could be due to weak technological capacity, budget limitations, or a lack of incentives. In brief, *simplicity is key for ICT in FCV!*

While the eventual scope of implementation of the GEMS method is generally at the discretion of the respective project and agency, the system provides incentives for sustainable use. The main aim of the GEMS methodology lies on building lasting capacity among the clients themselves to use the tools based on their specific needs.

On the one hand, the method is simple, cost-free and easy to scale, which prevents budgets and IT capacities from becoming an obstacle for implementation. On the other hand, the responsible project Task Teams and Country Teams on WBG-side are explicitly involved in the system setup and training. In this regard, dedicated GEMS focal points are designated within the projects and Country Teams to oversee the systematic and sustainable implementation of the method. Regular follow up by GP and CMU staff with the project team creates incentives to properly run the system.

Provided Support & Contact

GEMS implementation is offered to all CMUs and operations facing challenges related to fragility, conflict and violence. The user-friendly technology can be applied to any kind of project intervention or activity that relies on data collected on the ground. Despite its high impact, the technology is designed for application in developing countries with limited capacity and weak digital infrastructure.

The underlying ICT data platforms are completely cost-free, including accounts, mobile apps, and server space, and the method can be implemented within short time frames. The sole costs factors of GEMS implementation the training sessions (travel for 2 trainers & staff/STC time), smartphones for data collection (low-cost Android devices) and potential field data collection costs on the side of the projects. If needed, the GEMS team can provide follow-up support on a cost-recovery basis.

Training participants typically include Project Implementation Units, TTLs and WBG Task Team members working on M&E/MIS, safeguards and procurement specialists, CMU focal points, and external partners.

For more information on GEMS, click here for an interview from August 2018

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FCV Notes are produced by the FCV Group to provide guidance and resources to Bank staff on how to engage in fragile environments. For more information, visit us on the intranet at: http://fcv/
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