Health
Resources and Services
Availability Monitoring System
(HeRAMS)

External evaluation report
July 2019
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The World Health Organization gratefully acknowledges the support received for this evaluation from the United States Agency for International Development’s Office of Foreign Disaster Assistance (USAID/OFDA). We would also like to thank the Operations Partnership for conducting the evaluation and facilitating the expert review workshop. We would finally like to thank our country, regional and global colleagues and partners involved in the HeRAMS initiative for their ongoing support and for contributing to this evaluation.

### Abbreviations

- **DHIS**: District Health Information Software
- **EWARS**: Early Warning Alert and Response System
- **HeRAMS**: Health Resources and Services Availability Monitoring System
- **IDSR**: Integrated Disease Surveillance and Response
- **OECD**: Organisation for Economic Co-operation and Development
- **SARA**: Service Availability and Readiness Assessment
- **WHO**: World Health Organization
Disruptions to health systems often result in hindered access to essential health services, exposing affected communities to increased morbidity and mortality.

The Health Resources and Services Availability Monitoring System (HeRAMS) approach aims to improve overall access to health care by helping to elaborate a commonly agreed-upon picture of health needs, gaps and priorities.

The Operations Partnership was selected to conduct an evaluation of the implementation of the HeRAMS initiative, focusing on six key aspects:

- effectiveness;
- relevance;
- usability;
- quality (credibility and accuracy of data);
- integration;
- sustainability.

The evaluation was complemented by an assessment of the overall context of each implementation, including the level of resourcing and degree of adherence to HeRAMS core principles. Adherence to core principles was indeed found to vary from one context to another, providing key insights into enablers of and barriers to successful implementation.

Preliminary findings of the evaluation were presented and discussed during a two-day workshop conducted in June 2019 in Geneva. This report provides the summary findings of the evaluation and subsequent discussions.

### Context and core principles

Core principles almost fully achieved in the countries reviewed:

- exhaustiveness;
- service availability;
- granularity;
- collaboration;
- standardization.

Core principles only partially achieved in the countries reviewed:

- monitoring;
- impediments to service delivery;
- decentralization, self-reporting and expert judgement;
- data validation and verification;
- data openness and continuous dissemination.

HeRAMS operates with no dedicated full-time staff. It is supported by external donor funding, albeit limited at all levels (global, regional and national).

The evaluation found that HeRAMS has efficiently exploited these limited resources to make significant achievements.

### HeRAMS performance in a nutshell.

The evaluation found that HeRAMS overall performance to date was at a high level, including its relevance and usefulness as an approach to inform strategic and programmatic decision-making. The evaluation also identified opportunities for improvements in data quality and usability, and for integration of the approach within broader health information systems. The main drivers for improvement include better adherence to HeRAMS core principles at the time of implementation, and more predictable resourcing.
Summary of evaluation criteria

Relevance
HeRAMS is perceived as highly relevant to all phases of the Humanitarian Programme Cycle. It is well recognized as important in supporting informed decision-making, aiding the production, promotion and use of standards across health sector actors, and reinforcing intrasectoral and intersectoral collaboration.

Effectiveness
HeRAMS is perceived as efficiently meeting its objectives, including supporting informed decision-making, standardization and collaboration across the health sector, providing it with a comparative advantage over other approaches.

Quality
HeRAMS data quality is perceived to be good overall, with room for improvement in coverage, timeliness and accuracy through the implementation of more systematic data validation and verification mechanisms and greater decentralization of the process. Limits were reported on its ability to capture data from the private sector, a challenge that has on occasion (for example in the Syrian Arab Republic) been mitigated by the roll-out of targeted complementary health assessments.

Usability
The data usability of HeRAMS is perceived to be good. Information products are generally accessible and credible. While the information products are often too factual and descriptive, they are used extensively and are considered a fundamental reference for the health sector.

Integration
Integration of HeRAMS in the overall health information system infrastructure is light. Synergies were found (for example in such areas as attacks against health care, EWARS, IDS R, DHIS or SARA); and no evidence of duplication was documented, though other components of the health information system were largely non-existent in the contexts assessed. When health information systems were found to be disrupted, HeRAMS provided a solid foundation for their re-establishment. However, there is persistent confusion between HeRAMS and other seemingly similar health information system components (such as SARA), which is detrimental to proper implementation of HeRAMS.

Sustainability
Sustainability is variable and is largely dependent on adherence to core principles related to the implementation process. Low levels of decentralization were particularly found to hinder overall sustainability. Reliance on external resourcing (financial and technical) was also found to threaten overall sustainability, somewhat mitigated by strong institutional buy-in.

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Enablers and challenges

Enablers include the following:

- buy-in and support from national health ministries and authorities;
- presence of a strong information management team or unit, within a growing community of practice;
- high level of support from the World Health Organization (WHO), including financial and technical support, and online services or platforms that ease field implementation;
- receptiveness of stakeholders (donors, United Nations entities and international nongovernmental organizations) and recognition of the value of the information that HeRAMS provides, leading to high relevance and effectiveness.

Challenges include the following:

- systemic human and financial resourcing deficiencies (mentioned by more than 70% of respondents);
- high staff turnover;
- dependence on external technical and financial support;
- weaknesses in adhering to core principles, particularly with regard to monitoring decentralization, self-reporting and expert judgement; data validation and verification; and data openness and continuous reporting;
- incomplete normative and technical documentation (for example, technical guidance, standard operating procedures, data policy, and standard information products).

Overall conclusion

This evaluation demonstrates the critical importance of HeRAMS in countries where it has been implemented, and has identified aspects where improvement could help exploit its potential even further. HeRAMS was found to be a fundamental component of health information systems with very high relevance and effectiveness, as well as relatively high sustainability, particularly considering the challenging environments in which it operates. Data quality and usability were also found to be robust, though improvement is called for, particularly in data coverage, accuracy, timeliness and actionability.

Integration with other health information system components was demonstrated on occasion, but was largely hampered by the overall lack of structured health information systems in the contexts assessed. The lack of clarity on articulation of HeRAMS with other critical health information system components (such as SARA and EWARS) needs to be addressed. The evaluation found that the key enablers to implementing HeRAMS in a new country are:

- buy-in from the ministry of health and other health sector stakeholders;
- support from WHO and contribution of existing coordination mechanisms;
- good adherence to HeRAMS core principles
- strong information capacity.
Recommendations

Recommendations emerged both at country level, where actual implementation takes place, and at regional and global levels, where some of the critical support functions have been efficiently centralized to date, ensuring economies of scale and overall efficiency and sustainability of the HeRAMS initiative.

Country level

At country level, recommendations can be grouped into four main areas:

1. adhere more closely to core principles, in particular:
   - focus on monitoring to improve data timeliness and actionability;
   - strengthen decentralization (including reliance on self-reporting and expert judgement) to reinforce overall effectiveness and sustainability;
   - implement data validation and verification mechanisms more systematically to increase data quality and usability;
   - improve data openness and reporting (including through the development of online dashboards and automated reports) to increase data uptake by decision-makers.

2. strengthen data analysis and interpretation to increase data actionability

3. reinforce information management capacity

4. strengthen communication, advocacy and fundraising

Regional and global levels

At regional and global levels, recommendations can be grouped into seven main areas:

1. extend governance and develop partnerships, including:
   - create a steering committee to guide future developments;
   - develop specific partnerships to support further scale-up of the approach (in such areas as implementation and analysis).

2. reinforce regional and global capacity to support country-level implementation and clarify roles and responsibilities

3. focus on country support and areas with potential for economies of scale, including centralized online services (for example, data collection and management, dashboarding and reporting services)

4. expand and reinforce the community of practice, including through development of training packages (for example, e-learning and user manuals), training, mentoring, dissemination of lesson learned, cross-country and cross-regional fertilization, and networking

5. strengthen the normative and scientific base, including through development of:
   - technical guidance;
   - standard data models;
   - standard operating procedures;
   - data policy (for example, standard data-sharing agreements);
   - clear documentation of the articulation of HeRAMS in the broader health information system and its role beyond emergency and humanitarian contexts.

6. reinforce communications, advocacy and fundraising

7. formulate a multiyear strategy and implementation roadmap
1. Introduction and background

This section of the report describes the context and history of the development of the Health Resources and Services Availability Monitoring System (HeRAMS), as well as the methodology used for the evaluation.

1.1 Background

The Operations Partnership was selected to conduct the external evaluation of HeRAMS performance. Founded in January 2016, the Operations Partnership Ltd (Reg: 9935254) is a United Kingdom-based international consultancy firm that provides experts and consulting services for the development and humanitarian sectors in the following areas:

- organizational development;
- organizational resilience;
- operations management;
- emergency and humanitarian response.

The Operations Partnership focuses in particular on providing support and guidance to development and humanitarian organizations that are looking to cultivate organizational strategies and efficient and effective business practices to ensure timely delivery of services.

There were five stages to the HeRAMS performance evaluation:

1. inception (design, secondary data review)
2. data collection and analysis via key informant interviews, literature review and online survey
3. final evaluation report
4. presentation of findings
5. development of roadmap

1.2 Purpose and objectives of the evaluation

The evaluation addressed six key aspects of the implementation the HeRAMS approach, namely:

- effectiveness;
- relevance;
- usability;
- quality (credibility and accuracy of data);
- integration;
- sustainability.

More specifically, working in close collaboration with the WHE/HIM/MDC team, the evaluation addressed the following objective:

Evaluate the performance of HeRAMS with regard to HeRAMS objectives to date (based on relevant criteria of the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD) and discussions with the HeRAMS Reference Group).

1.3 HeRAMS initiative information

1.3.1 Rationale

Disruptions to health systems can impede access to essential health services. Affected communities become vulnerable to increased morbidity and mortality. These risks increase substantially when a lack of reliable information prevents sound decision-making, especially in rapidly changing

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2 WHO Health Emergencies Programme: Health Emergency Information and Risk Assessment Department: health operations monitoring and data collection team.
environments that require continued assessment. HeRAMS aims to provide decision-makers and health stakeholders at large with vital and up-to-date information on the availability of essential health resources and services, and help them identify gaps. The HeRAMS approach draws on the wealth of experience and knowledge gathered by the World Health Organization (WHO) and health sector actors, including nongovernmental organizations, donors, academic institutions and other technical bodies. The system reflects what is methodologically sound and feasible in highly constrained, low-resourced and rapidly changing environments such as humanitarian emergencies. Rapidly deployable and scalable at small scale to support emergency response, including in fragile States, HeRAMS also operates as an essential component of routine health information systems, thus playing a key role in health systems strengthening and the humanitarian–development nexus.

1.3.2 Overview

HeRAMS is designed to improve access to health care by helping to elaborate a commonly accepted picture of health needs, gaps and priorities. It is a collaborative approach that involves a wide range of stakeholders and is specifically intended for contexts where limits to access, security, time and resources do not favour traditional means of assessment and monitoring, such as the Service Availability and Readiness Assessment (SARA).

1.3.3 HeRAMS aims and objectives

The HeRAMS approach aims to:

1. contribute to informed decision-making in all phases of the health sector response:
   - gaps and priorities in essential health resources and services availability;
   - main impediments to health service delivery;
   - most appropriate response options.

2. promote standardization across the health sector response from resource and policy perspectives:
   - standard master health facility lists;
   - essential health service packages;
   - standard health service definitions.

3. contribute to improved intrasectoral and intersectoral collaboration:
   - shared data management and quality responsibilities;
   - joint analysis and prioritization;
   - rationalized resource allocation;
   - coordinated communication, advocacy and resource mobilization efforts.

1.4 HeRAMS core principles

The HeRAMS approach is structured around 10 core principles (see Annex 1):

1. exhaustiveness
2. monitoring
3. granularity
4. service availability
5. identification of Impediments to service delivery
6. decentralization, self-reporting and expert judgement
7. data validation and verification
8. collaboration
9. standardization
10. data openness and continuous dissemination
2. Methodology

This section of the report describes the methodology applied to the evaluation.³

2.1 Analytical framework

The evaluation relied on the methodology of the OECD Development Assistance Committee, with adapted criteria (effectiveness, relevance, usability, quality, integration and sustainability). It also included the requirements defined by the evaluation steering group during the initial meeting held in December 2018.⁴

The derived analytical framework examined the following:

- degree of adherence to HeRAMS core principles
- degree of achievements in relation to the three HeRAMS objectives across the five phases of the Humanitarian Programme Cycle⁵
- overall performance in relation to OECD Development Assistance Committee criteria.

The criteria were examined as presented in Table 1.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Topics and related indicators</th>
<th>Data collection and methodology</th>
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</thead>
<tbody>
<tr>
<td>Context and core principles</td>
<td>Description of the structure of HeRAMS and its resourcing (human and financial) at country level</td>
<td>- Summary matrix to compare structure and resources available for each implementation;</td>
<td>Key informant interviews, online survey, secondary data review</td>
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<tr>
<td></td>
<td>Degree of adherence to HeRAMS 10 core principles</td>
<td>- Degree of adherence to the 10 core principles.</td>
<td></td>
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<tr>
<td>Relevance</td>
<td>Extent to which HeRAMS objectives and outputs are perceived as suited to the needs (information management, standardization and coordination) and priorities of the context in which it is implemented</td>
<td>- Degree of relevance of HeRAMS objectives across the various cases of implementation;</td>
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<td></td>
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<td>- Degree of relevance of the outputs across the eight phases of the Humanitarian Programme Cycle;</td>
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<td>- Challenges and enablers;</td>
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<td>- Lessons learned and recommendations;</td>
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<td>- Evidence of use and usefulness (documented examples that key informants can provide).</td>
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⁴ Annex 3: Analysis matrix.
⁵ Phases of Humanitarian Programme Cycle: 1) needs assessment and analysis, 2) strategic response planning, 3) resource mobilization, 4) implementation and monitoring, and 5) operational review and evaluation.
<table>
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<th>Criteria</th>
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<th>Data collection and methodology</th>
</tr>
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</table>
| Effectiveness | Extent to which HeRAMS meets its objectives in terms of supporting informed decision-making, standardization and collaboration | ● Degree of achievement of the three key objectives;  
● Main challenges and enablers;  
● Main lessons learned and recommendations;  
● Evidence of alignment and achievements (through review of documented examples, standard operating procedures, guidance that key informants can provide). | Key informant interviews, online survey |
| Quality       | Extent to which HeRAMS data management processes, tools and analysis products are considered of adequate quality | ● Degree of perceived quality (completeness, timeliness, validation) of the data collected;  
● Degree of perceived accuracy and credibility of HeRAMS data analysis, and transparency on the limitations of findings;  
● Challenges and enablers;  
● Lessons learned and recommendations;  
● Evidence of sufficiency and quality of data (documented examples that key informants can provide). | Key informant interviews, online survey, secondary data review |
| Usability     | Extent to which HeRAMS data are usable and used                               | ● Degree of access to HeRAMS data across the eight Humanitarian Programme Cycle phases;  
● Degree of use of HeRAMS data across the eight phases of the Humanitarian Programme Cycle;  
● Main challenges and enablers;  
● Main lessons learned and recommendations;  
● Evidence of use (documented examples that key informants can provide). | Key informant interviews, online survey, secondary data review |
| Integration   | Extent to which the cases of HeRAMS implementation reviewed are well integrated into the overall health management information system architecture, promote synergy, and avoid gaps, unnecessary overlaps, and detrimental resource conflicts | ● Degree of integration of HeRAMS into the overall health management information system architecture;  
● Challenges and enablers;  
● Lessons learned and recommendations;  
● Evidence of integration (documented examples that key informants can provide). | Key informant interviews, online survey, secondary data review |
| Sustainability| Extent to which the HeRAMS approach can be sustained in the long term when needed (through allocation of adequate financial and human resources) | ● Degree of sustainability (availability of funding, and engagement of and ownership by local actors);  
● Degree of integration and ownership of HeRAMS within health authority systems;  
● Challenges and enablers;  
● Lessons learned and recommendations;  
● Evidence of sustainability (documented examples that key informants can provide). | Key informant interviews, online survey, secondary data review |
2.2 Sampling, data collection and analysis

The evaluation was designed to provide a "systematic and impartial examination of humanitarian action intended to draw lessons to improve policy and practice and enhance accountability". It involved a comprehensive technical assessment of HeRAMS with the purpose of providing analysis to inform change and development where necessary, and to demonstrate transparency and accountability to stakeholders.

The following six countries and contexts were selected for the evaluation by the HeRAMS Reference Group to maximize the range of implementation contexts and regions: Central African Republic, Nigeria, Sudan, Syrian Arab Republic, Syrian Arab Republic – Gaziantep hub, and Yemen.

The evaluation process was guided by the analysis matrix. Qualitative and quantitative information was gathered for each pillar of the matrix using multiple data collection techniques and an iterative process of data collection and analysis (following each step, available information was analysed to improve focus and targeting for the next round of data collection; See figure 1).

Secondary data review. Use of HeRAMS was reviewed for all humanitarian needs overviews produced since 2015, and all existing documents at country level (for example, HeRAMS reports, trainings, approach, structure and organigrams). In total, 108 documents were reviewed across the six countries and contexts.

Primary data collection. Methods included both key informant interviews and an online survey. Different audiences were targeted for different sections of the analysis matrix. A total of 237 respondents engaged with HeRAMS were contacted: of those, 36 were

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interviewed (16 coordinators, 10 data contributors, five data managers and five end users), 88 answered the online survey, 18 answered the core principles survey, and 95 did not respond. All key informant interviews were recoded and categorized using the DEEP platform.

Key informants were selected using a purposive sampling approach to ensure a diversity of respondents from various organizations and maximize the response rate by interviewing only those who interacted with HeRAMS. The evaluation also relied on data drawn from HeRAMS, humanitarian needs overviews and humanitarian response plans.

The online survey was carried out using SurveyMonkey. To minimize survey fatigue and ease the analysis, a limited number of open text questions were inserted, most of which were designed using Likert scale response options.

Results from both primary data collection and the secondary data review were filtered for each evaluation criterion, then grouped by theme (achievements, enablers, challenges, and lessons learned and recommendations). A final score for each criterion was determined and applied to the overall performance evaluation.

Despite all efforts, data collection was hindered by several challenges. For example, the online survey response rate in Sudan was quite low due to continuing unrest and Internet disruption. The response rate in the Central African Republic was also quite low due to limited Internet connectivity.

Findings of the evaluation are based on the data analysis and on the expert judgement collected during the preliminary findings workshop held in June 2019 in Geneva.

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7 See Annex 4: List of key informants.
8 https://deephelp.zendesk.com/hc/en-us/articles/360015943731-What-is-DEEP-
9 www.surveymonkey.com
10 See Annex 5: Evaluation Instruments.
3. Findings

This section of the evaluation presents key findings, challenges and enablers for each criterion. For some criteria, insufficient data were available to identify challenges and enablers.

3.1 Context and core principles

The following provides findings on the overall context in which instances of HeRAMS implementation have taken place, with a focus on:

- structure and level of resourcing (financial and human);
- degree of adherence to HeRAMS 10 core principles.

3.1.1 Key findings

This contextual analysis is central to understanding how different contexts and implementation approaches may impact the overall performance of individual cases of implementation, and help better identify potential barriers and enablers for each evaluation criterion.

Analysis of the structure revealed that none of the countries or contexts evaluated had full-time dedicated HeRAMS staff. HeRAMS is generally hosted and supported by WHO, with varying degrees of ministry of health ownership and contribution. Existing coordination mechanisms (such as health clusters or incident management teams) are always included and provide varying degrees of support to the implementation of HeRAMS, particularly in the areas of coordination and information management. More exceptionally, responsibility for specific aspects of the process are clearly spelled out, as in Sudan and the Syrian Arab Republic, where subnational focal points (ministry of health, state ministry of health and WHO) support the collection and verification of HeRAMS data as part of their responsibilities.

Funding at country level is still largely raised by WHO through donor grants and hence lacks sustainability and predictability. Funding is generally available, though one country – the Central African Republic – reported funding limitations to HeRAMS implementation (in 2017 and 2018).

In terms of adherence to global core principles (see Annex 1), the reviewed initiatives were found to be largely compliant with global standards, as detailed below and in figure 2.

Exhaustiveness (80% reported the requirement achieved or fully achieved). Generally, all facilities within the areas of concern were targeted and covered by the HeRAMS approach, with the exception of private sector facilities, which were reported to be more challenging to capture. This gap mainly originated from a lack or inefficiency of registration mechanisms, as well as the absence of HeRAMS data contributors with a supervisory role (see paragraph below on decentralization, self-reporting and expert judgement) in the private sector that could contribute to the HeRAMS process. In some instances, for example in the Syrian Arab Republic, HeRAMS has helped identify areas where the private sector has played a more active role (for example in areas with little public sector involvement), leading to the design of specific complementary health assessments to address this gap. Generally, key informants felt that overall coverage could be further improved, but found it satisfactory overall.

Monitoring (64% reported the requirement achieved or fully achieved). The ability of the HeRAMS process to support near real-time monitoring of the situation has largely not been achieved. Only three of the five countries generated HeRAMS quarterly updates, with only one (Syrian Arab Republic) generating monthly updates, and others mostly applying yearly rounds of updates. This limitation is thought to result largely from the lack of decentralization of these processes (see paragraph below on decentralization, self-reporting
An exceptional case of near real-time monitoring has been documented through the analysis of HeRAMS raw data in Yemen during the cholera outbreak response in 2016. This success again demonstrates the importance of decentralization, self-reporting and expert judgement, and automation of the data collection and management processes. Beyond this geographical and time-bound example, no country has achieved both autonomous and asynchronous reporting. Monitoring remains one of the main challenges ahead.

Granularity (85% reported the requirement achieved or fully achieved). Data are largely gathered at the required levels of granularity, and are disaggregated by points of service delivery and modalities of service delivery. The evaluation suggests however that gains may still be obtained from better standardization of the data models used to capture mobile modalities of service delivery.

Service availability (82% reported the requirement achieved or fully achieved). In most countries service availability is at the core of all instances of implementation, as demonstrated by the analysis of country data models and corroborated by key informant interviews.

Identification of Impediments to service delivery (79% reported the requirement achieved or fully achieved). The systematic monitoring of
impediments to service delivery is also largely adhered to, with four of the five countries reviewed using the standard approach.

Decentralization, self-reporting and expert judgement (70% reported the requirement achieved or fully achieved). Decentralization of the process to service providers, ideally at supervisory levels, and the resulting engagement of knowledgeable public health experts (rather than non-expert data collectors) has only been achieved in two of the five countries (Syrian Arab Republic and Yemen). Some countries have partially achieved one or more of the subcriteria defined (for example, HeRAMS data contributor is operating outside and supervising more than one modality of service delivery, has a supervisory role, or is a health expert), but adherence to this core principle is generally poor and is believed to largely impact the overall efficiency of the process at country level, and particularly the ability to achieve monitoring.

Data validation and verification (75% reported the requirement achieved or fully achieved). None of the countries evaluated were found to have implemented a systematic and fully functional data validation and verification framework. Three of the five countries – Nigeria, Sudan and Syrian Arab Republic (Damascus) – conducted “opportunistic data validation/verification when possible (e.g. during field/supervisory visits).” More systematic “mechanisms of data validation/verification” were found to be in place in Sudan and the Syrian Arab Republic, where a WHO-employed state or governorate focal point “verifies and validates the collected data in coordination with the ministry of health HeRAMS focal points”. The principle was generally found to be poorly implemented and, although this does not seem to have had a large impact on data usability and credibility, will need to be improved.

Collaboration (90% reported the requirement achieved or fully achieved). Stakeholders largely consider HeRAMS to be a collaborative process and a driver for collaboration across the health sector. In all countries evaluated, regardless of ownership, the HeRAMS approach was found to be inclusive and collaborative, bringing ministries of health, WHO and most other health sector actors together and efficiently building on and reinforcing existing coordination mechanisms (such as health clusters).

Standardization (86% reported the requirement achieved or fully achieved). In all countries evaluated, HeRAMS data models and standards are developed collectively by health sector actors and the ministry of health, and adapted to reflect local specificities and objectives (for example, existing minimum service packages). The HeRAMS process is also largely recognized as a contributor of standards, notably through the establishment of a master health facility list service, which is essential to all other components of the health information system.

Data openness and continuous dissemination (72% reported the requirement achieved or fully achieved). Information products (such as reports or snapshots) are shared to some extent regularly, either via health sector or health cluster distribution lists or online (ReliefWeb, Humanitarian Response, WHO Global Health Cluster, WHO country website). In some instances (for example in Yemen) aggregates and compilations of data are available in real time through online dashboards. However, raw data (including subsets of data) were never found to be available openly and easily, including to their contributors and owners. Users generally reported being able to ask for ad hoc, in-depth analysis when needed, and teams supporting the process were highly commended for their level of responsiveness. Data openness and continuous access however remain a major challenge. The implementation of technological solutions (online dashboards, automated reporting, platforms ensuring transparent and lean access to raw data) is key to ensuring data openness and continuous dissemination.
3.2 Relevance

HeRAMS was largely perceived as highly relevant to all phases of the Humanitarian Programme Cycle. Its relevance beyond emergency and humanitarian contexts was also strongly highlighted and documented.

*External evaluation score:*

- Low
- High

The following question on relevance was investigated: To what extent are HeRAMS objectives and outputs perceived as suited to the needs and priorities (for example, information management, standardization and coordination) of the context in which it is implemented? This includes:

- degree of relevance of HeRAMS objectives across the various implementations
- degree of relevance of outputs across the eight phases of the Humanitarian Programme Cycle.

3.2.1 Key findings

HeRAMS objectives were perceived as very relevant across all phases of the Humanitarian Programme Cycle in all the contexts evaluated. Additionally, HeRAMS was reported to be potentially relevant beyond emergency and humanitarian contexts, with clear supporting examples provided (for example, extension to non-emergency states in Sudan). These include the following.

HeRAMS contributes to informed decision-making as shown in figure 3. Numerous examples were reported of the importance of HeRAMS in supporting the identification of needs, gaps and priorities, the development and coordination of response activities and proposals, the integration of health considerations in humanitarian needs overviews and humanitarian response plan processes, and the reinforcement of health sector coordination.

"[We] use it for writing reports and proposals to donors. [We] access the HeRAMS database... [We] communicate with the HeRAMS team with what [we] need for a specific analysis, unless [it is in] annual reports" (key informant interview, Syrian Arab Republic, 10/06/2019).

HeRAMS supports the production, promotion and use of standards. These include standard master health facility lists, standard health service packages and standard health service definitions across health sector actors. The importance and relevance of that objective were recognized for all phases of the Humanitarian Programme Cycle, with specific emphasis on dynamic contexts where multiple partners operate alongside.

HeRAMS contributes to reinforcing intrasectoral and intersectoral collaboration. This is a prerequisite for joint analysis and prioritization, rationalized resource allocation and use, and coordinated communication, advocacy and resource mobilization efforts.
Figure 3. Percentage of respondents reporting HeRAMS objectives and outputs are perceived as suited to the needs (information management, standardization and coordination) and priorities of the context in which it is implemented.
3.3 Effectiveness

HeRAMS was largely perceived as meeting its objectives (supporting informed decision-making, standardization and collaboration across the health sector; See figure 4).

External evaluation score:

Low High

The following question on effectiveness was investigated: To what extent does HeRAMS meet its objectives?

3.3.1 Key findings

Key findings are summarized as follows.

HeRAMS was largely perceived as a fundamental driver of informed decision-making in the health sector. Key informants found HeRAMS to be an essential source of information to support decision-making processes, particularly for coordination, needs analysis and prioritization, strategic planning and resource mobilization.

"HeRAMS provided quick information with great coverage of the health gaps and was of great support to health partners in the prioritization and allocation of resources, as well as in monitoring the evolving situation and impact of their activities" (key informant interview, Nigeria, 21/04/2019).

HeRAMS was considered in some instances to be the main reference of health sector data, providing the health sector with a “comparative advantage over other sectors.”

“HeRAMS has become a reference accepted by both donors and partners"

Key informant interview, Nigeria, 21/04/2019

HeRAMS promotes standardization. HeRAMS was largely perceived as an important contributor to the promotion and diffusion of standards where they exist, including common operational datasets, essential health service packages and standard service definitions (for example, Sudan and Syrian Arab Republic). In the absence of pre-existing standards, HeRAMS was found to critically influence their design and dissemination (for example, Yemen). HeRAMS was also found to be the source of fundamental standards, such as master health facility lists, though not consistently. In Sudan, the Syrian Arab Republic and Yemen, HeRAMS has helped establish a master health facility list and has provided this standard as a service to other health information systems, while in the Central African Republic and Nigeria it has helped to complement the pre-existing master health facility list. The ability to provide an efficient master health facility list service was found to be closely related to the ability to successfully implement the principles of “monitoring” and “data openness and continuous dissemination”.

HeRAMS contributes to intrasectoral and intersectoral collaboration. HeRAMS was recognized as a key source of information and transparency on health sector actors’ activities, hence contributing to improved intrasectoral collaboration.

“The governorate health officer and Ministry of Health would ask for a lot of services and interventions in areas where maybe the needs are not a priority.”
**Findings**

... HeRAMS has prevented misdirection and misuse of resources

*Key informant interview, international nongovernmental organization, Yemen, 12/06/2019*

Contribution to intersectoral coordination was occasionally demonstrated, including through the integration of key HeRAMS findings into humanitarian needs overviews and humanitarian response plans (eight humanitarian needs overviews in 2019 were directly using HeRAMS data: Central African Republic, Iraq, Mali, Nigeria, occupied Palestinian territory, Syrian Arab Republic, Ukraine and Yemen), and there were continuing discussions to use them to inform the “essential services availability” component of the intersectoral severity
scale for the 2020 Humanitarian Programme Cycle in the Syrian Arab Republic. It was however generally felt that this area could be improved through more systematic integration with intersectoral information systems and decision-making processes.

### 3.3.2 Challenges

Low capacity and failure to successfully implement the “monitoring” and “data openness and continuous dissemination” principles appear to be the main barriers to achieving effectiveness more systematically. Related challenges identified include the following:

- low analysis and reporting capacity at country level;
- low overall decentralization of the process;
- lack of systematic coordination of information product development and dissemination with key decision-making processes, such as humanitarian needs overviews and humanitarian response plans;
- inconsistent capacity to mainstream, due in part to competing and contradicting standards;
- lack of comprehensively documented standards on the approach to support implementation (for example, standardization of HeRAMS variables and definitions).

### 3.3.3 Enablers

Adequate capacity and successful implementation of “monitoring” and “data openness and continuous dissemination” principles have proved to be key in achieving effectiveness. These include:

- efficient decentralization of the process, including presence of WHO focal points at subnational level to support data collection and verification processes;
- strong in-country information management capacity to support the process at all stages;
- capacity to support regular field and data validation visits.

The ability of WHO to financially support related activities, and build confidence in the value of the information on the part of health sector stakeholders (donors, United Nations entities and international nongovernmental organizations), also proved to be of fundamental importance.
3.4 Quality

HeRAMS data quality was perceived to be good, with areas of improvement identified more particularly for coverage, timeliness and accuracy.

External evaluation score:

The following question on quality was investigated: What is the degree of perceived quality of HeRAMS data and information products, including coverage, completeness, timeliness and accuracy?

3.4.1 Key findings

On balance, the quality of data and information products was perceived to be good with respect to the objectives as shown in figure 5, and considering the constraints inherent to the contexts evaluated (including security and accessibility).

“Overall quality of HeRAMS data (completeness, accuracy, timeliness, etc.) is good” (key informant interview, Nigeria, 07/06/2019).

3.4.2 Challenges

Coverage. Challenges were reported on the inclusion of the private sector, mostly due to non-existent or failing registration systems as well as overall lack of structure of that sector.

Accuracy. There were reports of several challenges, including discrepancies, misreporting and duplicate action.

“Discrepancy of data and reality – [it is] embarrassing [for] advocacy and engaging with donors. [We] recently visited facilities to rehabilitate but then discovered others had already intervened” (key informant interview, Yemen, 06/06/2019). There is a “need to ensure accuracy” (key informant interview, Nigeria, 07/06/2019).

Data validation. This varies from country to country, with no single clear process. In Sudan and the Syrian Arab Republic, WHO employed focal points to “verify and validate the collected data in coordination with the ministry of health HeRAMS focal points”. WHO terms of reference, Syrian Arab Republic, 13/06/2019.

This seems to be the most rigorous of methodologies. Across the remaining countries, validation occurs through irregular supervisory visits, subject to security access and resources.

Timeliness of data updates. In some contexts, time intervals between updates also proved a significant challenge.

“Partners complained in 2017 and 2018 as HeRAMS data was not available” (key informant interview, Central African Republic, 03/06/2019).

Other challenges identified related to reliance on data contributors other than knowledgeable public health experts, high staff turnover, and insufficiently resourced information management teams.

3.4.3 Enablers

Coverage. Ad hoc or complementary assessments were implemented to increase data coverage (for example, to capture the private sector).

“In areas where the public sector was found to have been strongly impacted through regular HeRAMS reporting, complementary assessments of services available through the private sector were led” (key informant interview, Syrian Arab Republic, 12/06/2019).
Findings

**Accuracy.** Implementation of data validation and verification mechanisms was found to improve accuracy.

“The health information system team have focal points to follow up with the Ministry of Health and other health partners to check data before sending it to the country office ... Ministry of Health staff are not qualified enough to give this information. They need a third party to supervise and ensure data quality” (key informant interview, Syrian Arab Republic (whole of Syria, 12/06/2019).

**Timeliness.** Decentralization, when achieved (for example, Sudan, Syrian Arab Republic and Yemen), has been found to significantly increase the timeliness of data updates, breaking the dependence on logistically challenging and costly field assessments (for example, Central African Republic and Nigeria). Timeliness of the analysis and information products is still largely dependent on strong information management capacity at country level or remote support.

“Analysis – should have a team to analyse the data; [information management officer] not sufficient, particularly if no medical background – at least health background to interpret data” (key informant interview, Sudan, 13/06/2019).

Where effective, the automation of descriptive analytics has proved highly efficient in increasing timeliness of information product generation and dissemination, allowing information management officers and public health experts to devote more time to the interpretation of findings.
3.5 Usability

Information products were found to be accessible, though inconsistently. There is currently no formal process for access to raw data, which increases reliance on personal connections and limits the ability to undertake further in-depth analysis. Data credibility was found to be good. Stakeholders had confidence in the information produced. In terms of actionability, information products were perceived as often too factual and descriptive. There is a need for greater interpretation and analytical narrative. The data and information products were used extensively and were considered a fundamental reference for the health sector.

The following questions on usability were investigated. What is:

- the degree of access to data and information products?
- the degree of perceived credibility and rigour of data and information products, including transparency on limitations?
- the degree of actionability of data?
- the degree of use of data and information products?

3.5.1 Key findings

Access. In terms of timeliness, analysis and information products were not always available at critical stages of the Humanitarian Programme Cycle (for example, phased with humanitarian needs overviews or humanitarian response plans) or during other key decision-making processes. The nature of information products, their frequency of availability, and dissemination channels were inconsistent. There is currently no formal process for access to raw data, which increases reliance on personal connections and limits the ability for further in-depth analysis about a particular area, facility or service.

"Credibility. Data were generally seen as credible" (key informant interview, Nigeria, 21/04/2019).

"HeRAMS report is the main report for me here. I use it for all the information I need. It is my main legitimate report"

(Key informant interview, Department of Health director, Syrian Arab Republic, 12/06/2019)
**The products are relevant. HeRAMS is the main source ... for all health sector data**

*Key informant interview, Central African Republic, 03/06/2019*

**Actionability.** Information products were generally perceived as being too descriptive and factual. Data need to be put in perspective, with greater contextual analysis and interpretation in order to increase uptake by decision-makers.

"HeRAMS would be more useful if it went a step further ... [currently it is] not providing enough analysis and recommendations in order to influence partners in addressing gaps. Data is just presented and it’s up to actors to take their own actions" (key informant interview, Nigeria, 07/06/2019).

**Use.** Information products were largely used at all stages of the Humanitarian Programme Cycle and recognized as a reliable and trusted reference.

"All health partners are interested by HeRAMS data that they use for fundraising. Donors [European Civil Protection and Humanitarian Aid Operations, Office of United States Foreign Disaster Assistance, etc.] are also users of the HeRAMS product. State ministries of health use HeRAMS data to advocate for their own internal planning and budgeting" (key informant interview, Nigeria, 21/04/2019).

### 3.5.2 Challenges

Challenges identified included the following:

- lack of analytical capacity: “Analysis – should have a team to analyse the data; [information management officer] not sufficient, particularly if no medical background – at least health background to interpret data” (key informant interview, Sudan, 13/06/2019);
- weakness of data interpretation due to lack of involvement of public health experts in analysis of findings;
- lack of data access or sharing protocols;
- lack of standardization of information products;
- reliance on data contributors other than knowledgeable public health experts;
- high staff turnover, insufficiently resourced information management teams.

### 3.5.3 Enablers

Enablers identified included the following:

- increased analytical capacity and improved analysis and reporting services (for example, automated reports, online dashboards) to alleviate the data analysis burden at country level;
- close involvement of public health experts in the interpretation of the results and their transformation into actionable recommendations.
3.6 Integration

Some level of integration was found in contexts where other health information system components existed (for example, EWARS, IDSR, DHIS or SARA).\(^{10}\)

However, in most contexts other health information system components were generally lacking. In these cases, HeRAMS was found to provide a useful foundation for the re-establishment of a more comprehensive health information system, particularly due to its ability to generate a master health facility list (see section 3.3 on effectiveness) and to support all other health information system components. Confusion on its role and contribution to the overall health information infrastructure with regard to other seemingly similar tools and processes (for example, health facility surveys such as SARA) was also highlighted. There is a strong need for clarification.

External evaluation score:

Low  
High

\(^{10}\) Early Warning Alert and Response System, Integrated Disease Surveillance and Response, District Health Information Software, and Service Availability and Readiness Assessment.

The following question on integration was investigated: To what extent is HeRAMS well integrated into the overall health information system architecture, and how well does it promote synergy and avoid gaps, unnecessary overlaps and detrimental resource conflicts?

3.6.1 Key findings

This evaluation found no evidence of actual integration of HeRAMS as a process in other health information systems. This is mostly due to the overall absence of other existing systems that required integration at the time of the evaluation. Previous focal points for the Ministry of Health who reported elsewhere were re-tasked to report on HeRAMS.

On some occasions, HeRAMS has demonstrated its ability to efficiently generate a master health facility list, thus playing a fundamental role in the overall health information system architecture. In contexts where there was little health information available (Syrian Arab Republic (Gaziantep hub) and Yemen), HeRAMS was considered the basis for information that other systems could build upon, while in others it has been used to address gaps (Central African Republic) or act as a cross-reference (Syrian Arab Republic).
Other [health information systems] have ‘died out’ because of the emergency, and HeRAMS gradually and successfully replaced previous disconnected reporting systems

Key informant interview, Syrian Arab Republic (Damascus), 15/04/2019

Confusion around the difference between and potential complementarity of HeRAMS and other approaches and tools, particularly health facility-based surveys such as SARA, remains high.

“Currently, the Central African Republic uses the SARA in stable areas and HeRAMS in affected areas. Some SARA questions were integrated into HeRAMS. Both products are worked out separately” Key informant interview, Central African Republic, 03/06/2019.

3.6.2 Challenges

Challenges identified included the following:

- lack of clarity on the role and contribution of HeRAMS with regard to other seemingly similar processes and tools that contribute to the overall health information system;
- lack of coordination – “There is no formal forum between system owners to understand where information could be shared, integrated or cross-verified” (key informant interview, Central African Republic, 03/06/2019).

3.6.3 Enablers

Enablers identified included the following:

- leveraging of HeRAMS as a master health facility list service, which proved key in gradually re-establishing other health information system components.
3.7 Sustainability

Sustainability varied across contexts. Data collection was found to be the most intense component from the resourcing perspective, followed to a lesser extent by data analysis and verification. On those aspects, the sustainability of the approach was found to be closely correlated with its implementation modalities, and more particularly the level of decentralization of the process. Sustainability was also found to be essentially dependent on external support, both financial and technical. Institutional sustainability was found to be high, with overall good buy-in from ministries of health.

The following question on sustainability was investigated: What is the extent to which the HeRAMS approach can be sustained in the long term when needed?

This includes:

- the degree of sustainability (financial and human resources versus needs);
- the degree of ownership by health authorities and engagement by local actors.

3.7.1 Key findings

The degree of sustainability of the HeRAMS approach was found to vary greatly from one context to another, and was closely related to the level of adherence to core principles, particularly for decentralization. Where decentralization was high, so was sustainability, as decentralization substantially reduced the resourcing required for data collection and, to some extent, data validation. Similarly, contexts where descriptive analysis and reporting had been at least partly automated were found to be more sustainable.

“The main challenges faced during data collection and reporting were accessibility and security, as well as continuous power cuts and disconnection of the network coverage in many governorates” (WHO, Syrian Arab Republic, 16/11/2019).

Technical and financial support, including for the supervision and incentivization of focal points, was still found to be mostly reliant on external sources, and may therefore constitute a weakness.

Institutional buy-in, and hence sustainability, is generally high. There is evidence in all countries of strong involvement of the ministry of health. In the Central African Republic, data collection is led jointly by WHO and the Ministry of Health. In Nigeria, Sudan, the Syrian Arab Republic and Yemen, the ministry of health owns the process and is only to varying degrees supported by WHO, mostly on coordination, data collection and analysis.

Longer-term visions of HeRAMS institutionalization and sustainability vary. In the Philippines, Sudan, the Syrian Arab Republic and Yemen, efforts are being made to mainstream the approach in the longer term to support not only emergencies but also preparedness, readiness, recovery and transition phases, as well as routine monitoring. Only the Syrian Arab Republic (Gaziantep hub) currently sees HeRAMS as an emergency-only process, though it is considering whether it should be integrated into the new district health information system.
3.7.2 Challenges

- **Lack of decentralization.** This was found to be the most substantial underlying cause of low sustainability of HeRAMS;
- **Data collection process.** This was still predominantly manual (a mix of paper and spreadsheet, with the information being transferred by phone or fax to a focal point to be entered into a database (Excel, Access), or directly at [www.herams.org](http://www.herams.org);
- **Dependence on external support.** There was some dependence on external funding and technical assistance for data collection and management (Central African Republic and Philippines) or for regular supervision and support of health authority counterparts (Nigeria, Sudan and Syrian Arab Republic). "If no funding is available, HeRAMS should be integrated into Ministry of Health regular reporting";
- **Incentivization.** Although health authorities have bought into HeRAMS, their ability to ensure that focal points collect and validate data regularly is constrained by other priorities. "It is not sustainable financially. If there was no WHO support or pressure it probably wouldn’t continue for more than a month" (key informant interview, Syrian Arab Republic (Damascus), 11/06/2019).

3.7.3 Enablers

Enablers identified included the following:

- extensive buy-in from health authorities;
- effective decentralization, which has proved to significantly reduce the resource requirements and hence increase sustainability, though technical and financial support is still needed to strengthen focal point networks and reporting;
- strong in-country information management team;
- communication: more could be done to increase HeRAMS advocacy and visibility. Across three countries (Nigeria, Syrian Arab Republic (Gaziantep hub) and Yemen), key informants stated that HeRAMS was not promoted enough. "Make it available – it should be a document that WHO should be proud of – not something that people should look for. People should see how vital it is. HeRAMS has not been marketed very well. Intra-collaboration is affected because people don’t know about it" (key informant interview, United Nations, Nigeria, 17/06/2019).
4. Conclusions and recommendations

HeRAMS has grown significantly since its inception in 2007. Considering the relatively low funding and institutionalization it has benefited from thus far, as well as the complexity of contexts it operates in, HeRAMS was found to be particularly effective. The evaluation demonstrated its critical importance in countries where it has been implemented and the fundamental role it can play in reinforcing broader health information systems. The evaluation also identified aspects that need improvement, including data quality and usability, and integration into broader health information systems. The proposed way forward combines recommendations applicable at country level where actual implementation takes place, and at regional and global levels where specific support services have already been efficiently centralized.

4.1 Conclusions on context and core principles

The evaluation investigated the specific context of each implementation, and more particularly the level of resourcing, in order to identify potential barriers and enablers. Overall, the evaluation found the level of resourcing to be low in comparison with the objectives assigned and the achievements measured. HeRAMS at country level is run with no dedicated staff and is only modestly supported financially, mostly through external donor funding. Despite the limited resources available in terms of both human resources and funding, the evaluation noted significant levels of achievement of the HeRAMS approach at country level.

In addition to the level of resourcing, the evaluation assessed the degree of adherence to HeRAMS core principles and found that six of the 10 core principles were generally well adhered to. These are the principles determining the intended coverage of the information targeted, its nature and unit of measurement (namely, the principles of exhaustiveness, service availability, impediments to service delivery, and granularity), and the principles underlying the importance of the approach as a driver for standards and collaboration across the health sector (namely, the principles of standardization and collaboration).

The remaining four principles were found to be only minimally adhered to. These are the principles describing the specificities of the HeRAMS process: its decentralized nature (decentralization, self-reporting and expert judgement), its objective of achieving near real-time monitoring of the situation (monitoring), and the imperatives of data validation and verification and of data openness and continuous dissemination, which are required to ensure higher data quality, usability and actionability. The relatively weak level of resourcing, as well as the failure to adhere to some of the core principles, particularly with regard to process, provided essential insights on the main enablers of and barriers to successful implementation.

4.2 Conclusions by criteria, with feedback from the validation workshop

4.2.1 Effectiveness

HeRAMS is perceived as efficiently meeting its objectives: supporting informed decision-making, standardization and collaboration across the health sector. It is largely recognized as a reference in proposals, sectoral and intersectoral assessments (for example, humanitarian needs overviews and humanitarian response plans), operations planning, and coordination of humanitarian interventions, and it contributes to the development and promotion of standards. Although there is limited evidence
indicating that it has improved intrasectoral and intersectoral collaboration, HeRAMS is generally perceived as essential to coordination, needs analysis and prioritization, and resource mobilization, and provides the health sector with a comparative advantage over other sectors.

4.2.2 Relevance

HeRAMS is perceived as highly relevant to all phases of the Humanitarian Programme Cycle (preparedness; coordination; needs analysis and prioritization; strategic planning; resource mobilization; implementation and response monitoring; operational peer review and evaluation; and recovery and transition. It is well recognized as important in supporting informed decision-making, aiding the production, promotion and use of standards across health sector actors, and reinforcing intrasectoral and intersectoral collaboration. Its relevance beyond emergency and humanitarian contexts was also documented, enlarging its potential scope of implementation.

4.2.3 Usability

The usability of HeRAMS data is generally perceived to be good. Information products are accessible, though products need to be standardized, and processes to share and access data and information need to be formalized. Data credibility is good, but information products are often perceived as too factual and descriptive. Despite the limitations, data and information products are extensively used and are considered a fundamental reference across the health sector.

4.2.4 Quality

HeRAMS data quality is perceived as good overall, particularly with regard to completeness. Limitations were however reported on coverage, timeliness and accuracy. Adherence to core principles was found to be key in ensuring data quality. Inconsistent data validation and verification mechanisms, and reliance on data collectors as opposed to the decentralization of responsibility to local public health experts, were found to hamper data accuracy. The lack of decentralization was also found to impact data timeliness. The approach was also found to be weak in capturing data from the private sector. Challenges have on occasion (for example in the Syrian Arab Republic) been mitigated by the implementation of complementary and targeted assessments.

4.2.5 Integration

HeRAMS integration in the overall health information system infrastructure was minor. Where other health information system components existed, synergies were found (for example in such areas as attacks against health care, EWARS, IDSR, DHIS or SARA), and no evidence of duplication was documented. In most cases, however, where no other components existed that required integration, HeRAMS was found to provide solid foundations for the re-establishment of health information systems, particularly through the master health facility list service. The lack of clarity between HeRAMS and other seemingly similar health information system components (such as SARA) was highlighted repeatedly and will need to be addressed.

4.2.6 Sustainability

The sustainability of the approach with regard to resources (that is, resources required versus resources available) was found to be variable and closely related to adherence to core principles. The level of decentralization of the process was found to particularly impact overall sustainability: the greater the decentralization, the greater the sustainability. More generally, reliance on external resourcing (financial and technical) was found to be high, posing a threat to overall sustainability, whereas strong institutional buy-in played in its favour.

4.3 Recommendations

Recommendations emerged both at country level, where actual implementation takes place, and at regional and global levels, where some of the critical support functions have been efficiently centralized to date, ensuring economies of scale and overall efficiency and sustainability of the HERAMS initiative.
4.3.1 Country level

At country level, recommendations can be grouped into four main areas:

1. adhere more closely to core principles, in particular:
   - focus on monitoring to improve data timeliness and actionability;
   - strengthen decentralization (including reliance on self-reporting and expert judgement) to reinforce overall effectiveness and sustainability;
   - implement data validation and verification mechanisms more systematically to increase data quality and usability;
   - improve data openness and reporting (including through the development of online dashboards and automated reports) to increase data uptake by decision-makers.

2. strengthen data analysis and interpretation to increase data actionability;

3. reinforce information management capacity;

4. strengthen communication, advocacy and fundraising.

4.3.2 Regional and global levels

At regional and global levels, recommendations can be grouped into seven main areas:

1. extend governance and develop partnerships, including:
   - create a steering committee to guide future developments;
   - develop specific partnerships to support further scale-up of the approach (in such areas as implementation and analysis);

2. reinforce regional and global capacity to support country-level implementation and clarify roles and responsibilities;

3. focus on country support and areas with potential for economies of scale, including centralized online services (for example, data collection and management, dashboarding and reporting services);

4. expand and reinforce the community of practice, including through development of training packages (for example, e-learning and user manuals), training, mentoring, dissemination of lesson learned, cross-country and cross-regional fertilization, and networking;

5. strengthen the normative and scientific base, including through development of:
   - technical guidance;
   - standard data models;
   - standard operating procedures;
   - data policy (for example, standard data-sharing agreements);
   - clear documentation of the articulation of HeRAMS in the broader health information system and its role beyond emergency and humanitarian contexts.

6. reinforce communications, advocacy and fundraising;

7. formulate a multiyear strategy and implementation roadmap.
5. Way forward

In addition to maintaining and reinforcing ongoing activities, particularly around the development of central services and support to country implementation, the following suggestions emerged from the present study:

1. a series of presentations be conducted (and related material developed) on the findings of the evaluation to sensitize regional and country offices;

2. further evaluation be conducted to refine the collective understanding of limitations and gaps to be addressed, including a more objective evaluation of data quality through external verification;

3. a multistakeholder workshop be conducted to define a multiyear strategy and roadmap for the HeRAMS initiative.
ANNEXES
Annex 1. HeRAMS Core Principles

Exhaustiveness
- All Modalities of Service Delivery (MoSD) are monitored including regular Hospitals, Primary Care Centres as well as emergency specific modalities (e.g. Mobile Clinics, Field Hospitals)
- All health service providers are monitored by HeRAMS (e.g. faith based, Nongovernmental organizations, private, public, etc.)
- All affected areas and Points of Service Delivery (PoSD) are covered

Granularity
- The process uses MoSD as the unit of analysis (i.e. data is captured/recorded per Modality of Service Delivery, e.g. per hospitals, health centre, mobile clinic, field hospital, etc.)
- MoSD are linked (or mapped) to Points of Service Delivery (PoSD) (i.e. each facility, mobile clinic is linked to a geographical location such as settlements (towns, villages, etc.) or camps (internally displaced persons/Refugees), etc. when applicable

Impediments to Service Delivery
- HeRAMS systematically assesses the causes of damage to infrastructure (e.g. natural disaster, etc.)
- HeRAMS systematically assesses the causes of dysfunctionality (e.g. lack of staff, lack of medical supplies, lack of finances to operate the health facility, damages, etc.)
- HeRAMS systematically assesses the causes of lack of accessibility (e.g. security, physical barriers, low financial power, etc.)
- HeRAMS systematically assesses the impediments to service delivery (e.g. Lack of staff, Lack of training of staff, etc.)

Monitoring
- Key Informants have the responsibility and capacity to report autonomously and asynchronously whenever significant changes occur
- Key Informants report autonomously and asynchronously whenever significant changes occur
- Updates are frequent enough to efficiently support decision-making

Service Availability
- HeRAMS focuses primarily on monitoring Health Service Availability (vs. quality or use/utilization, etc.)
- Signal functions/requirements/tracers (e.g. drugs, equipment, skills that are essential for the delivery of a given service) are integrated in the service definition (e.g. the definition of Basic Emergency Obstetric Care used to measure availability includes: parenteral antibiotics, oxytocic/anticonvulsant drugs, etc.)

Decentralization / Self-reporting / Expert judgment
- Data management responsibility (data editing, maintenance and quality) is decentralized to service providers (ministry of health, nongovernmental organizations, etc.)
- Key Informants operate outside of MoSD (e.g. district health officers) and report on more than one MoSD (within their area of responsibility)
- Key Informants are knowledgeable public health experts (rather than trained data collectors)
- Key Informants have a supervisory role on the MoSD for which they report
- Key Informants know most of the information to be reported without needing to physically visit/assess MoSDs
- Key Informants have the responsibility and capacity to report autonomously and regularly as agreed by the HeRAMS coordination team (e.g. monthly, bi-yearly)
- Key Informants report autonomously and regularly as agreed by the HeRAMS coordination team (e.g. monthly, bi-yearly)

1 MoSD refers to all modalities used to deliver health services to affected communities, from traditional health facilities to emergency specific modalities such as mobile clinics, field hospitals or rapid response teams.
2 PoSD refers to the physical/geographical location at which health services are delivered (e.g. populated places such as towns, villages or IDP/Refugee camps when applicable.
Annex 1: HeRAMS Core Principles

**Collaboration**
- The HeRAMS process is formally coordinated (existence of an individual, group or sub-group in charge of coordinating HeRAMS)
- The process is inclusive of all service providers (e.g. government health authority/ Ministry of Health, Nongovernmental organizations, etc.)
- The process invites inputs from service providers, data contributors and other health sector stakeholders at all stages (design, data collection/management, analysis, etc.)

**Data Validation / Verification**
- Informal peer to peer validation/verification is encouraged (e.g. during health sector meetings or joint analysis exercises)
- Opportunistic data validation/verification is conducted when possible (e.g. during field/supervisory visits)
- Mechanisms of systematic data validation/verification are in place
- National or crisis level aggregates (indicators) are publicly available at all times (e.g. through automated dashboards/reports)

**Standardization**
- The process builds on existing/agreed upon geographical standards (e.g. Common Operational Datasets)
- The process builds on existing global and national public health standards (MoSD classification (i.e., health facility types), service package definitions, etc.)
- The process fosters standardization of reporting and service delivery practice across health sector actors
- The data produced by HeRAMS generates the authoritative Master Health Facility List

**Data Openness / Continuous dissemination**
- National or crisis level aggregates (indicators) are publicly available at all times (e.g. through automated dashboards/reports)
- Subnational level aggregates (indicators) are available to all data contributors (at least) at all times (e.g. through automated dashboards/reports)
- The Master Health Facility List sets the standard and is available at any point in time to all interested stakeholders as a service (in the form of a sharable dataset or web service, API)
- Data owners/contributors can access their data autonomously and at all times
- Access to subnational level aggregates can be requested to and granted by the coordination team at all times
- Access to individual MoSD data (i.e. health facility) data can be requested to and granted by data owners at all times
Annex 2. Evaluation Methodology

By Operations Partnership (OP) - December 2018

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1. Executive Summary

OP has been selected to conduct the evaluation of the HeRAMS. The purpose of the evaluation is learning, and evaluating evidence of outcome level change, and possible impact level change.

OP: Founded in January 2016 the Operations Partnership Ltd (Reg: 9935254) is a UK based international consultancy business that provides experts and consulting services for the development and humanitarian sector in Organizational Development, Organizational Resilience, Operations Management and Emergency/Humanitarian Response. We have a particular focus on providing support and advice for development and humanitarian organizations to help them develop organizational strategy and support them in making their business functions as efficient and effective as possible to ensure timely delivery of services.

OP has proposed to take the following approach to deliver the evaluation:

1. Inception (Design, Secondary Data Review)
2. Data collection and analysis (Country reviews through Key informant interviews, literature Review and online survey)
3. Final evaluation report
4. Presentation of findings
5. Development of road map

2. Purpose and Objectives of the Evaluation

This evaluation will address questions on HeRAMS effectiveness, relevance, usability, quality (credibility and accuracy of the data), integration and sustainability. Further to that the evaluation will also help define what a HeRAMS Country model is in term of operational modalities (e.g., structure, finance, etc.)

More specifically, working in close collaboration with the WHO HeRAMS Team the evaluation will address the following objectives:

1. To evaluate the performance of HeRAMS with regards to HeRAMS objectives to date (based upon relevant OECD/DAC criteria and discussions with the steering group)
2. To provide strategic recommendations and a road map for the adaptation and further roll out/implementation of HeRAMS (based upon interviews and evaluation findings)

3. Methodology

3.1. Overall Approach

OP intend to conduct an evaluation, which provides “a systematic and impartial examination of humanitarian action intended to draw lessons to improve policy and practice and enhance accountability” (ALNAP EHA Guide, 2005). It will include comprehensive technical assessment of the HeRAMS, with the intention of providing analysis to inform change and development where necessary, as well as demonstrate transparency and accountability to stakeholders.

OPs key principles during independent evaluations are objectivity and data quality. These principles will underpin this evaluation to produce analysis and make recommendations that are sufficiently valid and reliable based on robust data collection and analysis. The evaluation process will be guided by the analysis matrix. Qualitative and quantitative information will be gathered using multiple data collection techniques.

3.2. Data Collection Methods, Tools and Sampling

The evaluation will apply mixed research methods, using secondary and primary data collection and including both quantitative and qualitative data, with an emphasis on data triangulation and verification.

6 countries were selected for the evaluation: Syria, Yemen, Nigeria, Sudan, Central African Republic and the Philippines.

3.2.1. Secondary data review (SDR)

A secondary data review will review internal WHO and partners documents related to the HeRAMS, including project proposal/plans and budgets, needs assessment reports, baseline, data as well as relevant external secondary information. The proposed analytical framework will guide the SDR and will help identify information gaps. The SDR process will ongoing during the data collection phase, as it is foreseen that country level relevant documentation will be accessed incrementally.

3.2.2. Primary data collection

Primary data will be collected through two means: Key Informants Interview and an online survey.

3.2.2.1. In-depth interviews with key informants

Syria, Yemen, Nigeria, Sudan, Central African Republic and Philippines were selected for the review. The team will conduct in-depth interviews with selected Key Informants (KIs). These will primarily be conducted remotely using a pre-set interview guide with pre-defined close and open-ended questions.

Key informants will be selected based on their involvement with the HeRAMS as well as their role within the humanitarian response at country level.

Respondents will be selected using a purposive sampling approach to ensure a diversity of respondents from various organisations are selected and maximise response rate by interviewing only respondents who interact with or are engaged in the HeRAMS approach. A few questions will not be asked to all key informants. For example, a few specialized key informants only are necessary to measure effectiveness as well as understanding the HeRAMS country operational model. A total of 100 key informants across the 6 countries is foreseen to be conducted. HeRAMS focal points in country will help in establishing the list of all HeRAMS stakeholders, from which 20 potential key informants to interview will be selected.

3.2.2.2. Online survey

Using the list of all HeRAMS stakeholders established in the previous step, the OP proposes to use an online survey tool (supported through surveymonkey or equivalent) in order to reach a large number of HeRAMS users and focus on issues related to relevance, usage, quality and sustainability.

A number of roughly 240 informants will be targeted in the 6 selected countries, however the response rate is largely dependent on the good will of respondents to answer the survey.

3.2.2.3. Sampling size

The table below details the total number of interviews planned for the evaluation.

<table>
<thead>
<tr>
<th>Online Surveys</th>
<th>Phone Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>240</td>
<td>90</td>
</tr>
</tbody>
</table>

KIs will be selected based on their relationship with the HeRAMS.

3 categories: Implementers, Contributors and Users. KIs will also be categorized based on the agency of affiliation (Donors, Ministry of Health, Health Actors, UN Coordination, WHO Staff)
3.2.2.4. Data collection tools

As mentioned above the main means of data collection tools will be through Key Informant Interviews (KIIs) and an online survey. The inception has defined 3 types of key informants, 1 Implementers, 2 Contributors and 3 Users, therefore 3 different key informants questionnaires with mostly open ended questions will be developed as to fit the roles of each of the key informants categories.

The online survey will be designed with a quantitative perspective with most questions designed as likert questions.

3.3. Data Collection and analysis process

Qualitative data from KIIs (main challenges and enablers, lessons learnt and recommendations, etc.) will be managed in the Data Entry and Exploration Platform and organized by criteria and topic, as per the proposed analysis framework. The first step will be to reduce data. From each question set, a list of themes (coding system established following inductive and deductive method) will be extracted and ranked based on frequency and importance and exported into an analysis matrix/grid. Then key themes and patterns will be explored. Data will be cross-referenced and verified as to summarize the factors that contributed the most to success or good performance, main obstacles that impeded achievements, lessons learnt and recommendations. Alternative explanations will be explored as to reduce impact of cognitive biases (selection and processing notably). Key findings will then be reported in the corresponding draft report section. Quotations, stories and best practices will also be tagged for use in the final report.

Results from the online survey will then be merged in the corresponding section of the draft report, as per the analysis framework. Comparison and triangulation between sources and methods will allow to evaluate similarities and differences, areas of agreement or inconsistencies. Intermediary conclusions will be derived for each criterion and topics and discussed with OP team members, notably the interviewers, to check if no inconsistency was introduced or need to be further explored. Final conclusions and messages will then be drafted and revised by the OP team members to ensure agreement and consensus.

3.4. Methodological Challenges

The main challenges are as follows:

- Ensure timely, detailed and comprehensive feedback from Steering group
- Ensuring timely availability and scheduling of stakeholders for interviews
- Accessing comprehensive, updated and well-structured contact lists of HeRAMS stakeholders at country level

3.5. Structure of the Final Evaluation Report

The report is proposed to be organized in sections as shown below:

1. Executive Summary (including main findings and recommendations based on each evaluation output)

2. Introduction and Background

   2.1 Context
   2.2 Analysis framework
   2.3 Methodology and limitations

3. Findings (effectiveness, relevance, usage, quality, connectedness, sustainability)

4. Conclusions

5. Recommendations, with sub-sections for each area of focus

6. Annexes

   6.1 Analysis Framework
   6.2 Data
   6.3 Interviewees and other information sources consulted
   6.4 ToR and evaluation questions to be answered
Annex 3.
HeRAMS Evaluation – Analytical Matrix

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata</td>
<td></td>
<td>Relationship to HeRAMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Implementer (involved in design, coordination of resources, fundraising and supervision);                                                                                                   ● Contributor (involved in data collection, management, verification);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Users (can be analyzer (involved in data analysis and interpretation of the data, joint analysis sessions, workshops) or involved in report writing, dissemination and publication or user of the data and results for strategy and programming).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of times HeRAMS was implemented during interviewee’s professional experience</td>
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<td></td>
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<td></td>
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<tr>
<td>Criteria</td>
<td>Indicators</td>
<td>Details</td>
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<tr>
<td></td>
<td></td>
<td>Key Informant Interviews</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPEC</td>
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<tr>
<td>Country</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Organisation</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

SPEC - Specialized
GEN - General
### Criteria | Indicators | Details | Key Informant Interviews | Online survey | SDR
--- | --- | --- | --- | --- | ---
Effectiveness
| 01.1 | structure, human and financial resources used to roll out and maintain HeRAMS at country level were perceived to be adequate and efficient. | • Summary matrix to compare structure and resources used for HeRAMS across implementations;  
• Structure required to implement and maintain HeRAMS in country depending on context, scale and type of disaster;  
• Financial resources required to implement and maintain HeRAMS in country depending on context, scale and type of disaster. | X | | X |
| 01.2 | Extent to which the HeRAMS implementations reviewed adhere to HeRAMS core principles. | Degree of achievement of the 3 key objectives:  
• Contribute to informed decision-making in all phases of the health sector response;  
• Promote standardization across the health sector response from resource and policy point of view;  
• Contribute to improved intra and intersectorial collaboration. | | | X |
| 01.3 | Extent to which the HeRAMS implementations reviewed meet the HeRAMS objectives. | Distinction will be made between expected results/targets and real results/achievement. | | | |

SPEC - Specialized  
GEN - General
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Details</th>
<th>Key Informant Interviews</th>
<th>Online survey</th>
<th>SDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.1 Extent to which informants find the HeRAMS objectives and outputs suited to the needs (in terms of information management, standardisation, and coordination) and priorities of the context in which it is implemented.</td>
<td>Degree of relevance of the HeRAMS objectives across the different implementations</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Degree of relevance of the outputs across the 8 phases of the Humanitarian Programme Cycle</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>1. Preparedness (e.g. elaboration and maintenance of the standard Master Health Facility List)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Coordination (e.g. standardization of essential health resources, services and service package definitions across health sector actors, reinforcement of collaboration across health sector actors)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Needs Analysis / Prioritization (e.g. identification of gaps in essential health resources and services availability, Identification of the main impediments to service delivery and selection of appropriate response options)</td>
<td></td>
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<tr>
<td></td>
<td>4. Strategic Planning (e.g. elaboration of a commonly agreed upon picture of the situation across health sector actors, Design, planning and implementation of adequate and efficient health sector response at strategic and operational levels)</td>
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<tr>
<td></td>
<td>5. Resource Mobilization (e.g. streamlining of communication, advocacy and resource mobilization efforts across the health sector)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>6. Implementation &amp; response monitoring (e.g. monitoring gaps overtime and the health sector response)</td>
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</tr>
<tr>
<td></td>
<td>7. Operational Peer Review &amp; Evaluation (e.g. evaluation of the health sector response)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Recovery / Transition (e.g. support to decision making for transition and recovery, support national authority in planning and managing health systems)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For each of the categories above:</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Main challenges and enablers;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Main lessons learned/recommendations;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Evidence of relevance (example or documentation that interviewees can share).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SPEC - Specialized
GEN - General
### Annex 3: HeRAMS Evaluation – Analytical Matrix

#### Criteria | Indicators | Details | Key Informant | Online survey | SDR
--- | --- | --- | --- | --- | ---
Usage | 03.1 Extent to which the HeRAMS is easy to use (for people managing it, providing inputs, and using its outputs) and is acted upon. | Degree of usability of processes and tools to collect, process, and disseminate data | Degree of access and usage of actionable information from HeRAMS data/findings in the 8 HPC phases: | | 
  1. Preparedness (e.g. elaboration and maintenance of the standard Master Health Facility List (MHFL))  
  2. Coordination (e.g. standardization of essential health resources, services and service package definitions across health sector actors, reinforcement of collaboration across health sector actors)  
  3. Needs Analysis / Prioritization (e.g. identification of gaps in essential health resources and services availability, Identification of the main impediments to service delivery and selection of appropriate response options)  
  4. Strategic Planning (e.g. elaboration of a commonly agreed upon picture of the situation across health sector actors, Design, planning and implementation of adequate and efficient health sector response at strategic and operational levels)  
  5. Resource Mobilization (e.g. streamlining of communication, advocacy and resource mobilization efforts across the health sector)  
  6. Implementation & Monitoring (e.g. monitoring of the health sector response)  
  7. Operational Peer Review & Evaluation (e.g. evaluation of the health sector response)  
  8. Recovery / Transition (e.g. support to decision making for transition and recovery) | | | X | X | 

For each of the categories above:  
- Main challenges and enablers;  
- Main lessons learned/recommendations;  
- Evidence of use (example or documentation that interviewees can share). | | | | X | 

SPEC - Specialized  
GEN - General
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Details</th>
<th>Key Informant Interviews</th>
<th>Online survey</th>
<th>SDR</th>
</tr>
</thead>
</table>
| **Quality** | 04.1 Extent to which the HeRAMS data management processes, tools, and analysis products are considered of sufficient/good enough quality. | - Degree of perceived quality (completeness, timeliness, validation) of the collected data;  
- Degree of perceived credibility and rigor of HeRAMS data analysis, and transparency on the limitations of findings. | X | X | |
| For each of the categories above: | | - Main challenges and enablers;  
- Main lessons learned/recommendations;  
- Evidence of sufficiency/quality of data (example or documentation that interviewees can share). | | | X |
| **Integration** | 05.1 Extent to which the HeRAMS implementations reviewed are well integrated into the overall health information system architecture, promote synergy, avoid gaps and unnecessary overlaps as well as detrimental resource conflicts. | Degree of connectedness between HeRAMS and in country HIS:  
1. Existence of other HIS in country  
2. Coherence/complementarity between systems (Granularity and type of data)  
3. Communication/links between HeRAMS and in country HIS  
4. Perception of duplication or resource conflict between HeRAMS and other in country HIS | | X | |
| For each of the categories above: | | - Main challenges and enablers;  
- Main lessons learned/recommendations;  
- Evidence of sufficiency/quality of data (example or documentation that interviewees can share). | | | X |
| **Sustainability** | 06.1 The extent to which the HeRAMS approach can be sustained in the longer term when needed (financial / human resources, etc.). | - Degree of sustainability of the approach (funding availability and engagement/ownership by local actors);  
- Degree of integration/ownership of HeRAMS within health authority systems  
  - Level of integration within MoH  
  - Degree of ownership by Ministry of Health | X | X | |
| For each of the categories above: | | - Main challenges and enablers;  
- Main lessons learned/recommendations;  
- Evidence of integration/ownership. | | | X |

SPEC - Specialized  
GEN - General
## Annex 4. Key Informants List

<table>
<thead>
<tr>
<th>#</th>
<th>Position</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Information Team Lead</td>
<td>Yemen</td>
</tr>
<tr>
<td>2</td>
<td>Incident Manager</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Health Cluster Coordinator</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Data Manager</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>HeRAMS Team Leader – Yemen</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Health Emergency Officer</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Health Cluster Coordinator</td>
<td>Sudan</td>
</tr>
<tr>
<td>8</td>
<td>Ministry of Health HeRAMS team lead</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Sub-national Coordinator / Darfur</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Information Team Lead</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Information Team Lead</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Health Cluster Coordinator</td>
<td>Syrian Arab Republic</td>
</tr>
<tr>
<td>13</td>
<td>ex - National Emergency Coordinator</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>ex - Incident Manager</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>GIS Officer</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Database / Web-based developer</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Information Management</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Incident manager / Health Cluster Coordinator</td>
<td>Central African Republic</td>
</tr>
<tr>
<td>19</td>
<td>Information Manager</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Data Manager</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Incident Manager</td>
<td>North-east Nigeria</td>
</tr>
<tr>
<td>22</td>
<td>Health Cluster Coordinator</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Information Manager</td>
<td>Philippines</td>
</tr>
<tr>
<td>24</td>
<td>Incident Manager</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Technical Staff, WHE</td>
<td>Philippines</td>
</tr>
<tr>
<td>26</td>
<td>Regional Focal Point</td>
<td>Yemen</td>
</tr>
<tr>
<td>27</td>
<td>Health Cluster Coordinator</td>
<td>Philippines</td>
</tr>
<tr>
<td>28</td>
<td>Information Manager</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Health Systems Advisor</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Information Management Officer</td>
<td>Syrian Arab Republic</td>
</tr>
<tr>
<td>31</td>
<td>Health Cluster Coordinator</td>
<td></td>
</tr>
</tbody>
</table>
Annex 5. Evaluation instruments

Online Survey – HeRAMS Application of Key principles

Introduction and questionnaire guidance

1. Please indicate the country in which HeRAMS is being implemented and this questionnaire will refer to.

2. How well does HeRAMS achieve an **exhaustive** coverage? Answers include scores from 1 (not at all achieved to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

   - All Modalities of Service Delivery (MoSD) are monitored including regular Hospitals, Primary Care Centres as well as emergency specific modalities (e.g. Mobile Clinics, Field Hospitals)

   - All health service providers (e.g. faith based, Nongovernmental organizations, private, public, etc.) are monitored by HeRAMS

   - All affected areas and Points of Service Delivery (PoSD) (i.e. no sampling) are covered by HeRAMS

   What are the main challenges/enabling factors that impede or help in ensuring HeRAMS exhaustiveness (open text)?

   What are the main recommendations or lessons learnt for ensuring HeRAMS exhaustiveness (open text)?

3. How well does HeRAMS achieve to **monitor** changes in the situation? Answers include scores from 1 (not at all achieved to 5 (fully achieved) or "Not part of the initial objectives" and "Do not know". The statements are:

   - Key Informants have the responsibility and capacity to report autonomously and regularly as agreed by the HeRAMS coordination team (e.g. monthly, bi-yearly)

   - Key Informants report autonomously and regularly as agreed by the HeRAMS coordination team (e.g. monthly, bi-yearly)

   - Key Informants have the responsibility and capacity to report autonomously and asynchronously (outside of pre-defined reporting cycles) whenever significant changes occur (the process and platform allow for autonomous and asynchronous reporting)

   - Key Informants report autonomously and asynchronously whenever significant changes occur

   - Updates are frequent enough that the data produced efficiently supports decision-making
What are the main challenges/enabling factors that impede or help in ensuring HeRAMS near-real time monitoring?

What are the main recommendations or lessons learnt for ensuring HeRAMS near-real time monitoring?

4. How well HeRAMS achieves to adheres to/promotes the use of Modalities of Service Delivery (MoSD) and Points of Service Delivery (PoSD)? Answers include scores from 1 (not at all achieved to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

- The process uses MoSD as the unit of analysis (i.e. data is captured/recorded per Modality of Service Delivery, e.g. per hospitals, health centre, mobile clinic, field hospital, etc.)
- MoSD are linked (or mapped) to Points of Service Delivery (PoSD), (i.e. each facility, mobile clinic is linked to a geographical location such as settlements (towns, villages, etc.) or camps (IDPs/Refugees), etc. when applicable)

What are the main challenges/enabling factors that impede or help in ensuring HeRAMS promotes and uses MoSD and PoSD standards?

What are the main recommendations or lessons learnt for ensuring HeRAMS promotes and uses MoSD and PoSD standards?

5. How well HeRAMS achieves to monitor Service Availability? Answers include scores from 1 (not at all achieved to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

- The HeRAMS approach focuses primarily on monitoring Health Service Availability (vs. quality or use/utilization, etc.)
- Signal functions/ requirements / tracers (e.g. drugs, equipment, skills that are essential for the delivery of a given service) are integrated in the service definition (e.g. the definition of Basic Emergency Obstetric Care used to measure availability includes: parenteral antibiotics, oxytocic/anticonvulsant drugs, etc.)

What are the main challenges/enabling factors that impede or help in ensuring HeRAMS monitor Health service availability?

What are the main recommendations or lessons learnt for ensuring HeRAMS monitoring or health service availability?
6. How well HeRAMS achieves to monitor **Impediments to Health Service Delivery**? *Answers include scores from 1 (not at all achieved to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

- HeRAMS systematically assesses the causes of damage to infrastructure (e.g. natural disaster, etc.)
- HeRAMS systematically assesses the causes of dysfunctionality (e.g. lack of staff, lack of medical supplies, lack of finances to operate the health facility, damages, etc.)
- HeRAMS systematically assesses the causes of lack of accessibility (e.g. security, physical barriers, low financial power, etc.)
- HeRAMS systematically assesses the impediments to service delivery (e.g. Lack of staff, Lack of training of staff, etc.)

What are the main challenges/enabling factors that impede or help in ensuring HeRAMS promotes and uses MoSD and PoSD standards?

What are the main recommendations or lessons learnt for ensuring HeRAMS promotes and uses MoSD and PoSD standards?

7. How well HeRAMS achieves to be based on **Self-Reporting / Expert Judgement**? *Answers include scores from 1 (not at all achieved to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

- Data management responsibility (data editing, maintenance and quality) is decentralized to service providers (Ministry of Health, Nongovernmental organizations, etc.)
- **Key Informants are knowledgeable public health experts (rather than trained data collectors)**
- **Key Informants have a supervisory role on the MoSD for which they report**
- **Key Informants operate outside of MoSD (e.g. district health officers) and report on more than one MoSD (within their area of responsibility)**
- **Key Informants know most of the information to be reported without needing to physically visit/assess MoSDs**

What are the main challenges/enabling factors that impede or help in ensuring HeRAMS is based on Self-Reporting / Expert Judgement?

What are the main recommendations or lessons learnt for ensuring HeRAMS is based on Self-Reporting / Expert Judgement?
8. How well HeRAMS achieves to ensure **DATA VALIDATION / VERIFICATION**? Answers include scores from 1 (not at all achieved) to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

- Informal peer to peer validation/verification is encouraged (e.g. during health sector meetings or joint analysis exercises, discussions of findings allow to confront submissions from various key informants/Service Providers to the review of other health sector stakeholders)
- Opportunistic data validation/verification is led, for example during field/supervisory visits
- Mechanisms of systematic data validation/verification are in place

What are the main challenges/enabling factors that impede or help in ensuring HeRAMS data validation/verification?

What are the main recommendations or lessons learnt for ensuring HeRAMS data validation/verification?

9. How well HeRAMS achieves to be a **COLLABORATIVE process**? Answers include scores from 1 (not at all achieved) to 5 (fully achieved), "Not part of the initial objectives" and "Do not know". The statements are:

- The HeRAMS process is formally coordinated (existence of an individual, group or sub-group in charge of coordinating HeRAMS)
- The process is inclusive of all service providers, e.g. government health authority/Ministry of Health, Nongovernmental organizations, etc.
- The process invites inputs from service providers, data contributors and other health sector stakeholders at all stages (design, data collection/management, analysis, etc.)

What are the main challenges/enabling factors that impede or help in ensuring collaboration around HeRAMS?

What are the main recommendations or lessons learnt for ensuring collaboration around HeRAMS?
10. How well HeRAMS achieves to support **STANDARDISATION** in the health sector? Answers include scores from 1 (not at all achieved) to 5 (fully achieved), ”Not part of the initial objectives” and ”Do not know”. The statements are:

- The process builds on or contribute to existing/agreed upon geographical standards (e.g. CODs)
- The process (and the data generated) are recognized as the authoritative Master Health Facility List
- The process builds on existing global and national public health standards (MoSD classification (i.e., health facility types), service package definitions, etc.)
- The process fosters standardization of reporting and service delivery practice across health sector actors

What are the main challenges/enabling factors that impede or help in ensuring standardisation around HeRAMS?

What are the main recommendations or lessons learnt for ensuring standardisation around HeRAMS?

11. How well HeRAMS achieves to have **EASY to ACCESS data**? Answers include scores from 1 (not at all achieved) to 5 (fully achieved), ”Not part of the initial objectives” and ”Do not know”. The statements are:

- National or crisis level aggregates (indicators) are publicly available at all times (e.g. through automated dashboards/reports)
- Subnational level aggregates (indicators) are available to all data contributors (at least) at all times (e.g. through automated dashboards/reports)
- The Master Health Facility List (list of health facilities) sets the standard and is available at any point in time to all interested stakeholders as a service (in the form of a sharable dataset or web service, API)
- Data owners/contributors can access their data autonomously and at all times
- Access to subnational level aggregates can be requested to and granted by the coordination team at all times
- Access to individual MoSD data (i.e. health facility) data can be requested to and granted by data owners at all times

What are the main challenges/enabling factors that impede or help in ensuring easy access to HeRAMS data and products?

What are the main recommendations or lessons learnt for ensuring easy access to HeRAMS data and products?

---

3 Common Operational data sets (CODs) are datasets used in humanitarian emergencies to support technical standards, improve the quality of data, and strengthen interoperability. They represent the best-available datasets on a range of basic subjects such as Administrative boundaries, Populated settlements, towns, cities, Population statistics, etc.
12. Our final question is about the main challenges you face in your country (or in the country considered for the interview) to sustain HeRAMS implementation at acceptable or satisfactory level. Please note the change in the scoring system before answering. Answers include "Strongly Agree", "Agree", "Partially agree", "Disagree", "Strongly disagree" and "Do not know".

- The lack of financial/material resources is a critical challenge to ensure a good enough HeRAMS
- The lack of data contributors is a critical challenge to ensure a good enough HeRAMS
- The lack of data management skills is a critical challenge to ensure a good enough HeRAMS
- The lack of data analysis is a critical challenge to ensure a good enough HeRAMS
- The lack of coordination is a critical challenge to ensure a good enough HeRAMS
- The lack of ownership and governance is a critical challenge to ensure a good enough HeRAMS

13. Is there any other challenges you would like to report which are not included in the above list? Leave blank if you have no further suggestions.

This is the end of the survey. Thanks for your participation, we will be in touch shortly for a more in depth interview.
Key informant Interview Template – HeRAMS

Introduction and questionnaire guidance

Hello, how are you? Let me introduce myself: I am _____________ from the Operations Partnership and I am responsible for collecting information about HeRAMS in your country. The objective of the evaluation is to evaluate the performance of HeRAMS with regards to its objectives and to provide strategic recommendations and a road map for the adaptation and further roll out/implementation of HeRAMS.

Your participation is voluntary, and you have the right to leave the interview at any time. Your decision to participate or not in the interview will not affect your status an employee or partner.

We are interested in the different points of view and your feedback is very valuable to us. There are no right or wrong answers as everyone’s views are important. There is no need to prepare in advance and please feel free to stop us at any time to clarify or add further comments. You can also decline to answer a question.

In the information provided to WHO, including the report, answers will be anonymized and cannot be identified or linked to any of the persons that have participated in this process.

Before we proceed can you please confirm that

● Your participation is voluntary?
● Do you have any questions before we start the discussion?
● Are you happy for your name to be mentioned in the report as an interviewee?

The questions are semi-structured and are intended to guide our discussion. The interview will take roughly 1-1.5 hour.

Guidance for interviewer: Not all the questions will be relevant to a specific KII try to cover all the information gaps that exist in the research, whenever possible obtain examples and evidence.

In the use ask question about what is being done about HeRAMS communication and advocacy
For data managers: Ask something about guidance they received from HQ or Regional office or what it only local customized solutions.

What kind of support they would want form region and HQ, or guidance.
1. Interview Information

Interviewer Name: 
Date of interview: 
Starting time:     Ending time:

1.1 Respondent Information

Name of the interviewee: 
Exact position of the interviewee: 
In which country are/were you based at the time of your involvement with HeRAMS?

1.2 Only key informant 1 / 3 / 4 Respondents

What type of organisation do you work for? 
What type of office are you working in? 
How many years have you worked in the humanitarian or health sector? 
How would you describe you level of familiarity with the HeRAMS approach, methodology and Outputs?

- Never heard about it [ ]
- Not very familiar [ ]
- Familiar [ ]

How long have you been participating in the HeRAMS process in your current country of operation?

2. Key informant Group 1 – Data Contributor

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Key Questions / Probing Questions</th>
<th>Answers</th>
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</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td>Tell me a bit about your role in relation to HeRAMS</td>
<td></td>
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<tr>
<td><strong>Usage</strong></td>
<td>How does the data collection process work? Are you the only person in your organisation who inputs data in HeRAMS?</td>
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<td></td>
<td>How often do you collect/update the data?</td>
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<td>How much time does it take you?</td>
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<tr>
<td><strong>Sustainability</strong></td>
<td>Do you always have time to provide input? If/when you don’t have time, is someone else responsible to input data in your place?</td>
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<tr>
<td><strong>Usage</strong></td>
<td>What tool/interface do you use?</td>
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<td></td>
<td>Since you’ve been involved in data collection, have the tools evolved? If yes, how so?</td>
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<td>Do you sometimes face any issues or challenges in collecting or updating the data?</td>
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<td>What are the things that motivates you to collect and update this data?</td>
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<td>In your experience how would you have organised the data collection differently, if at all?</td>
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<td></td>
<td>Lessons learned or recommendations for the future or for other countries collecting HeRAMS data?</td>
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<tr>
<td>Criteria</td>
<td>Key Questions / Probing Questions</td>
<td>Answers</td>
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<tr>
<td><strong>Integration</strong></td>
<td>Do you collect and input data in any other health information system? For which system?</td>
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<td>What kind of data do you input? Is there overlap or redundancy between the data you are requested to provide for HeRAMS and other Health Information System?</td>
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<td>What gaps or information needs (if any) are not being met by the different systems?</td>
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<td>Which of the HIS complement each other very well? What benefit does this provide you?</td>
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<td>What recommendations or lesson learnt do you have regarding how HeRAMS could better fit with other HIS? How could HeRAMS be improved to avoid duplication or fill the gaps left by other HIS?</td>
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<tr>
<td><strong>Sustainability</strong></td>
<td>Is providing data to HeRAMS acknowledged in the description of your role and responsibilities?</td>
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<tr>
<td><strong>Quality</strong></td>
<td>How were you chosen to input data in the HeRAMS? Did you receive any training?</td>
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<td>What training did you receive at the beginning and what refresher training have you received since?</td>
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<td></td>
<td>How often do you receive feedback about the data that you enter in HeRAMS?</td>
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<td></td>
<td>How are you assisted or supervised during your data entry?</td>
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<td>If you face an issue (technical, or else), who do you ask for support and help?</td>
<td>Answers should cover (peer2peer, opportunity check, systematic random check or other)</td>
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<td>How does the HeRAMS quality control and data validation process works?</td>
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<td>How often has your data been verified and when was the last time?</td>
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<td>What are the positive things about HeRAMS that ensure the quality of the data? Was there any issues?</td>
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<tr>
<td><strong>Relevance</strong></td>
<td>In your position, you see first-hand the challenges and most urgent issues affecting the health system in your community. Which (if any) of these challenges and issues are being addressed by the HeRAMS?</td>
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<td></td>
<td>Are there any issues with how the HeRAMS addresses these challenges? Do you have any recommendations to share with HeRAMS coordinators?</td>
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<td></td>
<td>How does collecting HeRAMS data help you and others on your everyday job?</td>
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<tr>
<td><strong>Sustainability</strong></td>
<td>What challenges or obstacles do you see in your ability to continue contributing data to HeRAMS in the future?</td>
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<td></td>
<td>What recommendations do you have to make the HeRAMS data collection more sustainable and maintain the level of quality of the data you contribute?</td>
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</table>
3. Key informant Group 2 – Implementers/Coordinators

"I'd like to start the interview with just getting a brief understanding of your role, and history and overview of HeRAMS in your country?"

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<thead>
<tr>
<th>Criteria</th>
<th>Key Questions / Probing Questions</th>
<th>Answers</th>
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</thead>
<tbody>
<tr>
<td>Effectiveness</td>
<td>What is/are your current role(s) in relation to HeRAMS?</td>
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<td></td>
<td>When did the HeRAMS approach start, what triggered its set up and how was it implemented in the country?</td>
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<td>What were/are the main challenges in terms of setting up the HeRAMS structure (team and resources)?</td>
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<td>What were/are factors that made setting up the HeRAMS structure a success?</td>
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<td>If you could have set things up differently what would you have done?</td>
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<td></td>
<td>How is HeRAMS structured today?</td>
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<td>How is it governed or coordinated?</td>
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<td>How is HeRAMS resourced (e.g. data collectors, funding, material)?</td>
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<td></td>
<td>How is HeRAMS financed and by whom?</td>
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<td></td>
<td>What is overall annual budget available for the HeRAMS project? How adequate is this?</td>
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<td>How many full-time equivalent staff are dedicated to HeRAMS?</td>
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<td>Which organisation, UN, government of Nongovernmental organization, is leading/hosting HeRAMS in the country?</td>
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<td>According to you who are HeRAMS main stakeholders and why?</td>
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<tr>
<td>Usage</td>
<td>And who actually &quot;consumes&quot; (uses) the HeRAMS product and data?</td>
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<td></td>
<td>If there are any that should be included but are not, why haven't they?</td>
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<tr>
<td>Criteria</td>
<td>Key Questions / Probing Questions</td>
<td>Answers</td>
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<tr>
<td><strong>Usage</strong></td>
<td>So, what outputs are produced with HeRAMS data and at which frequency? Are you able to share all reports produced by HeRAMS by mail or DropBox?</td>
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<td></td>
<td>How would you rate the overall quality of the HeRAMS data (completeness, accuracy, timeliness, etc.)? (Very poor; poor; average; good; very good)</td>
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<td></td>
<td>If there is a data verification process, how, and how efficient is the data verification process (peer2peer, opportunity check, systematic random check, etc)</td>
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<tr>
<td><strong>Quality</strong></td>
<td>What are the main challenges faced to ensure good enough data quality (comprehensiveness, timeliness, accuracy, etc.)?</td>
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<td>What are things that have made ensuring good enough data quality?</td>
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<td>What recommendations or lessons learnt do you have for other countries planning to implement HeRAMS with regards to ensuring good enough data quality?</td>
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<tr>
<td><strong>Usage</strong></td>
<td>In your country, which of the following activities in the Humanitarian Programme Cycles has HeRAMS been most useful for and why? Please provide tangible example for each?</td>
<td></td>
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<tr>
<td></td>
<td>a. Preparedness</td>
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<td></td>
<td>b. Coordination</td>
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<td></td>
<td>c. Needs Analysis / Prioritization</td>
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<td></td>
<td>d. Strategic Planning</td>
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<td></td>
<td>e. Resource Mobilization</td>
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<td></td>
<td>f. Implementation &amp; response monitoring,</td>
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<td></td>
<td>g. Operational Peer Review &amp; Evaluation,</td>
<td></td>
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<td></td>
<td>h. Recovery / Transition</td>
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<tr>
<td><strong>Relevance</strong></td>
<td>What feedback can you give us regarding the relevance of HeRAMS analysis/products and their ability to meet the information needs of the health sector in the current context?</td>
<td></td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td>One of the key objectives of HeRAMS is to contribute to informed decision making in all phases of the health sector response. What examples do you have that HeRAMS is successfully meeting this objective? If not, why?</td>
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<tr>
<td>Criteria</td>
<td>Key Questions / Probing Questions</td>
<td>Answers</td>
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<tr>
<td><strong>Relevance</strong></td>
<td>What are the main challenges and enabling factors when ensuring that HeRAMS remains relevant to the needs of the health actors?</td>
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<td>What recommendations or lesson learnt do you have for the future or for other countries in term of ensuring HeRAMS products are relevant to the information needs of health actors?</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>Another key objectives of HeRAMS is to promote standardization across the health sector response from resource and policy point of view.</td>
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<td>What examples do you have that HeRAMS is successfully meeting this objective? If not, why?</td>
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<tr>
<td><strong>Usage</strong></td>
<td>To what extent has it been possible to create a Master Health Facility List, and how significant was HeRAMS’ contribution to that achievement?</td>
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<td></td>
<td>The term MHFL refers to a list of health facilities in a country with a set of attributes to uniquely identify each facility</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>The third key objectives of HeRAMS is to contribute to improved intra and inter sectoral collaboration.</td>
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<td></td>
<td>What examples do you have that HeRAMS is successfully meeting this objective? If not, why?</td>
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<td></td>
<td>In your opinion what have been the strengths and key achievements of HeRAMS? What has HeRAMS allowed the stakeholders to do that they were not able to do before?</td>
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<tr>
<td><strong>Integrity</strong></td>
<td>What other Health Information Systems exist in country?</td>
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<td>How well has HeRAMS integrated with other Health Information Systems in the country (overlap, duplication, gaps, synergies, etc.)?</td>
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<td></td>
<td>Which ones especially does HeRAMS integrate well with?</td>
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<td></td>
<td>Which ones especially does HeRAMS integrate poorly with?</td>
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<td></td>
<td>How do you deal with conflicting information between Health Information systems?</td>
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<td></td>
<td>Does HeRAMS provides the MHFL to support other HIS (SARA, DHIS, EWARS, Health facility assessment, etc)? If no, is there another source for MHFL?</td>
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<td></td>
<td>What are the main challenges and enabling factors in term of integration of HeRAMS with other HIS?</td>
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<td>What recommendations do you have for other countries planning to implement HeRAMS in terms of integrating with other HIS?</td>
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### 4. Key informants Group 3 - Data Manager

"I’d like to start the interview with just getting a brief understanding of your role, and history and overview of HeRAMS in your country?"

<table>
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<tr>
<th>Criteria</th>
<th>Key Questions / Probing Questions</th>
<th>Answers</th>
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<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td>What is/are your current role(s) in relation to HeRAMS?</td>
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<tr>
<td></td>
<td>Can you explain to me how the HeRAMS data collection, management and analysis process is structured overall?</td>
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<td></td>
<td>What is the process for collecting data?</td>
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<td>How is data being centralized? Do you think this is effective? e.g. ensure that no data is lost or forgotten and trends can be followed?</td>
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<td>How and how often is the data updated?</td>
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<td></td>
<td>Do you feel this is effective to ensure the latest information is available to inform health actors?</td>
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<td></td>
<td>At what frequency does the analysis happen?</td>
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<td></td>
<td>Who is involved in the management and analysis of HeRAMS data? Please detail at which level of analysis are they involved?</td>
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<tr>
<td><strong>Usage</strong></td>
<td>Once the data is available, in what ways do health actors get access to HeRAMS outputs?</td>
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<td>Explore here if health actors get access to the raw data or just reports</td>
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<td>Is there a live access to the data/dashboards. Is there live products derived from HeRAMS data that people can access? What is the process to access them? Etc.</td>
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<td>What challenges exist or feedback/complaints have you received from users regarding how easy or difficult it is to use data/dashboard?</td>
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<td>What recommendations do you have for making the data easier to access and use by Health Actors?</td>
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<td>If users receive reports (Products) Who uses HeRAMS products that you produce? Who is the main audience?</td>
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<td>How are these reports distributed or shared?</td>
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<td>What challenges exist or feedback /complaints have you received from audiences regarding the usefulness and ease of use of these reports?</td>
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<td></td>
<td>What recommendations do you have for making the reports easier to access and use by Health Actors?</td>
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<td>Criteria</td>
<td>Key Questions / Probing Questions</td>
<td>Answers</td>
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<tr>
<td><strong>Relevance</strong></td>
<td>How relevant is the data collected for HeRAMS to understanding the availability of health resources and services?</td>
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<td>Could you explain what the process is/was to define and agree on the definitions of health resources and services ?</td>
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<td>How relevant do you feel the definitions are for your context?</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>Has HeRAMS been able to provide or contribute to the Master Health Facility List?</td>
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<td></td>
<td>How do you ensure that the data and products remain relevant to the needs of the Health Actors?</td>
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<td>What have been the main challenges and enabling factors been to achieve this?</td>
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<td></td>
<td>What recommendations do you have for other countries in term of ensuring HeRAMS analysis/products are relevant to the information needs of health actors?</td>
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<tr>
<td><strong>Quality</strong></td>
<td>Overall - how would you rate the overall quality of the HeRAMs data (completeness, accuracy, timeliness, etc.)?</td>
<td>(Very poor; poor; average; good; very good)</td>
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<td></td>
<td>What overall feedback have you received from end users about the quality of HeRAMS data?</td>
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<td>What are the main challenges or issues you face in terms of data quality? How does this affect the quality of the analysis?</td>
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<td>What things or actions taken have improved the quality of the HeRAMS data (strict cleaning or verification procedures, peer review, etc.)</td>
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<td>What recommendations do you have for other countries to ensure the quality of the data?</td>
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<td>How would you rate the overall quality of the HeRAMS data analysis process (joint analysis between health experts, alternative hypothesis, systematic documentation of uncertainty and information gaps and possible impact on main conclusions, etc.).</td>
<td>(Very poor; poor; average; good; very good)</td>
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<td>What feedback have you received from end-users about the quality of HeRAMS analysis and products?</td>
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<td>What are things or actions taken have improved the quality of the HeRAMS analysis and products?</td>
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<td>What recommendations do you have for other countries to ensure the quality of the analysis and products?</td>
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<td>Criteria</td>
<td>Key Questions / Probing Questions</td>
<td>Answers</td>
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<tr>
<td><strong>Integrity</strong></td>
<td>How would you rate the comparative advantage of HeRAMS analysis/products in comparison to other existing HIS analyses or products?</td>
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<td>To what extent does the data collected/analysis produced in the HeRAMS and the data collected/analysis produced in other HIS overlap or complement each other?</td>
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<td>What are the challenges or benefits in integrating HeRAMS data or analysis/products with other HIS?</td>
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<td>What recommendations do you have for other countries for better integrating HeRAMS analysis/products into other HIS or products?</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>Overall - What were/are the main factors that enabled an appropriate data management and analysis of HeRAMS data?</td>
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<td>Overall - What were/are the main challenges that impeded an appropriate data management and analysis of HeRAMS data?</td>
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<td>Overall - If you could have set up the data management and analysis process differently, what would you have done and why? What recommendations do you have for other countries for improving the effectiveness of HeRAMS?</td>
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5. Key informant Group 4 – Decision Makers

"I’d like to start the interview with just getting a brief understanding of your role, and history and overview of HeRAMS in your country?"

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<th>Criteria</th>
<th>Key Questions / Probing Questions</th>
<th>Answers</th>
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<td>What is/are your current role(s) in relation to HeRAMS?</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>In your country, how well do you feel HeRAMS is fulfilling its general objectives (assessing the availability of health services and the main impediments to their functionality)</td>
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<td></td>
<td>How has HeRAMS affected your work and your organisation’s understanding of the health system priorities in the affected areas?</td>
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<td></td>
<td>In your opinion how vital was HeRAMS in helping you understand this?</td>
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<tr>
<td><strong>Usage</strong></td>
<td>What data analysis or products do you receive direct from HeRAMS?</td>
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<tr>
<td><strong>Relevance</strong></td>
<td>How well do you feel these analysis/products are meeting your information needs with regards to health service availability and impediments in the current context?</td>
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<td></td>
<td>What are the main things you like about HeRAMS analysis/products?</td>
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<td>What feedback, if any, have you provided to the Herams team regarding their data/analysis/products?</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>What key decisions or actions have you been able to take as a result of these data or reports that HeRAMS produces? Would you be able to share any documents or examples?</td>
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<td>Without the information from HeRAMS, how likely or able would you have been to take the same decision or action?</td>
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<tr>
<td>Criteria</td>
<td>Key Questions / Probing Questions</td>
<td>Answers</td>
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<tr>
<td>Relevance</td>
<td>What expectations do you have of HeRAMs that it is not meeting?</td>
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<td></td>
<td>For which of the following activities in the Humanitarian Programme Cycle has HeRAMS been most and least relevant for you, and why. Please provide tangible example for each?</td>
<td>Most relevant</td>
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<tr>
<td></td>
<td>a. Preparedness</td>
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<td>b. Coordination</td>
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<td>c. Needs Analysis / Prioritization</td>
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<td>d. Strategic Planning</td>
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<td>e. Resource Mobilization</td>
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<td>f. Implementation &amp; response monitoring,</td>
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<td>g. Operational Peer Review &amp; Evaluation,</td>
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<td>h. Recovery / Transition</td>
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<td></td>
<td>What recommendations do you have for other countries in term of ensuring HeRAMS analysis is relevant to the information needs of health actors?</td>
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<tr>
<td>Usage</td>
<td>What are the main challenges and enabling factors you face when using HeRAMS data or analysis/products?</td>
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<td>How easy is it to access the HeRAMS analysis and reports? What is the process?</td>
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<td></td>
<td>If you wanted to access the raw data, how easy would it be? What is the process?</td>
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<td>What other analysis/reports do you use that are directly or indirectly built from HeRAMS? And how useful are these? Can you provide samples?</td>
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<td></td>
<td>What recommendations do you have for other countries in term of ensuring HeRAMS analysis and products are used by health actors?</td>
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<tr>
<td>Quality</td>
<td>How would you rate the overall quality of the HeRAMs data (completeness, accuracy, timeliness, etc.)?</td>
<td>(Very poor; poor; good; very good)</td>
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<td></td>
<td>If you answered very poor to good, What are the main issues/challenges related with HeRAMS data quality?</td>
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<td>What recommendations do you have for other countries in term of how to improve the quality of HeRAMS data?</td>
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<td>How would you rate the overall quality of the HeRAMS analysis process (joint analysis between health experts, alternative hypothesis, systematic documentation of uncertainty and information gaps and possible impact on main conclusions, etc.). How confident are you in the HeRAMS analysis?</td>
<td>(Very poor; poor; good; very good)</td>
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<td></td>
<td>If you answered very poor to good, What are the main issues/challenges related with HeRAMS analysis/products quality?</td>
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<td>What recommendations do you have for other countries in term of how to improve the quality and credibility of the HeRAMS analysis/products?</td>
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