

**MID-TERM EVALUATION
OF
THE TOWARDS ELIMINATION OF MALARIA IN TANZANIA (TEMT) PROJECT**

May 2020 to April 2024

Final – Analytical Report

Project no: 7F-10130.01.04

Contract no: 81076479

Submitted to:

Embassy of Switzerland in Tanzania

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March 20, 2023

Resubmission: April 10, 2023

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List of Acronyms

Bti	: <i>Bacillus thuringiensis</i> israelensis
CCHP	: Comprehensive Council Health Plan
CM	: Case Management
CORP	: Community Owned Resource Person
DHIS	: District Health Information System
DHS	: Demographic and Health Survey
DMFP	: District Malaria Focal Person
DMO	: District Medical Officer
DVCO	: District Vector Control Officer
EAC	: East African Community
EMC	: End Malaria Council
FGDs	: Focus Group Discussions
GF	: Global Fund
GFATM	: The Global Fund to Fight AIDS, Tuberculosis and Malaria
GLMI	: Great Lakes Malaria Initiative
HMIS	: Health Management Information Systems
ICCM	: Integrated community case management
IHI	: Ifakara Health Institute
IPT	: Intermittent preventive treatment
KI	: Key Informant
KIIs	: Key Informant Interviews
LSM	: Larval Source Management
M&E	: Monitoring and Evaluation
MIS	: Malaria Indicators Survey
MoH	: Ministry of Health
MTR	: Mid-Term Review
NATNETS	: National Insecticide Treated Nets Programme
NIMR	: National Institute for Medical Research
NMCP	: National Malaria Control Programme
OECD DAC	: The Organization for Economic Co-operation and Development (OECD)- Development Assistance Committee (DAC)
PAMCA	: Pan-African Mosquito Control Association
PMI	: The U.S. President's Malaria Initiative
PORALG	: President's Office, Regional Administration and Local Government
PPE	: Personal protective equipment
PQ	: Pre-qualified
RMFP	: Regional Malaria Focal Person
SBC	: Social and Behavior Change
SBCC	: Social and Behavior Change Communication
SDC	: The Swiss Agency for Development and Cooperation
SMSP	: School Malaria Parasitaemia Surveys
SM&E	: Surveillance, Monitoring and Evaluation
SOP	: Standard Operating Procedures

TEMT	: Towards Elimination of Malaria in Tanzania
TOR	: Terms of Reference
TWG	: Technical Working Group
VC	: Vector Control
VEOs	: Village Executive Officers
WEOs	: Ward Executive Officers
WHO	: World Health Organization
ZAMEP	: Zanzibar Malaria Elimination Programme

Acknowledgements

The review team would like to appreciate the opportunity given by the Embassy of Switzerland in Tanzania to conduct the Mid-Term Review for the Towards Elimination of Malaria in Tanzania (TEMT) project. In addition, we acknowledge the coordination support provided by the embassy staff team to ensure that the MTR was conducted as required. The valuable inputs provided during inception report and final report debriefings are highly appreciated, specifically, the review team would like to thank Esther Majani, Leticia Mashimba, and Viviane Hasselmann for their inputs, suggestions, and recommendations throughout the MTR process including a critical review of the final report.

In addition, the review team would like to acknowledge the coordination support provided by the TEMT project staff members. The support was very important to ensure that all required appointments were secured and key respondents were interviewed as planned. Specifically, the review team would like to thank Noela Kisoka and Dr. Denis Kailembo for dedicating their time to provide the required coordination support via email and/or on the ground in Tanga region including the three districts implementing larval source management.

Moreover, the review team would like to acknowledge all persons interviewed for dedicating their time to share valuable information to support the MTR process of TEMT project. The list includes international organizations, malaria donors, relevant research organizations in Tanzania, embassies, MoH – Tanzania mainland and Zanzibar, PORALG central, regional and council levels, the managers and head of units of NMCP and ZAMEP. Acting DMOs and members of their offices provided a great coordination in the respective districts to ensure a great collaboration in conducting interviews and field observations up to ward levels. We are also grateful for the assistance of our social scientist for the transcript of FGD interviews.

Last, but not least, the review team would like to acknowledge the commitment and time set aside by CORPs and community members in Tanga to go through the long interviews and for providing a field tour in selected area. MTR team takes full responsibility for the content of this work. Any errors or misrepresentations in the document are our own.

Executive summary

Introduction (including TEMT background)

The Embassy of Switzerland in Tanzania has a historical background providing technical assistance to NMCP since 2002 with NETCELL project. This Mid-Term Review (MTR) is part of regular management cycle of the new project “Towards Elimination of Malaria in Tanzania”, extended from May 2020 to April 2024 and covers the period from May 2020 to December 2022. The review is expected to provide an external view allowing the priority steering of the project investment over the remaining 2 years of the project phase 1, with a special focus on the piloting of the Larval Source Management (LSM) component implemented in three districts of Tanga region. The two specific objectives of the MTR are:

- Assess the project’s performance guided by the OECD DAC’s criteria of relevance, effectiveness, coherence, efficiency, sustainability, and impact;
- Make steering / investment recommendations for the remaining period of the phase 1 (short to medium term) and for future phase 2 orientation (long term)

Methods and limitations

The review team has worked closely with Embassy of Switzerland in Tanzania, TEMT staff, NMCP, ZAMEP and other stakeholders involved in malaria control to get access to the existing sources of secondary data. The following methodologies were used for the review and to address the MTR key questions:

- Desk Review of key documents;
- Key Informant Interviews (KIIs) with key stakeholders in the country (49 participants);
- Focus group discussions (FGDs) – focusing on LSM project (total of 8 FGDs);
- Field observations from three districts of Tanga region (Lushoto, Handeni and Tanga City) for implementation of LSM.

The limitations were based on the methods used for selection of the participants to interview for KII and FGDs as well as the VEOs to be visited. The main partners to be interviewed and VEOs were prior selected by TEMT project and not included in the methodology of MTR.

Key findings on achievements and key questions

Progress in achievement of indicators

Despite the long period of delay for starting the project and the covid-19 contexts which marked the last 2 years of MTR period, TEMT project has made a good progress in achieving the planned outcomes and outputs. The project planned to achieve a total of 31 indicators among them 10 and 21 outcome and output indicators, respectively. Out of the 31 indicators in the revised TEMT project log frame of December 2022, 51.6% were fully implemented, 22.6% partially implemented, 16.1% not implemented and 9.7% scheduled for implementation from Y3. For the 10 outcome indicators, 50% we fully achieved, 40% partially achieved and 10% not yet implemented. For the 21 output indicators, 52.4% were fully implemented, 14.3% partially implemented, 19.6% not implemented and 14.3% planned from Y3 of project timeline. The only indicator planned and not implemented is “the number of PO-RALG staff (w/m) trained on gender aspects related to malaria in 3 districts” was due to the precondition for prior-digitalization of micro-stratification per risk factors for planning tool which has to be integrated into the district plans. The other activities delayed or with unclear time lines are those associated to the support of cross-border and multi-sectoral collaboration initiatives. A high level advocacy has to be undertaken to the national or regional political decision makers to set them at high priorities of implementation during the next two years of TEMT timeline.

Key questions of TEMT Project

MTR-KQ1: - Are the activities of the TEMT project well integrated with the national malaria control documents, especially the National Malaria Strategic Plan (NMSP) 2021–2025? **Response:** TEMT activities are well integrated via NMSP 2021-2025 and other policy documents or through NMCP special requests.

MTR-KQ2: - Is the collaboration with the staff of the National Malaria Control Programme (NMCP) going well and how could it be optimized? **Response:** The collaboration of TEMT team with NMCP staff is going well and highly rated, from good to Very good. The point of improvement is more the involvement of NMCP central staff in implementation of LSM.

MTR-KQ3: Is the collaboration with the staff of the Local government (PO-RALG) going well and how could it be optimized? **Response:** The collaboration of TEMT team with PO-RALG staff is going well with some extent. Going very well for TEMT staff and rated from 3 to 3.5 for PO-RALG staff and requesting more involvement specifically in implementation of LSM. The points for optimization of the collaboration are the following:

- Improvement of transparency at central level (NMCP, PORALG) on the actual detailed budget instead of a total amount available to support implementation of LSM;
- More involvement of PO-RALG central staff in supervision and feedback workshops organized after LSM rounds;
- PO-RALG members at the council levels (e.g., DED, RC, DC) to be more actively involved in implementation of LSM for sustainability purpose.

MTR-KQ4: Is the project on track delivering on its outcomes and outputs? (also take into account sustainability of achieved results)? **Response:** Overall, the project is on track delivering on its outcomes and outputs. To some extent the community is well informed on the LSM and perceive impact on reducing mosquito density and malaria cases. Several plans, initiatives or thoughts reported to ensure sustainability for LSM implementation, mainly the establishment of End Malaria Council (EMC) and integration of LSM budget line into CCHP annual plans as condition for approval of budget

MTR-KQ5: Is the project making an efficient use of its resources and does it represent good value-for money for Swiss taxpayers? **Response:** Overall, the project is making an efficient use of its resources and represents good value-for money for Swiss taxpayers. The use of less resources (compared to other malaria donor-funded projects) with high achievements despite the adjustment of scope of work to accommodate LSM project in Tanga. The latter is taking almost 2/3 of the total project budget. The NMSP supported by TEMT is the framework for identification of gaps and guide commitments of other partners (GF, PMI, etc.). The partners are expecting a lot of lessons, local evidences from the LSM project to enable them to mobilize further resources for scaling up the LSM intervention.

MTR-KQ6: - Is the dissemination effort (locally, nationally, and internationally) of the TEMT project allowing to capitalize optimally the experience and lessons learned by the project? **Response:**

Overall, the dissemination efforts of the TEMT project allows to capitalize optimally the experience and lessons learned by the project at national, regional and international level. At national level, 23 presentations and technical reports were produced and presented (NIMR annual symposium, TWGs for Vector Control and Case Management, World Malaria Day. At international level, 7 scientific abstracts and 8 papers in peer reviewed journals were published by TEMT staff from 2020 to 2022. However, no dissemination efforts at the local level especially for the LSM districts are noted. The dissemination efforts also influenced the development or review of policies and strategies at sub-national, national and regional levels, for instance Comprehensive Council Health Plans, NMSP, EMC for multi-sectorial collaboration framework and cross-border initiatives within East Africa Region (EAC),

Conclusions

The project is on good track delivering on its outcomes and outputs. Despite the long delay in starting the project activities, more than 50% of outcome and output indicators were fully achieved and 22.6% partially implemented. TEMT project activities are also well integrated in NMSP 2021-2025 and also comply with the national policy guidelines. The technical assistance is normally and officially requested following the needs from NMCP or ZAMEP. The NMCP and partners also acknowledge and appreciate the quality and flexibility of TEMT supports.

The collaboration between NMCP staff and the TEMT project staff is going very well but with different rates from good to very good (3 to 4, 1- unacceptable, 5 – Excellent). The collaboration between PO-RALG staff and the project is in general going well, except for some miscommunications. PO-RALG was more involved in planning than in implementation phase of LSM. The major activities which require the political advocacy are connected to the support of cross-border and multi-sectoral initiatives. Different plans for sustainability of LSM interventions are in good progress for instance the establishment of EMC and integration of LSM budget into CCHP as a condition for approval of council plans by PO-RALG. Other development partners are waiting the results from the pilot phase of LSM and the Pre-qualification of Bio-larvicide products by WHO for effective engagement to support LSM.

Flowing the achievements reached out in two years, the project is making an efficient use of its resources it is representing good value of money. The “small” budget allocated has helped to provide technical support to NMCP&ZAMEP, and to implement the pilot phase of LSM as first Government partner engaged to support this intervention. An assessment of LSM implementation progress and weakness has to be planned to investigate and address the key challenges highlighted in this report and that may affect the results, for instance data quality of reports from CORPS, irregular frequency of supportive supervision, irregular feedback meetings, improper, implementation of biolarviciding, if any, missed opportunity to manipulate breeding habitats and the status of low performance for controlling mosquito breeding sites reported in Tanga City.

Key recommendations

1. Prioritize in the annual operational plans Y3&4 the achievements of indicators in status of “not or partially implemented” in Y1&2;
2. Advocate to MoH-NMCP and PORALG management team the need to highly prioritize launching of the End Malaria Council (EMC).
3. Advocate to EAC-Health Secretariat to mobilize funds and support cross-border malaria control initiatives and case studies in regards to GLMI strategic plan 2020-2025;
4. Advocate to PO-RALG and local manufacturer of bio-larvicide products to proceed to WHO registration of produced biolarvicides, diversify packaging and formulations for friendly handling, storage and promote the selling to private sector through social marketing;
5. Considered different approaches enabling the production of strong and more informative evidences and lessons such as KAP surveys, including control arm into the design of LSM, blanket versus targeted implementation, using government versus non-government existing structures to implement LSM, to support scaling up of LSM and engagement of other funders;
6. Consider targeting the potential invasion of *An. stephensi*, e.g., in border and more urban areas when planning the selection of new sites and impact monitoring of LSM, where applicable. Also advocating for joint action in platforms discussing cross-border initiatives;
7. There should a way to stress the implementation of LSM in terms of manipulation of breeding habitats to complement the application of bio-larvaciding. For example, the drainage of standing water, covering water containers and bore holes and intermittent irrigation etc. to be advocated at the councils level and other non-health sectors;
8. A general SBCC mainly based on mass media, other innovative approaches and community mobilization on proper implementation of LSM should be considered at the community level but highly supported by political will and other project funders;
9. Discuss the feasibility to integrate outdoor adult mosquito collection by the supervision team regardless of the fact that it is not consider as an indicator to assess the impact of LSM. This will help to monitor

the pattern of other mosquito species that developed outdoor biting and resting behaviors (e.g., *An. Arabiensis*);

10. Assess the required and gaps in number of assigned CORPs according to the mapped and size of breeding habitats per district/council. The selection of CORPs should be reconsidered to reduce dropouts encountered during the MTR period
11. Consider collecting and managing data electronically with a mechanism put in place to ensure cost implication, applicability, and data quality assurance.
12. Improve the budget management and execution based on best practices and lessons from Y1&2 of the project.

A matrix with detailed short, mid, and long term recommendations based on stepwise perspectives and who is responsible is provided in section 6.2.

1. Introduction

Since 2002, Switzerland supports the National Malaria Control Programme (NMCP) of Tanzania through multiple and in-depth management, strategic and technical supports. This support allowed for instance the growing of Tanzanian mosquito net programme NATNETS (National Insecticide Treated Nets programme) to one of the largest, most innovative and successful in the world; strengthening malaria case management and decisively developing the monitoring and evaluation component of the NMCP. Moreover, Swiss support greatly strengthened evidence-based planning and capacity building of government staff. The above support is universally seen as a major success story, to be replicated in other endemic countries.

The present project entitled “**Towards Elimination of Malaria in Tanzania**” (TEMT) started in 2020 and is planned until 2024 and two more phases of 4 years are planned until 2032. The target groups of the projects are all Tanzanians (mainland and Zanzibar) suffering from the burden of malaria disease – particularly those in rural areas and those in the highest risk groups- pregnant women and children, individuals living with HIV. By reducing the burden of disease from malaria substantially, the project will contribute to reduce the number of patients seen in health facilities, and hence improve the provision of quality health care for all Tanzanians. The project fully embraces the new strategic approach recommended by the World Health Organization (WHO). A new major vector control component, the Larval Source Management (LSM) was added to the existing strategies with focus on two key aspects: (1) implementation of larviciding in three councils in Tanga Region, and (2) a comprehensive operational and impact evaluation which is performed by the Ifakara Health Institute. The TEMT project has three outcomes as follows:

- a) Supporting cost-effective and evidence-based malaria control efforts at national level and decentralized in each epidemiological risk strata, in line with the current SMSP.
- b) Enhancing multi-sectoral action in malaria control by including non-health sectors and particularly the private sector in the malaria control effort and extend this to cross-border and regional initiatives.
- c) Developing a comprehensive knowledge management strategy for malaria control in Tanzania and increasing the contributions and visibility of the Tanzanian experience at regional and global level.

2. Intervention/strategies supported by TEMT

The following intervention strategies/approaches are supported by the TEMT project either in Tanzania mainland and/or isles;

- a. In Mainland;
 - i. The inclusion of a standardized malaria risk stratification into each district’s Comprehensive Council Health Plan (CCHP), in collaboration with PORALG and national partners,
 - ii. Testing of larviciding in three districts in Tanga - the process has been led by NMCP with TEMT’s assistance – with the actual implementation conducted by the government structure of the PORALG,
 - iii. Supporting the creation of the End Malaria Council set up by the President of Tanzania
 - iv. Supporting cross border malaria control initiatives (e.g., Rwandan-Tanzania border area in 2022),
 - v. Disseminating the Tanzania malaria control experience through general media and scientific journals, and giving presentations at international meetings.
- b. In Zanzibar;
 - i. Providing technical advice in a number of areas such as monitoring and evaluation, surveillance, and vector control,

- ii. Assisting the Zanzibar Malaria Elimination Program (ZAMEP) to produce epidemiological risk profile and an evidence-based strategic plan
- iii. Assisting with the production of a Global Fund concept note

3. The Mid-Term-Review

This Mid-Term Review (MTR) is part of regular TEMT project management cycle, running from May 2020 to April 2024. The Embassy of Switzerland in Tanzania, the donor of the project, commissioned an external Mid-Term Review (MTR) of the project to be performed by two review team members. The review covers the period from May 2020 to December 2022. The review is expected to provide an external view allowing the priority steering of the project investment over the remaining 2 years of the project phase 1, with a special focus on the piloting of the Larval Source Management (LSM) by TEMT project in Tanga but also the totality of the project's log frame planned 2020-2024.

3.1 The objectives of the MTR

The objectives of MTR for the TEMT project are highlighted by the project management through the ToR. The review will cover both Tanzania mainland and Zanzibar. The overall objective is to provide an external view allowing the priority project investment over the remaining 2 years of the TEMT project phase 1, with a special focus on the piloting of the LSM (cost-efficiency and impact), but also the totality of the project's log frame.

The two specific objectives are:

- Assess the project's performance guided by the OECD DAC's criteria of relevance, effectiveness, coherence, efficiency, sustainability, and impact;
- Make steering / investment recommendations for the remaining period of the phase 1 (short to medium term) and for future phase 2 orientation (long term)

3.2 The methodologies

In the framework to meet the MTR overall objectives and deliveries, the review team has worked closely with Embassy of Switzerland in Tanzania, Project staff, NMCP and other stakeholders involved in malaria control to get access to the existing sources of secondary data and coordinate the collection of primary data. The assessment methodologies comply with the OECD DAC's criteria of relevance, effectiveness, coherence, efficiency, sustainability, and impact of the project. The following methodologies was carried out to address the MTR key questions:

Desk Review

A desk review of the relevant reference documents listed below will provide the background information on the TEMT project including the project related documents, mainly the implementation plan, monitoring and evaluation plan including expected outcomes and outputs. The review team will also review the policies, strategic plans and guidelines prepared by NMCP, ZAMEP and the Ministries of Health of the United Republic of Tanzania. Other regional and international policies, strategic plan and guidelines and scientific publications will be reviewed in accordance with the TEMT identified activities for implementation. These sources of information will partially provide valuable insights on performance of TEMT project and achievements of its targets. Therefore, information from one source will be validated or supplemented with information from other sources.

Here is the list of reference documents to be reviewed;

- i. National Malaria Strategic Plan (NMSP) 2020–2025
- ii. National Guidelines for Malaria Diagnosis and Treatment
- iii. National Guidelines for vector control
- iv. Specific documents relating to larviciding for the period May 2021 to December 2022.
- v. Scientific publications and other technical documents produced by the NETCELL/TEMT project for the period 2017-2022.
- vi. SDC's General Terms and Conditions of Business for Type A & B Mandate
- vii. TEMT Project document dated April 2020.
- viii. TEMT annual project progress reports for the years 1 & 2.

The matrix is used to report on the key indicators based on the reviewed documents.

Focus Group Discussions and Key Informant Interviews for Beneficiaries

The review team conducted Focus Group Discussions (FGDs) with key groups of project beneficiaries of larval source management intervention in Tanga region - at least four (one respectively in Lushoto district and Tanga City and two FGDs in Handeni districts). A consideration of gender, sex and age was highlighted as key criteria for selection of participants. Other four FGDs were conducted for Community Representatives (CORPs) - implementing the project – targeting 2 per village for 3 villages per one ward from Lushoto and Tanga City and 2 wards from Handeni. The key informant interviews (KIIs) were conducted for District Medical Officer (DMO), District Malaria Focal Person (DMFP), District Vector Control Officer (DVCO), and two Ward Executive Officer (WEO) from each district, Village Executive Officer (VEO). In addition, Tanga's District Executive Officer (DED), Regional Medical Officer (RMO), Regional Malaria Focal Person (RMFP) were also interviewed at Tanga City. The semi-structured questions for the FGDs and KIIs are in appendix 1). Moreover, the KIIs were conducted for the supervision team from Ifakara Health Institute including the Field Team Lead and technicians from the three districts.

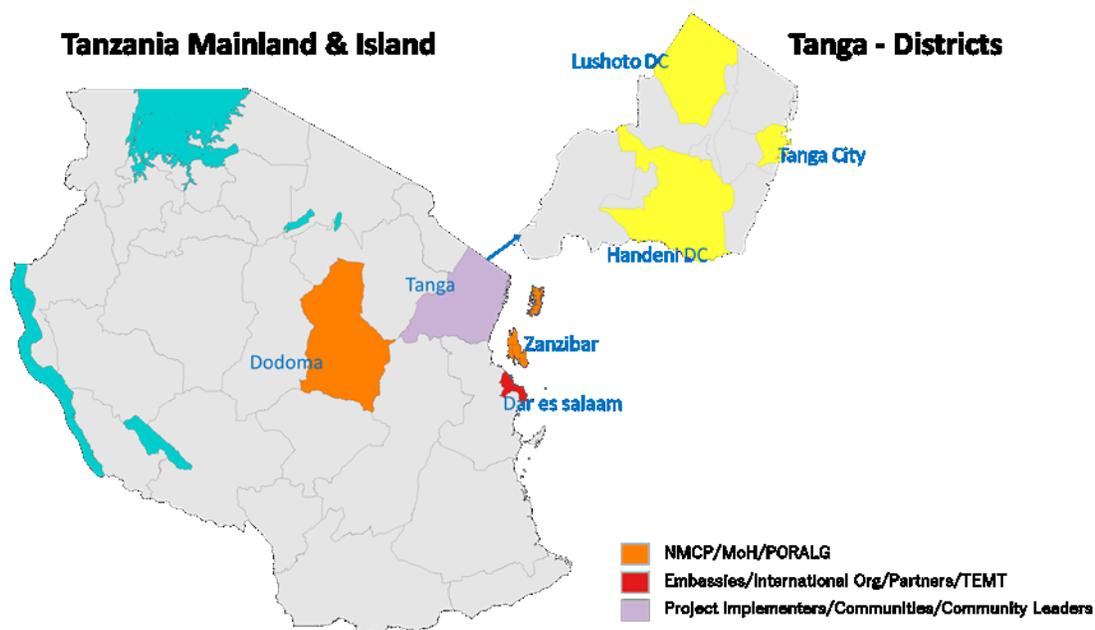


Figure 1: An illustration of regions and districts where the interviews were conducted

Key Informant interviews for the key stakeholders

The key informant interviews (KIIs) were carried out with relevant stakeholders in malaria control from Government officials such as PORALG, MoH-Zanzibar, NMCP, ZAMEP and partners such as (U.S.

President's Malaria Initiative, Global Fund, Ifakara Health Institute, Embassy Switzerland in Tanzania, China - CDC, and WHO). Interviews allowed for understanding the skills and perceptions related to the capacity at all levels for implementing TEMT project, identify the key strengths, challenges and the points for improvements as well as plans to sustain the project. The interviews were based on semi-structured questions (appendix 1).

Visual observations throughout site visits

The site visits were conducted in areas where TEMT's larviciding activities are carried out in the three districts in Tanga region. These field visits provided opportunities for direct observations of the status of achievements, material and infrastructures available to support project implementation and an indication of sustainability.

3.3 Data management and analysis

The analysis of data was tailored to the assessment questions and the types of secondary and primary data collected; qualitative or quantitative. The quantitative data was used to provide demographic information for participants and used to compare responses from different stakeholders. The data were disaggregated per age and location and analyzed using R statistical software. The qualitative data were entered Nvivo software for qualitative data analysis. Thematic review of qualitative data was performed, and connecting the findings to key component of the answers to be responded. The analysis pulled out main themes and subthemes related to respondent responses and based on assessment questions.

3.4. Ethical considerations

All data collected complied with good practices around a written consent for FGDs respondents or verbal consent for KI interviews and confidentiality with regard to information provided by participants to interviews. A standard informed consent protocol for all individual interviews was used and ensuring that project staff were not present for any of the FGDs or KIIs with external partners.

3.5. Reflection on Limitations of Methodologies

Several limitations based on the methodologies used to conduct the MTR for the TEMT project are briefly outlined below

- a) Time constraint: One of the limitations was not having enough time to i) ensure that CORPs and community members were selected randomly and not based on convenience, ii) make sure the team performed extensive observation in the field and iii) observe the data collection at different levels including the data forms.
- b) Consideration of other key stakeholders: Several other stakeholders (e.g., the industry in Kibaha manufacturing the biolarvicide product used by the project in Tanga) and political leaders like District Executive Officers (DEDs), District Commissioners and others were not part of the initial list recommended for an interview. . Given the roles that can be played by DEDs, DC, etc especially in advocating, supporting the implementation and sustainability of LSM project, it would be important to prioritize them in future evaluations.

Nevertheless, the MTR review team made sure to conduct all planned interviews as indicated in the TOR based on the allocated time. The KIIs for MoH, Tanzania main land specifically Chief Medical Officer and Head of Programs were not interviewed due to other urgent government engagements at the time of interview and limited time of consultants. Despite these limitations, the MTR was conducted successfully resulting into several key findings and corresponding recommendations.

4. The findings of the Mid-Term Review

In accordance to the terms of references for the mid-term review of TEMT, project funded by Embassy of Switzerland in Tanzania, the findings are displayed in the following three sections: The first section summarizes the results on the progress in achievement of project indicators per outcome and output covering the period from May 2020 to December 2022 of project implementation. The review referred to the revised logframe of TEMT project, phase 1 (2020-2024) of December 8th, 2022. The second section is addressing the specific six questions to be answered by this MTR. The key findings are presented in this section as well as the conclusions and recommendations per question. The third section also displays the findings on management of the TEMT project in terms of human resources, the logistic and the budget.

4.1. Progress in achieving the project indicators

The TEMT Project under mid-term review aims to assist the United Republic of Tanzania to get close to malaria elimination in 2030 and reduce durably morbidity and mortality caused by malaria, especially for vulnerable groups. The main aim of Embassy of Switzerland in Tanzania support is to strengthen evidence-based planning, capacity building of government staff, and support to the implementation of key programme components. In the Tanzania mainland, support is provided to the NMCP and the President's Office Regional Administration and Local Government (PO- RALG), whereas in Zanzibar support is focused on providing technical support to ZAMEP. The TEMT project activities are focusing on the following malaria control areas: vector control mainly through larval source management, case management, and surveillance, monitoring and evaluation.

To achieve the project goal, three outcomes and nine outputs are expected to be achieved by end of this project, April 2024. In total, 31 indicators were set in the project monitoring log frame with respectively 10 outcome and 21 output indicators. It is important to note that the implementation of TEMT activities at the beginning was marked by a delay of almost eight months for approval and signature of the bilateral agreement governing the TEMT project. The above delay was associated to the deep change of scope of work extended to the support of vector control through larval source management identified by the Tanzanian Government as a high priority for malaria control. The prevailing of Covid-19 and the change in scope of work impacted the delay in implementation of the planned activities with re-budgeting of the activities.

This section reviews the progress of achieving the project indicators with regards to the planned targets per outcome. A brief explanation allows to giving a justification or the reasons for the attribution of the reported finding mainly for indicators in progress, not achieved or not yet started for implementation (table 1)

4.1.1. The outcome indicators

Outcome 1: The Government of Tanzania has mapped continuously malaria risk in all 184 districts, and implemented appropriate national-level and district level strategic control options based on the National Malaria Strategic Plan (NMSP 2021-2025).

The table 1 shows that of the 3 indicators planned for the achievement of the Outcome1, two indicators were fully implemented and the third indicator related to "Number of districts with specific implementation plans addressing local malaria risk factors effectively; stratified by level of risk (Very low, Low, Moderate, High, Urban)" was not implemented. It was planned to perform at least this micro-stratification to support microplanning for at least 5 districts by end of 2022. The digitalization of this micro-stratification was the pre-condition to integrate it into district planning reason why related activities for this indicator were postponed in Y3 of the project. To fully reached out the 15 districts to be micro-stratified by the end of the Project, a rigorous effort has to be put on the implementation and monitoring of activities related to this indicator for the remaining period of the TEMT project. Specifically, an advocacy and working hand-in-hand

with PORALG at central level as well to encourage and monitor districts/Councils to budget for the microplans in their PlanRep.

Outcome 2: The Government of Tanzania has implemented a multi-sectoral action plan by including non-health sectors and particularly the private sector in the malaria elimination effort, and extended this approach to cross-border and regional initiatives.

Under the outcome 2, there were 4 indicators planned in the project document. The status of their implementation is still in progress and none was fully achieved. It should be noted that the implementation of activities associated to this outcome is interlinked to both technical support and the high political will, concertation and engagement.

The technical support to the involvement of non-health actors in malaria control, mainly in urban settings and major infrastructure projects, were supported with the development of a roadmap and framework for multi-sectoral collaboration. The lack of official framework body delayed the implementation of three documented case studies.

The End Malaria Council (EMC) body governing the involvement of non-health and private sector actors in malaria control was approved and signed by His Excellence, the President of United Republic of Tanzania. Its official launch was delayed and according to NMCP, this launch is expected to be launched this year. This delay affected the implementation of the planned case studies of malaria mitigation measures by private sector actors. Nonetheless, for multi-sectoral coordination as well as for cross-border initiatives, the project did not take substantial initiative to explore or understand what might already be on the ground organically for local needs and proactive actions from individuals or institutions. If the latter are identified and found functional, these spontaneous initiatives could have also made case studies to inform the development of needed operational frameworks. The TEMT project is encouraged to consider such initiatives going forward.

Regarding the indicators related to cross border malaria control initiatives, TEMT project supported the NMCP to introduce the Great Lakes Malaria Initiatives (GLMI) to the mapped councils bordering with the Lake and North- East zones and also the development of the operation plans for each council – border. Therefore, none out of the four cross border case studies planned in the logframe of activities was yet implemented due to the lack of budget from TEMT funds. NMCP plans to lobby for the cross border funding during the Global Fund (GF) grant during the upcoming funds application of May 2023. This will form the basis for implementations of the planned case studies and it is recommended that TEMT should advocate for a budget line for this initiative while providing technical support to NMCP for the development of May 2023 GF application.

At regional level, the GLMI strategic plan and an operational plan of two years were developed and signed for implementation. This regional malaria initiative is hosted and coordinated by EAC Secretariat, but not fully functional. TEMT project may focus on generating strong and innovative evidences to support the kick start of GLMI for implementation of cross border activities in remaining two years of the project and further two phases of the project.

Outcome 3: Tanzanian academic institutions, in collaboration with Swiss Partners, provided high quality data and experience to optimally inform national and global malaria control and elimination.

The outcome 3 fits with the original scope of work of the Embassy of Switzerland in Tanzania to technically support the NMCP for generation, dissemination and usage of knowledge and the best practices at national, regional and global levels. All targeted indicators for this outcome were fully implemented. A support was provided to the NMCP to develop the NMSP 2021-2025 and Malaria business plan 2021-2025, the mid-term review of malaria elimination strategic plan of Zanzibar, the support to the organizations of three out

of four targeted Technical Working Groups (Vector Control and Case Management) planned by TEMT project and virtual participation to the RBM technical working groups (Vector Control and Surveillances, Monitoring and Evaluation). The primary hindrances to the implementation of activities were the prevailing situation of covid-19 which constrained and limited the movement of populations and organizations of regional and international events. The delay in starting the field activities limited also the number of generated evidences in malaria control and its progressive elimination. The last period of TEMT project may contribute to more malaria control evidences and their dissemination in wide national, regional and international events. Where applicable, the project should have clear documentation of the contribution of the Tanzanian experience in global guidelines.

4.1.2. The output indicators per outcome

Outputs-Outcome 1: Of the 11 targeted outputs, 54.5% were fully implemented, 9.1% partially implemented, 18.2% not implemented and planned from Y3 respectively. The two activities which were planned and not implemented are respectively: -1 micro-stratification and microplanning tools digitized into the DHIS2 and their integration into Council Comprehensive Health Plan (CCHP), and 2- the training of 6 PO-RALG staff (w/m) on gender aspects related to malaria in 3 districts implementing the larval source management. The other two indicators planned from the Y3 are -1 the identification of Age, gender and pregnancy factors, addressed and integrated into the all relevant work plans and budgets, and - 2 districts with specific malaria activities and budget in CCHPs and reflecting Age, gender and pregnancy risk factors. The activities related to the indicators not implemented or planned from Y3 have to be prioritized in the coming two years of project timeline.

Outputs-Outcome 2: Of the 4 outputs for this outcome, 25% were fully implemented, 50% partially implemented, 25% not implemented. The one indicator which was not implemented is the performance of documented case studies of cross-border malaria control activities out of the 4 planned cases. The full implementation of this indicator requires an effective commitment will at national and from the neighboring countries. This indicator may be re-planned in short to mid-term, even in the two future phases are the regional factors escape the national control. An advocacy of these activities may be undertaken by the Embassy of Switzerland to EAC Secretariat and during future GLMI meetings.

Outputs-Outcome 3: Of the 6 targeted outputs, 66.7% were fully achieved, and 16.7% not implemented and other 16.7% scheduled for implementation from Y3. The indicator which was not implemented is related to “the evidence based intervention package to target the vulnerability groups (mainly associated to socio-economic and occupational factors)”. This indicator is important in low transmission to enable the adjustment of appropriate malaria control measures to target vulnerability groups. Its effective implementation is strongly connected to the availability of micro-stratification maps not yet produced. The other indicator not yet implemented “establishment of regional experience sharing malaria control initiative” is planned from Y3. The latter is of regional interest for setting up a regional course on malaria control and elimination. The project may collaborate with other institutions such as Pan-African Mosquito Control Association (PAMCA), IHI and Swiss TPH head quarter to establish regional malaria courses or Webinars or tailor on existing or similar initiatives to the regional training needs in malaria control. So, it is recommended that TEMT project complement existing initiatives or specify how their platform will not be a replication.

Table 1: Progress in achievements of outcome and output indicators**a. Outcome indicators**

Outcome indicators		Status of implementation
Outcome1: The Government of Tanzania has mapped continuously malaria risk in all 184 districts, and implemented appropriate national-level and district level strategic control options based on the National Malaria Strategic Plan in 15 districts.		
1	Number of districts for which regular risk level is mapped to ward level.	Fully Implemented
2	Number of districts with specific implementation plans addressing local malaria risk factors effectively; stratified by level of risk.	Not Implemented
3	Number of districts with larviciding operations	Fully Implemented
Outcome 2: The Government of Tanzania has implemented a multi-sectoral action plan by including non-health sectors and particularly the private sector in the malaria elimination effort, and extended this approach to cross-border and regional initiatives.		
4	The involvement of non-health actors in malaria control has become effective in Tanzania, especially for urban development and major infrastructure projects.	Partially implemented
5	The involvement of private sector actors in malaria control has become effective through a national multi-sectoral leadership body.	Partially implemented
6	Cross-border malaria control activities have been implemented.	Partially implemented
7	A regional initiative in malaria elimination has been setup and is functioning effectively.	Partially implemented
Outcome 3: Tanzanian academic institutions, in collaboration with Swiss Partners, provided high quality data and experience to optimally inform national and global malaria control and elimination policies, allowing accelerated progress towards malaria elimination.		
8	Tanzania's National Malaria Strategic Plan always state-of-the-art and evidence-based.	Fully Implemented
9	All Tanzanian actors working on malaria linked effectively in a common knowledge management concept (knowledge management in place).	Fully Implemented
10	Substantial contribution of Tanzanian experience towards WHO/RBM guidelines.	Fully Implemented

b. Outputs indicators

Output indicators		Status of implementation
Output 1.1. NMCP effectively supported at central level for the development, monitoring and implementation of the next National Malaria Strategic Plan, including age, gender and pregnancy risk factors.		
1	Evidence of substantial inputs into the development and implementation of the NMSP in areas of vector control, case management and M&E	Fully Implemented
2	Age, gender and pregnancy risk factors included in all processes and reflected in gender/age specific budgets.	Planned from Y3
Output 1.2: Local government authorities (PO-RALG) effectively supported to develop and implement sub-national cost-effective malaria control and elimination strategies adapted to their malaria risk level, including age, gender and pregnancy risk factors.		
3	Evidence of substantial engagement with local government authorities in developing and implementing locally relevant malaria control activities	Partially implemented
4	Age, gender and pregnancy risk factors included in all processes	Planned from Y3
5	Number of districts with evidence of malaria activities in the Comprehensive Council Health Plan (CCHP), and reflecting gender/age specific budgets) per risk strata.	Not implemented
Output 1.3: Capacity gaps related to the decentralized gender-sensitive implementation of malaria elimination activities identified and addressed at all levels of the health system.		

6	Number of NMCP staff (w/m) engaged in decentralized malaria control activities	Fully Implemented
7	Number of PO-RALG staff (w/m) trained on stratified malaria strategies in 3 districts	Fully Implemented
8	Number of PO-RALG staff (w/m) trained on gender aspects related to malaria in 3 districts	Not implemented
Output 1.4: Tanzania pilots larval source management in a way that is in line with later national upscaling		
9	Number (and proportion) of targeted councils' supervisors trained to implement effective bio-larviciding	Fully Implemented
10	Proportion of identified productive breeding sites treated with quality bio-larviciding according to SOP	Fully Implemented
11	Proportion of larval density reduced in councils implementing biolarviciding	Fully Implemented
Outputs 2.1.: Strong partnerships built by NMCP and PO-RALG with non-health actors in the public and private sectors, following an effective multi-sectoral action plan.		
12	Effective regular engagement of non-health public sectors	Partially implemented
13	Effective regular engagement of the private sector in malaria control activities through a national multi-sectoral leadership body.	Partially implemented
Output 2.2.: Tanzania has implemented effectively cross-border initiatives to reduce the impact of human movements on the spread of malaria, and has engaged in a regional malaria elimination initiative.		
14	Coordinated cross-border malaria control activities implemented	Not implemented
15	Tanzania is an active member in a regional malaria elimination initiative	Fully implemented
3.1. A comprehensive knowledge management strategy including NMCP and all Tanzanian scientific institutions working on malaria is designed and implemented and linked to global knowledge sharing initiatives.		
16	Number of annual knowledge-sharing events organized on malaria (two presentations to malaria events in Tanzania).	Fully Implemented
17	Number of scientific and technical events in which the Tanzanian malaria control experience is presented to a global audience.	Fully Implemented
18	Number of scientific publications presenting the Tanzanian malaria control experience to a global audience	Fully Implemented
Output 3.2.: Magnitude and location of malaria vulnerable groups, especially socio-economic and occupational ones, are identified in low transmission areas by using existing malaria surveillance systems. This information is needed to target vulnerability with appropriate control measures.		
19	Identified and documented risk groups, their magnitude and location within communities	Fully Implemented
20	Identified evidence based intervention package to target the vulnerability	Not implemented
Output 3.3.: Organize one regional experience sharing initiative on malaria control and elimination, based on Tanzanian capacity and experience.		
21	Regional experience sharing initiative established.	Planned from Y3

4.1.3. The main barriers encountered during MTR period

The main barriers that affected the TEMT project during the period of review and which affected the performance of indicators are the following:

- The five months of delay in approval and signature of the bilateral agreement that guides the implementation of the project. Further delays were related to reprogramming purpose for initial activities to accommodate LSM which has to be implemented by TEMT team and endorsed by NMCP Leaders. Thus, an amendment to the contract between Swiss TPH and the Embassy of Switzerland in Tanzania was then counter signed in March 2021.

- The adjustment of scope of work initially focusing on technical support to the costing and new intervention of vector control based on larval source management to ensure that it is performed in standardized manner;
- The covid-19 period prevailing in 2020 and 2021 which restricted the population movements and organization of regional and international events.
- The initial lack of capacity of TEMT for costing LSM intervention and thus the estimation of required human resources, logistic commodities, implementation SOPs and reporting tools to be procured. This initial gap delayed the implementation of LSM intervention and this, effectively started in June 2021.

4.2. Findings to specific questions addressed by TEMT

Question1

Are the activities of the TEMT project well integrated with the national malaria control documents, especially the National Malaria Strategic Plan (NMSP) 2021–2025?

Findings

Based on the results from the desk review, the interviews of key informants mainly with TEMT Team Leader and staff, the NMCP Manager and staff and other stakeholders, the activities of TEMT project are integrated with the national malaria control documents, specially the National Malaria Strategic plan (NMSP) 2021-2025. Already, the TEMT project fits with the vision of NMCP 2021-2025 stating as “Tanzania becomes a society free from Malaria” and contribute to the achievement of the mission and goals of the NMSP. The main activities supported by TEMT project cover the main areas of NMCP including the Case management, Vector control through larval source management, surveillance and monitoring & evaluation and Programme management. In terms of technical support, TEMT project supported the development of NMSP 2021-2025, the Malaria business plan 2021-2025, the Malaria Programme review in Zanzibar, commissioned the University of Dar es salaam for the digitization of malaria microstratification under theDHIS2, NMCP malaria composite database, development of the concept notes and grant application request to GFATM, the stratification of malaria risks at ward levels in 184 districts, and contributed to acceleration of digitization of micro-stratification under the DHIS2 composite database.

The project supported also the development of roadmap and framework of End Malaria Council (EMC) which will be launched in 2023, the advocacy to integrate Cross Border Malaria Control initiatives into the bordering Councils (Lake Victoria and Eastern councils) and the dissemination of best practices of Tanzania in malaria control through national, regional and international events as well as through peer reviewed journals. In terms of supporting implementation of malaria control interventions, TEMT project supported the costing and scale-up of IPT during infancy (IPTi), IPT in school-aged children (IPTsc) and seasonal malaria chemoprevention (SMC) and also conducted four rounds of IPTSc among school children in Kibondo DC (Kigoma Region). In vector control, the TEMT project supported the development of standard operating procedures (SOPs), adopted NMCP’s SBCC materials for the launch of LSM and M&E tools for LSM intervention which is implemented before and after rain season. A support was provided to NMCP and PORALG to carry out a pilot phase using *Bacillus thuringiensis israelensis* (Bti) produced locally in three districts of Tanga region (Lushoto, Handeni and Tanga City). This support covers the procurement of products, the operation costs and monitoring of the entomological impact in collaboration with Ifakara Health Institute (IHI). Already, two rounds of eight weeks were carried out in June-July and October-November 2023. Despite the WHO 2013Operational manual on LSM¹ not recommending LSM in rural settings, the LSM implemented in Tanga region complies with the national malaria risk stratifications for implementation of larviciding: a. focal in very low transmission, seasonal in low transmission, targeted in moderate and high transmission, and blanket larviciding in urban settings. In rural districts of Lushoto and Handeni, larviciding

¹ <https://apps.who.int/iris/handle/10665/85379>. Also reiterated in *WHO Guidelines for Malaria* - 3 June 2022 <https://apps.who.int/iris/bitstream/handle/10665/354781/WHO-UCN-GMP-2022.01-Rev.2-eng.pdf>

is a community based seasonal intervention focusing on mosquito breeding sites mapped by community members themselves before and after the rain season.

All the activities above mentioned are fitting with the core (Integrated Malaria Vector Control; Malaria Diagnosis, Treatment & Preventive therapies; Surveillance, Monitoring & Evaluation) or supportive strategies (Commodities and Logistics Management; Social Behavior Change & Advocacy; Program Management) stated in the NMSP 2021-2025.

Conclusions

- TEMT's main activities are well integrated in NMSP and comply with the national policy guidelines;
- Providing technical assistance to NMCP which is normally and officially requested in the areas of case management, vector control, surveillance Monitoring & Evaluation and Programme management. A technical assistance is also provided to ZAMEP on request;
- The international partners and other relevant organizations, and funders acknowledge and appreciate the support provided to NMCP and ZAMEP by TEMT. The partners are benefiting some of outcomes from TEMT support, such as NMSP for identification of gaps and reallocation of funds, micro-stratification of malaria risks for identification of priorities for deployment of appropriate interventions, etc.

LSM is recommended in NMSP to be implemented in all malaria transmission and operational strata, and the LSM was initially planned in 15 councils. The costing and available budget constrained to reduce the targets to three districts of Tanga region. The process to adjust the number of districts to be targeted for LSM delayed the project activities for almost 6 months.

Question 2

Is the collaboration with the staff of the National Malaria Control Programme (NMCP) going well and how could it be optimized?

Findings

The collaboration of TEMT staff and the NMCP central staff is going well and was rated from 3-5 (1-unacceptable, 5 – Excellent). Therefore, the collaboration was rated better with decentralized NMCP staff (District malaria focal person and District Vector Control Focal person) than central staff, 4 to 5 rates. The strong collaboration is based on historical relationship with STPH by providing technical assistance from 2002 with the NETCELL project which impacted the scaling up of bed nets distribution and usage countrywide. The collaboration is often associated with individual relationship, formal requests from NMCP for assistance, and implementation of programme activities. The primary activities which marked the collaboration with TEMT project were the development and review of NMSP 2021-2025, the stratification of malaria risk strata, the dissemination of best practices in malaria control in Tanzania, the advocacy for integration of cross border malaria initiatives into the 34 border councils, establishment process of EMC, and in case management through ICCM and chemoprevention using Intermittent Chemo-prevention specially in schools. TEMT project was the first implementing partner engaged in Laval source management. For this intervention, the collaboration was strongly highlighted from the planning with the development of SOPs, SBC guidelines and materials, training modules and costing of community based LSM intervention. Another best practice illustrating the good collaboration is the regular support from NMCP by availing a vehicle to TEMT staff for field visits as the project doesn't have a transport vehicle for field works.

The main gap in collaboration reported by the informants were inadequate involvement of NMCP central staff during the implementation of LSM (for instance the field supervisions, feedback meetings), the transparency in communicating the available funds and annual expenditures of TEMT budget, and full knowledge and capacity transfers to NMCP staff. They also reported the lack of clear information on how

STPH is collaborating with TEMT to implement the project activities. The collaboration may be optimized through: 1- more involvement of NMCP staff during planning and implementation of TEMT project activities, 2- transparency on the actual funds available and annual expenditures of the project, particularly for LSM, 3- Strengthening capacity for NMCP staff members extended in short, mid and long terms. In short and mid-terms, the capacity may be focused in data management and GIS based mapping. However, some acknowledged the knowledge transfer performed by TEMT was based on individual initiatives or requests.

Conclusions

- The collaboration between NMCP staff and the project is going very well but with different rates among some respondents from different NMCP Units.
- There is a need to clear some misunderstandings on the mandate of the TEMT project vis-à-vis the opportunities at Swiss TPH as an institution
- There is a need for assessment the needs of NMCP in capacity buildings of staff and build upon a comprehensive programme of capacity development integrated into short, medium and long terms.

Recommendations

- Ensure strategic and proactive communication by TEMT staff to clarify to MoH/NMCP and PO-RALG central and at the regional level the relationship between Embassy of Switzerland in Tanzania, Swiss TPH and TEMT project staff and their mandates;
- Support training of NMCP staff - short term training mainly in data management and GIS based mapping or other fields requested by NMCP;
- Define specific measurable indicators for mentorship, capacity building for long term trainings such as MSc/PhD and identify area of required expertise, targeted # of staff, and determine the skill uptake/effectiveness, satisfaction measurement, etc.);
- To articulate in project document or logframe of actions the contribution of Swiss TPH as an institution in capacity building, i.e., certificate/degree per level or scholarships delivered to NMCP, PO-RALG as well as TEMT project staffs;
- Ensure that NMCP are aware of TEMT's mandate in strengthening the required skills for NMCP staff;
- Project should make efforts to start using their own vehicles, unless the running costs for NMCP vehicles aren't high compared to purchasing and related tax costs.

Selected quotes

- “[name withheld] from TEMT has been an asset to us, we continue to appreciate [their] support, it would have been nice to transfer some of [their] skills internally” *KII-Respondent*
- “For all the years, not only through TEMT, with Swiss's presence at NMCP, one would expect that they have also developed the required [internal NMCP] capacity and not only providing technical support – not just doing it for them” *KII-Respondent*
- “I recommended and requested project to support one of NMCP member for a PhD opportunity using the data to be generated by the project but that didn't happen. [...]it wasn't such a friendly exchange via emails; it is not fair” *KII-Respondent*
- “We will also appreciate even short term trainings to ensure that our staff are equipped with some skills based on technical assistance provided” *KII-Respondent*
- “We were promised that our units will be further trained, but that hasn't happened yet, we remain optimistic it will happen” *KII-Respondent*

Question 3

Is the collaboration with the staff of the Local government (PO-RALG) going well and how could it be optimized?

Findings

The collaboration with the staff of the local government (PO-RALG) is going well but rated lesser than the NMCP staff, 3-3.5 rates. The consistent collaboration happened more during the planning and the launch of LSM. During the planning phase, PO-RALG staff participated in the training of CORPS, integrated supervision and internal meetings. PO-RALG appreciates the Embassy of Switzerland in Tanzania through TEMT project as the first partner engaged in implementation of pilot larviciding by providing technical assistance and financial support in three districts with different epidemiological risks of malaria transmission (low, moderate to high and urban). The findings through this phase will be of capital importance for decision making in scaling up larviciding intervention and mobilization of resources from other partners. PO-RALG is mandated to oversee the LSM implementation at regional and council levels. However, PO-RALG deplored that the collaboration with TEMT staff was weakened during the implementation phase, and this was similar perceived both by staff from central, regional and district levels. The involvement of PO-RALG has to be optimized by: 1- improving the transparency on the actual funds for LSM and sharing this information with PO-RALG; 2- more involvement of PO-RALG-HQ staff in supervision of LSM activities preferably twice during the LSM round, and 3- regular feedback sharing and increasing the involvement of PO-RALG members at the region and the council levels (DED, RC, DC) in LSM activities. A comprehensive and regular feedback meeting after each LSM round and held at regional level was emphasized by most of interviewed informants.

Conclusions

- The collaboration between PO-RALG staff and the project is in general going well, except for some miscommunication;
- However, PO-RALG thought the collaboration can be optimized with more involvement in budgeting and implementation of LSM, and accommodate more team members from PO-RALG central office during LSM field supervisions.

Recommendations

- A meeting should be held between NMCP, PO-RALG and TEMT project to clarify on the number of PO-RALG staff that can be accommodated during field supervisions and attendance to the feedback meetings at regional levels. The budget constraints on the number of staff members from both NMCP and PO-RALG that can be accommodated have to be considered.
- A meeting should be organized between TEMT, PO-RALG, and NMCP to discuss how best to work together and the project should involve PO-RALG at the central and council level as much as possible for sustainability and ownership of intervention in the future.
- Conduct training of the six PO-RALG health staff as planned in the project log-frame.

Selected quotes

- “There is no any outstanding issues with PO-RALG we work very closely with them” *KII-Respondent*
- “We were involved at the beginning, but not so much involvement during implementation. We would appreciate if more staff members will be involved in implementation and supervision”, *KII-Respondent*
- “I feel like we should have a breakdown of the funds used to support LSM implementation rather than just a lump sum” *KII-Respondent*

Question 4

Is the project on track delivering on its outcomes and outputs? (also take into account sustainability of achieved results)?

Findings

The project is on good track for delivering its outcomes and outputs. Despite the delay, the context of covid-19 prevailing in 2020-2021, and the adjustment in its initial scope of works, the project already completely achieved 50% and 52.4% of outcome and input indicators, 40% and 14.3% are partially completed respectively. Only one outcome and 3 output indicators were not implemented due to the precondition of digitalized micro-stratification of malaria risk factors as planning tool to be integrated into the district plans. The other indicator not implemented is associated to the output of outcome3 for evidence based intervention package to target the vulnerability groups (table1). Other outcome and outputs that are behind for fully implementation are related to the outcome2 which require political advocacy at high levels through MOH-NMCP, PORLAG and EAC. Most of technical works were completed for the establishment of multi-sectoral collaboration framework (EMC) and the support of cross border malaria initiatives. This level of achievements is also perceived by interviewed key informants. To some extent the community is well informed on the LSM and perceive impact on reducing mosquito density and malaria cases. A number of strategic plans or frameworks have been developed and signed at high levels and waiting official launch to enable the implementation of connected activities such as the case studies. For instance, the End Malaria Council (EMC) as government body to coordinate and to mobilize national resources from private and non-health sectors was signed and will be launched in 2023. The GLMI strategic plan for EAC countries was signed and is awaiting its fully functional phase. The border councils were supported to integrate cross border malaria control initiatives into their comprehensive health plans.

For sustainability, PORALG is planning to mobilize Councils to integrate the budget for LSM into their annual budget to cover the cost of products, sprayer pumps, PPE and transport means for CORPs such as bicycles. PO-RALG would like also to engage discussions with manufacturers to avail different packages of larvicide (packs of 1 liter) for social marketing and distribution in private sectors. Community also expressed their willingness to pay bio-products in order to sustain the gains in malaria reduction and mosquito nuisance overseen during the last two rounds of project implementation. The clear SOPs, the guidelines and transfer of capacity to local CORPS for identification of mosquito breeding sites, larval stage and LSM techniques will support the sustainability of this intervention.

Conclusions

- The project is on track delivering on its outcomes and outputs. More acknowledgement on technical assistance provided to NMCP and ZAMEP was perceived from interviews.
- There is a strong will from PORALG and plans to intergrade LSM costs under council's budget
- Different plans for sustainability are waiting for after the official launch of EMC
- Some community members are willing to pay for larvicide products but request special packaging and subsidies.

Recommendations

- Close follow up and support the process for official launch of EMC and functioning of multisectoral collaborations;
- Support the functioning of cross border initiatives and its advocacy through policy dialogue and case studies;
- Introduce and support more SBCC through mass media and community mobilization mainly targeting general community members in districts implementing LSM. This may be planned and implemented in collaboration with NMCP and other development partners with focus in 3 districts implementing LSM;
- Improve field supervision of TEMT staff at least twice per LSM round;

- Make sure that the CORPs implementing LSM are different from those supporting the impact monitoring. This is to avoid having the same CORPs implementing LSM and also conducting entomological monitoring in the three districts;
- Ensure strong involvement PO-RALG at all levels of LSM operations to support sorting out raised issues and anticipate the full introduction of LSM into the CCHPs and ensure effective implementation;
- Improve commitment/engagement of some of WEOs, VEOs at the district/regional levels
- Consult PO-RALG about a possibility to review the PO-RALG document on costing of LSM and provide additional inputs according to the lessons/findings from the TEMT project phase 1.

Selected quotes

- “Yes, we think the project is on the right track despite the delay at the start due to a change in scope of work” *KII-Respondent*
- “Yes, to some extent the project has prepared SOPs, trained community – this is important in sustaining the project” *KII-Respondent*
- “Yes, I think we are well trained and the community is now very aware of the LSM project” *KII-Respondent*
- “Yes, initiatives like End Malaria Council will help sustain implementation of LSM in the country” *KII-Respondent*
- “Yes, LSM is government’s priority, councils are now required to include larviciding in their annual budget” *KII-Respondent*

Question 5

Is the project making an efficient use of its resources and does it represent good value-for money for Swiss taxpayers?

Findings

The project is making efficient use of its resources. This was highlighted by different KII and FGD participants due to the participatory approach used by TEMT project from planning, implementation and evaluation of project activities. The transparency was also noted and the use of less resources with high achievements in comparison with other big funded project in the country, and despite the extension of scope of work with LSM. This intervention is costing almost 2/3rd of the planned budget. The project also represents good value-for-money for Swiss taxpayers as the resources reach out the beneficiaries with impact directly perceived by the community members in reduction of malaria and mosquito nuisance in districts benefiting from LSM. As well, other local authorities DMO/RMFP/DMFP, DVCOs/WEO/VEO, all also acknowledging the impact on the reduction of malaria cases due to LSM.

The results and evidences generated by funded activities are used for resource mobilization or guiding the commitments of other partners (GF, PMI, etc.). For example, the NMSP 2021-2025 which guides other partners in identification of financial gaps and areas of priorities for deployment of recommended interventions, the micro stratification maps and tools guiding the status of distribution of malaria burden and tailored interventions to be deployed. The dissemination of research findings also supports and guides introduction of innovative malaria control tools for instance bio-larviciding. However, the biolarvide products used for LSM are not WHO-PQ and are of some concerns to primary partners due to the compliance to their restricted regulations and requirements for disbursement of funds. For SDC, the support of LSM was based on the country priorities and approval of the products. The aim of the pilot phase is to generate local evidences from different malaria transmission strata and thus, to guide the scaling up phases and mobilization of other partners. Therefore, more data might be required specially on LSM at the end of the project, suggested some respondents. TEMT will appreciate an opportunity to increase staff members to increase field works, one for vector control and another person for SM&E.

Conclusions

- Based on achievements reached in two years, the project is making an efficient use of its resources despite the delay in starting the project activities and it is representing good value of money;
- The “small” budget allocated has helped to provide technical support at NMCP&ZAMEP and to implement the pilot phase of LSM;
- Some decision makers have raised their concerns on lack of transparency on funds especially for LSM during implementation phase;
- A clear assessment needs to be done on LSM implementation and considering several factors such as data quality, supportive supervision and coverage of breeding sites mainly in Tanga City.

Recommendations

- Continue to provide technical support with increased transparency in planning, implementation, and evaluation of operational annual plans and budgets;
- More involvement of PORALG for effective ownership of LSM;
- Perform cost-benefit analysis now and at the end of the 4 years of LSM intervention;
- Discuss with PO-RALG if compensations to WEOs/VEOs can be dropped out in the reviewed SOPs to reduce the cost for sustainability of LSM intervention during its extension phase;
- Consider providing support for TEMT to recruit more staff members based on the next revised work plan and especially to support close field supervision of LSM implementation;
- Support mobilization of human and financial resources to sustain the achievements and scaling up of LSM in other districts.

Selected quotes

- “The project has accomplished a lot based on the small budget allocated”, *KII-Respondent*
- “Great lessons will definitely come out of this project” *KII-Respondent*
- “We have already experienced a decline in mosquito population” *FGD-Respondent*
- “We have already experienced a decline in number of malaria cases” *FGD-Respondent*
- “It is not fair to judge now – perhaps after 4 years – once we assess the outcomes (i.e., decline in malaria cases, skills acquired by stakeholders at the region level, lessons generated, etc.) based on LSM implementation” *KII-Respondent*

Question 6

Is the dissemination effort (locally, nationally, and internationally) of the TEMT project allowing to capitalize optimally the experience and lessons learned by the project?

Findings

The dissemination effort of the TEMT project allowed to capitalize the experience and lessons learned by the project at local, national and international levels. The dissemination was optimized more in 2022. All respondents interviewed agreed with this capacity of dissemination played with TEMT Team and partners:

At local and national levels, 23 presentations and technical reports were produced in the areas of: 1- case management, 2-Cross border collaboration, 3- Multi-sectoral collaboration (EMC framework and roadmap), 4- SM&E, and 5- Vector Control (LSM) through feedback meetings, trainings, advocacy meetings and development of SOPs.

At National level, dissemination was performed through NIMR annual symposium, TWG for Vector Control and Case Management (other SM&E and SBCC are cross-cutting and members attending the major two working groups), and World Malaria Day;

At international level, 7 scientific abstracts were published at ASTMH (4), ECTMIH (1), PAMCA (1), RBM (1) and an article published in SDC health network news. The TEMT staff also contributed to the publication of 8 papers: 2020 (1), 2021 (0) and 2022 (7).

Conclusions

- The project has disseminated the project progress and country best practices at national, and international levels and less at local level with target of lay communities in LSM implementation districts;
- Different stakeholders and wide technical audiences were targeted and reached out to during dissemination;
- The project has capitalized from the feedback provided through supportive supervision and/or Malaria Technical Working Groups (VC and CM);
- More feedback sessions with different stakeholders might be necessary specially for LSM findings;
- The involvement of NMCP to support dissemination has worked well encouraging more involvement of PO-RALG in future dissemination events.

Recommendations

- Continue to encourage NMCP representative(s) to contribute to and even lead the presentation of TEMT findings at VC TWG and other events via conferences;
- Continue providing updates via TWG meetings regularly and participating in the NIMR annual symposium for National dissemination;
- Ensure that feedback is provided to simultaneously to MoH and PORALG at central, regions, councils levels and other partners involved in implementing TEMT activities;
- Optimize the effective functionality of LSM Task Force (not currently functional) and the continuous supportive supervision;
- Organize regular, comprehensive feedback meetings on LSM at least before and after each LSM round respectively at regional and district levels.
- Ensure all intended stakeholders receive feedback, particularly the representative of community members in districts implementing LSM.

Selected quotes

- “Yes, in fact, we have asked them that the member of NMCP should be presenting during VC TWG – the project is doing that and even in some of the conferences” KII Respondent.
- “Feedback meetings after supervision are very important, we hope that the project acts on the report prepared”. KII Respondent.
- “Perhaps, we should be starting making a follow up on the implementation of feedback provided to the project during supervision visits” KII Respondent.
- “There should be an LSM Task Force – for the project to use this forum to discuss challenges and solutions more frequently than waiting to present at the VC TWG” KII Respondent

5. Analysis and interpretation

5.1. Achievements of project indicators

5.1.1. Contribution to the malaria impact indicators

The TEMT project aimed to contribute to the achievement of four malaria impact indicators by 2024. The DHS-MIS 2022 survey indicated that two indicators measured (all causes of mortality and parasite

prevalence under 5 years) exceeded the targets of TEMT project. The all causes of mortality among children under 5 year olds were reduced by 35.8% (67/100: 2027 to 43/1000: 2022) while the target was a decline of 25%. As well, the annual parasite incidence rate declined by 36.4%, from 96/1000 to 61/1000 populations (HMIS/DHIS2). The trends showed by the above two indicators represent a good indication for the potential changes in transmission intensity in case the interventions are maintained, extended and supplemented by further innovations. The other two indicators, showed a slight increase instead of decline pattern. The parasite prevalence in children under 5 years changed from 7% to 8.1% with an increase of 14.2% (DHS-MIS 2022) while, it was expected a decline of 43% (4%). The change of districts from high to moderate malaria transmission intensity increased also by 0.8% (from 116 to 117 districts, HMIS/DHIS2) and it was expected to achieve a reduction of districts with high malaria intensity by 63 % by 2024 (from 116 to 60 districts). It is evident that the two targets may be not achieved by the end of the project in 2024.

5.1.2. Achievements of outcome and output indicators

As indicated above, a total of 31 indicators were planned in the revised TEMT project log frame. Out of the planned indicators, 51.6% were fully implemented, 22.6% partially implemented, 16.1% not implemented and 9.7% scheduled for implementation from Year3. For the 21 output indicators, 52.4% were fully implemented, 14.3% partially implemented, 19.6% not implemented and 14.3% planned from year3 of project timeline (figure 2). In total, one indicator of outcome1 and 3 output indicators associated to outcome1 were not implemented due to the precondition to digitalize micro-stratification of malaria risk factors as a planning tool to be integrated into the district plans. Another indicator not implemented is associated to the output of outcome3 for evidence based intervention package to target the vulnerability groups (table1). The planned 15 districts will be implemented during the remaining period of two years as prior-works are in good progress. Therefore, a readjustment of number of districts to be targeted in year 3 and Y4 has to be discussed during the annual operational plan as the five districts planned in 2022 were not done.

The primary challenges are related to the full achievement of the indicators planned for the outcome2 which require political advocacy at high levels. Most of technical works were completed for the support of cross border malaria initiatives and multi-sectoral collaboration with non-health and private sector partners. The case studies planned for the above outcome were delayed due to the lack of framework body (End Malaria Council) or the governing organization is not well functioning (GLMI Secretariat-EAC). A political advocacy has to be played by the Embassy of Switzerland to the respective political leaders (MOH, PO-RALG, EAC) to find out the ways how the planned activities will be implemented in due time. The output indicators partially achieved or not implemented are mostly linked with the challenges mentioned in outcome indicators. Other three output indicators are planned from year3.

Therefore, the output indicator related to “Regional experience sharing initiative established” may be achieved through the collaboration with research institutions (IHI and NIMR) usually having past experience in organizing similar trainings, with strong regional and international connections. The advocacy and the assessment of needs of this training may be carried out through the framework of cross border malaria control initiatives.

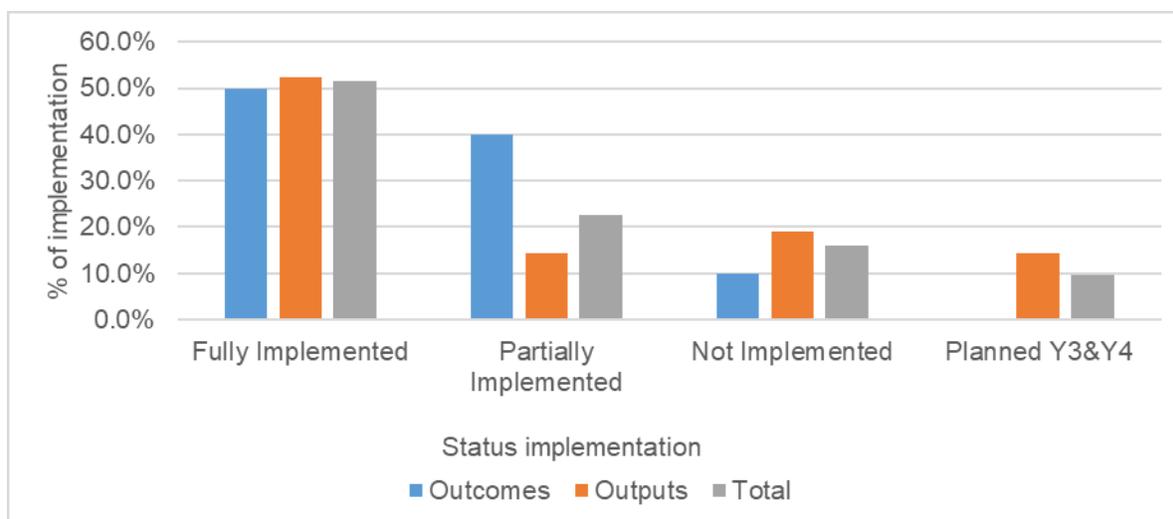


Figure 2: Status implementation of outcome and output indicators

5.1.3. LSM preliminary impact in 3 districts

The review team performed preliminary check on the performance of LSM project in Tanga based on a) anopheles larvae data shared by the TEMT project, and b) malaria incidence per 1000 population, all ages, below and above 5 years.

a) Observation based on monthly malaria incidence data

The initial visual inspection based on DHIS2 - monthly malaria incidence data per 1000 population indicate some decline on malaria incidence after round 1 and 2 across the three districts (Figure 3). It is important to note that a decline of malaria is also observed throughout the country, so, there is a need to quantify the contribution of this intervention.

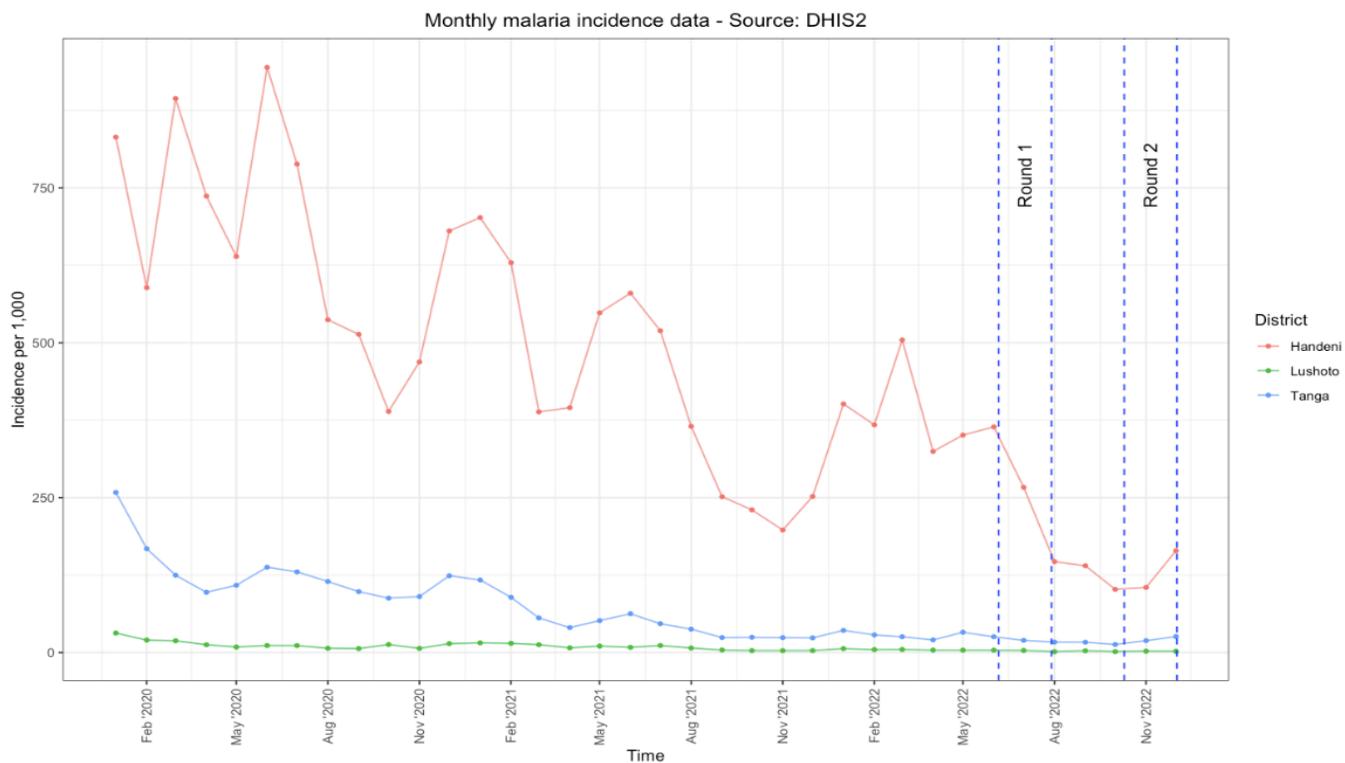


Figure 3: Time series plot for malaria incidence per 1000 population before and after first and second rounds for LSM in three districts, Tanga.

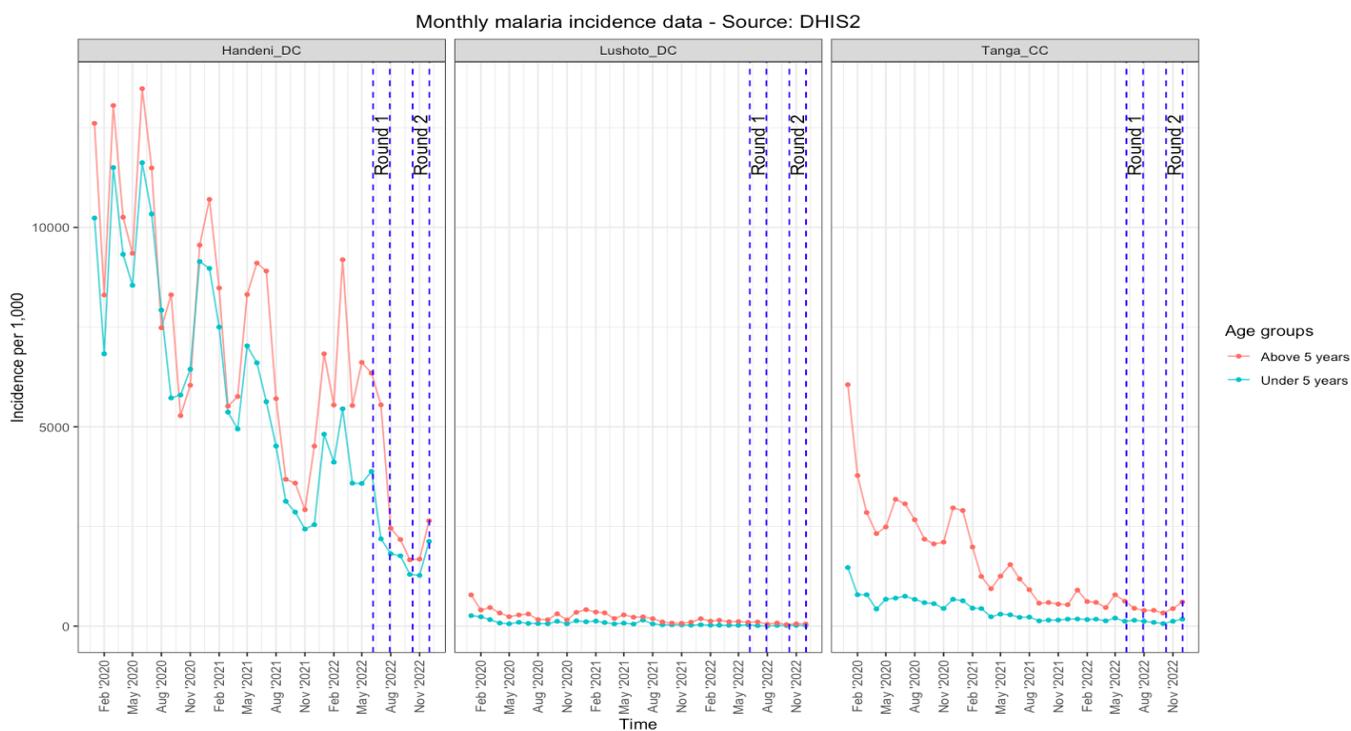


Figure 4: Malaria incidence trends for under and above 5 years of age across the three LSM districts, Tanga region.

b) Figure Weekly trend based on anopheles larvae data

The weekly trend graphs based on anopheles larvae data shared by the TEMT project indicate a reduction of larvae density over time after the LSM implementation - round 1 and round 2 (Figure 4). It is important to note that the quality of the data should be checked and verified before the final conclusion can be made regarding the impact of LSM. However, initial check based on the project data indicate a reduction of larvae density over time.

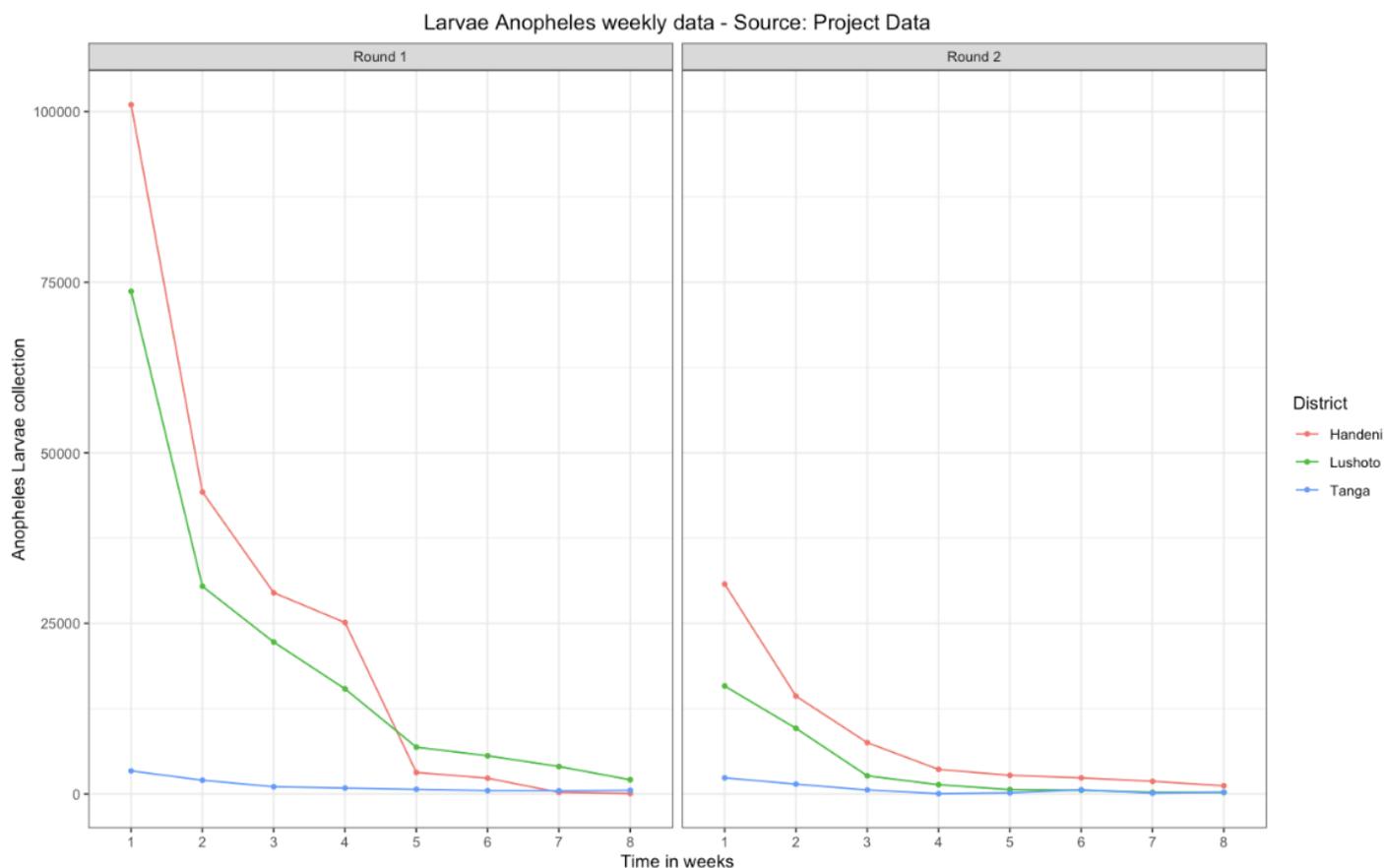


Figure 5: Trends of larvae density over time after the implementation of LSM in three districts, Tanga (round 1 and 2)

One important recommendation is for the project to make sure to quantify the contribution of LSM in reducing malaria transmission based on entomological and epidemiological indicators. The same should be performed by the commissioned supervision team. It is also very important to report on the data quality used to perform the analysis.

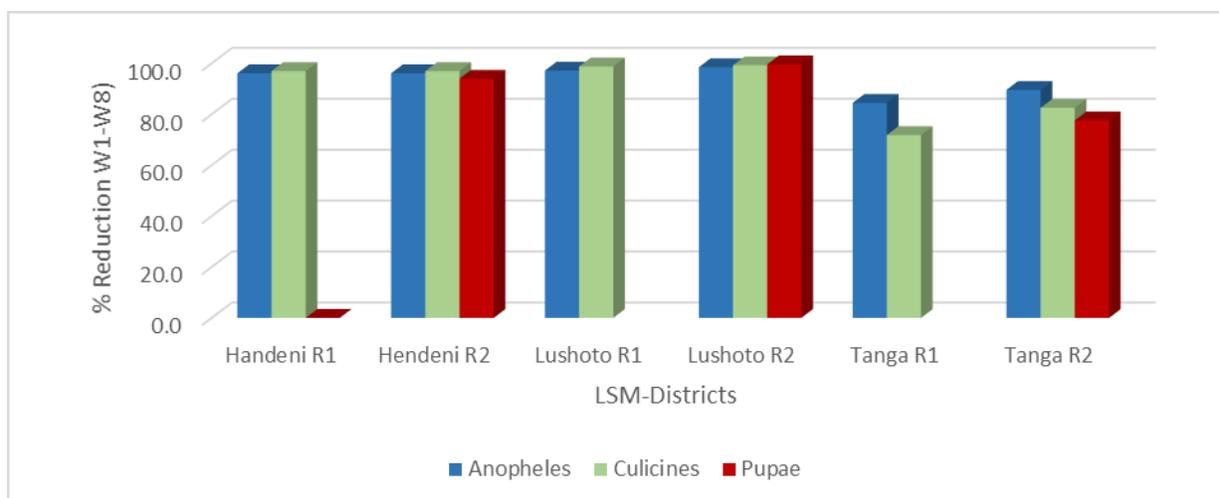


Figure 6: Trends of reduction of larval and pupae density in three districts of Tanga

The two consecutive rounds of LSM showed a drastic reduction of larval mosquito density on anophelines, culicines larvae and pupae when the mosquito larvae collected at the 1st week are compared to those caught at the 8th week of LSM (Figure 5&6). This reduction was above 95% in two rural districts of Lushoto and Handeni and ranging from 71.8% to 89.6% in Tanga City. An investigation of the coverage of breeding sites during the spraying and monitoring of impact and the quality of larvicide application in Tanga City has to be conducted during the third LSM round planned from July to August 2023. The strengthening of supportive supervision in Tanga city will enable the improve the impact of LSM on larval density and to understand the reasons of low impact in urban setting as compared to the rural districts.

5.2. Management and finance capacity

5.2.1. Human resources

Two project team members, Project Director and Finance Director are based in Basel at Swiss TPH with level of effort charged to the TEMT project, In the country, TEMT project is managed by a team of six persons, respectively a Team Leader who is overseeing the coordination of project management; two technical advisors, one for vector control and another for case management; in Charge of Surveillance, Monitoring & Evaluation; a Senior Financial and Administration; and Financial and management Officer. The initial mandate of the six staff is to provide technical assistance to NMCP in the areas of malaria case management, vector control, SM&E and programme management specifically in planning, development of guidelines, SOPs, etc. Therefore, the adjustment of their scope of work of technical assistance to mosquito larval source management increased their load of work. In addition, the technical advisor in vector control is at the same time a PhD student and combining the academic/research obligations to the TEMT assignments. The PhD research project is very relevant and in-line with TEMT's project objectives. This is highly encouraged as one way to build local capacity for the sustainability of the project. The student is also able to work remotely when in Basel. An adjustment made to the scope of work required an additional staff member to support LSM field supervision – which is still a lot of work for one person in three districts. The respondents interviewed recognize that they are overloaded by the office and field works and meetings. The subnational partners for LSM implementation highlighted the lack of TEMT central staff in field visits specially the supportive supervisions and feedback meetings. An additional of a staff member especially one for vector control ill enable the team to increase their frequency in field work supervision and alleviate the workload. Other consideration should be given to increase or maintain the number of staff members depending on the workload and justifications from the TEMT team when submitting the work plans for the second phase.

5.2.2. Reflection on logistics

At central level, the primary issue is the lack of TEMT's own vehicle to facilitate the field and other activities requiring transport. However, for any planned field visit, TEMT staff normally request a vehicle from NMCP and the support is usually provided on time. TEMT team appreciates this good collaboration with NMCP. The team is waiting on tax exemption approval to be able to procure a vehicle per the allocated budget. The TEMT project has also considered another option which is the transfer of a vehicle from HPSS project also funded by the Embassy of Switzerland in Tanzania and implemented by another department of Swiss TPH. Based on their initial assessment the car is in good condition and the project is ready to sort out the required logistic for the transfer of the vehicle. Other logistic issues were reported from the districts implementing LSM. They are related to the a) needs of a transport support (either motorbike, or bicycle or funds) by CORPS to reach remote breeding sites, b) shortage of reporting books in some wards, c) the lack of Personal Protective Equipment (PPEs), rain boots and coats and form of an ID (e.g., reflector jackets). The low quality of sprayer pumps purchased for spraying the bio-larvicide was also highlighted. It is important to note that some CORPs were aware of the fact that using PPEs was not recommended to avoid creating misperception by the community regarding the safety of the intervention. Perhaps, more information should be shared by CORPs regarding the use of PPEs. The lack of dedicated storage rooms for the bio-larvicides was also mentioned at WEO levels. The products are usually stored in the WEO's office and they have indicated that the smell of the product is not so friendly. PO-RALG is willing to facilitate the storage of bio-larvicides in government warehouses and storages. It is important that the logistical issues raised by CORPs be discussed between TEMT project with NMCP and PORALG, to provide feedback to the CORPs.

5.2.3. Monitoring and Evaluation

For the LSM intervention, the guidelines, SOPs and SBCC materials were developed to guide the implementation and monitoring of LSM implementation. The Monitoring and Evaluation is organized through the following activities:

- Progress feedback meetings at the end of each LSM round of 8 weeks. Therefore, these meetings are not regularly conducted or not comprehensive mainly they are attended by DMO, DMFP/CMFP and DVCO. The last feedback meeting was conducted in Dar-Es Salaam and respondents would like to organize the feedback meetings in Tanga. During the feedback meetings, a focus has to be put on participatory discussions on progress achieved, the challenges and appropriate solutions and ensuring the representation of all parties involved in LSM. PORALG central level recommended to be involved more and if possible to organize the feedback meetings before, during, and after the LSM implementation.
- The integrated supportive supervision is planned at the end of each LSM round. The respondents would like to have at least supportive supervision at the beginning, mid, and the end of LSM round.
- The entomological monitoring of the impact of LSM is ensured respectively by CORPs and independently by IHI. The data quality assurance is required from CORPs due to the multiple paper based reporting forms to be completed and verified at different levels and sometimes overloaded by the weekly reporting frequencies. The digitalization of reporting process from CORPs may facilitate the prompt reporting and cleaning of data on time to minimize errors.
- The IHI is supporting the entomological impact of LSM. This monitoring is lacking the control arm for comparison of findings. The control arm was planned in the protocol but left out because of shortage of funds. The future plan may consider this gap of control arm. The only one technician appointed at each district-council for monitoring both adult and larval mosquitoes on weekly basis claimed also to be overloaded by work which may affect the quality of data collected and coverage of breeding sites. The design may be reviewed with one technician for adult mosquito monitoring and another one for mosquito larval monitoring. The use of the same COPRs implementing LSM to evaluate its impact is a bit questionable – it is important to consider making the evaluation process completely independent from LSM implementation.

5.2.4. Budget management

For the period covered by MTR, in total 3,600,000 CHF funds have been received by TEMT project with expenditures of 2,796,441 CHF and a balance of 803,558 CHF (table 3). The budget execution in the first year of the project was low with 55% of spending rate. This was caused by the delay of approval and signature of Bilateral Agreement regulating the project. This impacted the non-execution of some activities and the delay in recruitment of new staff for key positions which explained the underspent of some budget lines. In the second year, the project experienced overspending of some budget lines due to the adjustment of some staff salaries and more costs than planned of some activities, for instance the support of some regional initiatives. There were also some activities planned and not implemented which generated less expenditure for some budget lines. The spending rate was higher in year 2 than the Year1. The spending rate of 36% in the half period of year3, displays a potential high budget execution in the Year3. The major constraints encountered was the delay of payment of the short-term consultants of IHI, the vehicle not purchased and keeping the funds allocated to the running costs of the vehicle. The budget line for communication was also under used, and the delay in supporting cross border and multi-sectoral initiatives was reported in the first half of Year3. The budget execution during the MTR period was fluctuating following different factors and the Y3&Y4 have to improve the budget management from the best practices and lessons from Y1&Y2.

Table 3: Budget and spending rates for MTR period

TEMT/Financial year	Budget	Expenditure	Balance	Spending rate
Year 1 (May 2020-April 2021)	CHF 1,308,400	715,965 CHF	592,435 CHF	55%
Year 2 (May 2021-April 2022)	CHF 1,573,800	1,335,937 CHF	237,863 CHF	85%
Year 3 (May 2022-October 2022)	CHF 2,047,120	738,696 CHF	1,308,424 CHF	36%
Cumulative Y1+Y2	CHF 2,900,000	2,057,744 CHF	842,255 CHF	71%
Cumulative received Y1+Y2+Half Y3	CHF 3,600,000	2,796,441 CHF	803,558 CHF	77.7%

6. Conclusions and recommendations

6.1. General conclusion

TEMT's main activities are well integrated in NMSP 2021-2025 and comply with the national policy guidelines. The technical assistance is normally and officially requested and needed by NMCP or ZAMEP in the areas of case management, vector control, surveillance monitoring & evaluation and programme management. The NMCP and partners also acknowledge and appreciate the quality and flexibility of TEMT support. The partners are benefiting on some of outcomes from TEMT for identification of gaps, setting priorities of interventions and reallocation of funds.

The collaboration between NMCP staff and the project staff is going very well but with different rates from good to very good (3 to 4, 1- unacceptable, 5 – Excellent) from different NMCP respondents. Therefore, there is a need for assessment of NMCP in capacity buildings of staff and earlier involvement of them in development and implementation of annual operational plans.

The collaboration between PO-RALG staff and the project is in general going well, except some miscommunications. PO-RALG was more involved in selection of region and districts for LSM as well as

during the planning phase. However, it was less informed and involved during the budgeting and implementation phase of LSM.

The project is on track delivering on its outcomes and outputs. Despite the long delay in starting the project, 51.6% and 22.6% of all project indicators were respectively fully and partially implemented. For the outcomes indicators, 50% and 40% were fully and partially implemented. For output indicators, 52.4% and 14.3% were fully and partially implemented respectively. The major activities which require political advocacy are connected to the support of cross-border and multi-sectoral initiatives. Different plans for sustainability of LSM interventions are under discussion and in good progress for instance the establishment of EMC and integration of LSM budget in CCHP as a condition for approval by PO-RALG. Distribution of bio-products through social marketing to private sectors is another way for sustainability and requiring different options of packaging from manufacturers. Other partners are awaiting the results from the pilot phase of LSM and the Pre-qualification of Bio-larvicide products for taking engagement of support.

Based on achievements reached in two years, the project is making an efficient use of its resources it is representing good value of money. The “small” budget allocated has helped to provide technical support at NMCP&ZAMEP and to implement the pilot phase of LSM as the first Government partner engaged to support this intervention. Some respondents from government institutions raised their concerns on inadequate transparency on available funds especially for LSM for implementation phase. A clear assessment needs to be done on LSM implementation and considering several factors such as data quality from CORPS, supportive supervision frequency and feedback, and the coverage of breeding sites mainly in Tanga City.

6.2. General recommendations (Short, Mid and long terms)

In this section, general short, medium, and long terms recommendations are provided. In addition, an indication of who is responsible is provided but in principal TEMT should take a lead for each recommendation.

No	General Recommendations	Implementation Timeframe			Responsible Entity
		Short (0-6 months)	Mid 6 months- 2yrs)	Long > 2 yrs	
PLANNING					
1	Prioritize in annual operation plans activities in status of “not or partially implemented and postponed” in Year 3&4.	x	x		TEMT
2	Ensure that TEMT annual activities are captured into operational annual plans of NMCP, PORALG and CCHPs for transparency with more involvement of PORALG and effective ownership of LSM intervention.	x			TEMT, Embassy of Switzerland, NMCP, PORALG
3	Introduce and support more SBCC (mass media, community mobilization) mainly targeting general community members in districts implementing LSM.		x		TEMT, NMCP, PORALG
4	Consider different LSM implementation approaches to produce general and more appropriate informative lessons to support scaling up of the LSM.	x	x		TEMT, PORALG
5	Consider targeting the potential invasion of <i>An. stephensi</i> , e.g., in border and more urban areas when planning the selection of new sites, if any, and impact monitoring of LSM, where applicable.		x	x	TEMT, IHI, NMCP, PORALG
6	Provide technical support to strengthen ZAMEP’s SME Unit per the project’s agreement with them and mainly to update malaria epidemiological profile of Zanzibar and data management.		x		TEMT, ZAMEP
IMPLEMENTATION					
1	Undertake discussions with NMCP and PORALG to find ways to improve commitment/engagement of some of WEOs, VEOs at the district/regional levels for improving LSM implementation.	x	x		TEMT, NMCP, PORALG Central + Tanga Region and districts
2	Consider collecting data electronically with a mechanism put in place to ensure cost implication, applicability, data quality and improved storage.		x	x	TEMT, IHI

MONITORING AND EVALUATION					
1	Organize a meeting with PO-RALG and NMCP to clear any misunderstanding on the number of PO-RALG staff that can be trained and accommodated for supervision and attendance to the supportive supervisions and feedback meetings at regional levels.	x			TEMT, NMCP and PORALG
2	Share short report on any trainings/ meetings involving PORALG staff to the relevant PORALG Head of Department for transparency, communication, and documentation for future reference	x	x	x	TEMT
3	Organize a meeting between TEMT, PO-RALG, and NMCP to discuss how best to work together for effective implementation and monitoring of LSM intervention, multi-sectoral and cross-border initiatives.	x			Embassy of Switzerland, TEMT
4	Involve PO-RALG at the council level as much as possible for sustainability and ownership of LSM intervention in the future.	x	x	x	TEMT
5	Conduct the training of the six PO-RALG health staff as planned in the project log-frame.	x			TEMT
6	Improve field supervision of TEMT central staff at least twice per LSM round; at the beginning and at end of each LSM round.	x	x		TEMT
7	Ensure regular checking of data generated from the LSM project for quality assurance and ensure that the overall impact will be evaluated based on data quality.	x			TEMT, IHI
8	Continue providing updates via TWG meetings regularly and participating in the NIMR annual symposium for National dissemination of TEMT findings.	x	x		TEMT, IHI
9	Discuss with NMCP and PO-RALG on how to optimize the effective functional of LSM Task Force (not currently functional) and the continuous supportive and integrated supervision.	x			TEMT, NMCP, PORALG
10	Organize regular, comprehensive feedback meetings on LSM at least before (micro-planning) and after each LSM round as end evaluation of LSM round.	x	x		TEMT
11	Ensure all intended stakeholders receive feedback, particularly the representative of community members in districts implementing LSM.	x	x		TEMT
12	Quantify the contribution of LSM as supplement intervention in reducing malaria transmission based on entomological and epidemiological indicators.		x		TEMT, IHI
13	Discuss with IHI the possibility to employ two entomology technicians per district for entomology monitoring instead of one technician: One for adult mosquitoes and the second for mosquito larval stages.	x			TEMT, IHI,
14	Avail the report on the data quality used to perform comprehensive analysis of LSM.	x	x		TEMT, IHI
15	Discuss the feasibility to integrate outdoor adult mosquito collection by the LSM supervision team. This will help to monitor the pattern of other mosquito species that developed outdoor biting and resting behaviors (e.g., <i>An. Arabiensis</i>).	x	x	x	TEMT, IHI

16	Assess the implications of using the same CORPs implementing LSM (spraying the bio-larvicide) to evaluate its entomological impact. –The impact evaluation process may need to completely be independent from LSM implementers.	x			TEMT, IHI
17	Discuss with IHI the feasibility and financial requirements to integrate a control arm for the evaluation of LSM impact.	x	x		TEMT
SUSTAINABILITY					
1	TEMT project should consider training of NMCP and PORALG staff members through short term training (mainly in data management and GIS or other field of priority identified by NMCP)	x	x	x	TEMT, NMCP, PORALG
2	Advocate to Swiss TPH the consideration of long term training support at MSc/PhD levels for NMCP and PORALG qualified staff members in addition to training other qualified Tanzanian.		x	x	TEMT
3	In future contracts with the Embassy (from June 2024 onwards), Swiss TPH can specify and quantify MSc/PhD trainings as a project deliverable and as their contribution to the project.				Swiss TPH, Embassy of Switzerland
4	Ensure that NMCP and PORALG staff are aware of TEMT's mandate in strengthening the required skills for NMCP staff and/or supporting long term training through MSc and PhD programs to avoid misunderstanding TEMT should provide more clarity regard the current two projects and the roles played by Swiss TPH vs TEMT project	x			TEMT
5	Find a mechanism to work with PO-RALG to review and update LSM costing document prepared by PORALG and already shared as a first draft with the Prime minister's office according to PORALG- HQ representative.	x	x		Embassy of Switzerland, TEMT, PORALG
6	Support mobilization of human and financial resources to sustain the achievements and scaling up of LSM in other districts or in the same districts but considering piloting the recommended approaches of LSM applications (focal, seasonal, targeted, and blanket applications), and maintaining the application of 8 weeks (before and after rainfall) vs more weeks and implementation channels (e.g., the use of existing government structures vs a non-government structures.		x	x	TEMT, PORALG, NMCP
7	Continue to encourage NMCP representative(s) to contribute to the presentation of TEMT findings at VC TWGs and other dissemination events via conferences.	x	x	x	TEMT
8	Ensure that feedback is provided to PORALG at central, regions, councils levels and other partners involved in implementing TEMT activities.	x	x		TEMT, NMCP
9	Organize an advocacy to MOH/NMCP and PO-RALG Leaders to launch the End Malaria Councils (EMC) as Government framework for resources mobilization and effective engagement of multi-sectoral collaboration with non-health and private sector.	x			Embassy of Switzerland, TEMT
10	Carry out an advocacy to EAC/Health Secretariat (GLMI) and MOH to set the implementation of cross border initiatives and case studies at high priority.	x	x		Embassy of Switzerland, MoH, TEMT

11	Organize an advocacy to PO-RALG and manufacturer of bio-larvicide products to diversify packaging and formulations for friendly handling, storage and promote selling through social marketing.	x	x	x	Embassy of Switzerland, PORALG, NMCP, TEMT
BUDGETING & LOGISTICS					
1	Improve the budget management and execution based on best practices and lessons from Y1&2 of the project.	x	x		TEMT
2	Make efforts to procure and start using own vehicles, unless the running costs are comparable with using NMCP's vehicles or make a choice to continue using NMCP vehicles given there are no challenges in doing so, or make a follow up to transfer a vehicle from another project funded by the Embassy of Switzerland in Tanzania under Swiss TPH.	x			TEMT
3	Support CORPs to reach out to restricted areas e.g., industry compounds or prisons for the application of LSM or provide training for industries, prisons and other security settings to conduct LSM on their own based on best practices generated by the project.	x	x		TEMT, NMCP, PORALG
4	Engage discussions with CORPs, VEOs, WEOs to find out the best and acceptable solutions to reach out the remote breeding habitats while considering budget constraints (options of availing bicycles or increase the number of COPS in regards to the size of covered area and geographic accessibility).	x			TEMT, NMCP, PORALG
5	Discuss with other malaria control funders the possibilities and feasibility to support integrated field supervisions, SBCC component, etc. in support of LSM- and based on their annual work plans for the next phase.	x	x		TEMT, NMCP, PORALG
6	Assess the required and gaps in number of assigned CORPs according to the mapped and size of breeding habitats per district/council. The selection of CORPs should be reconsidered to reduce dropouts encountered during the MTR period.	x			TEMT, IHI, NMCP, PORALG
7	Discuss with the MOH/NMCP and PO-RALG how to sort out the logistic issues claimed by CORPs and District malaria control teams (lack of PPE, rain coats, quality of sprayer pumps, storages of bio-larvicides, bicycles/motobikes etc..) and share the clear feedback.	x			TEMT, NMCP, PORALG
8	Support the establishment of the TEMT project's intended steering committee	x	x		NMCP, Embassy of Switzerland, TEMT

7. Annexes

7.1. List of documents consulted

1. The United Republic of Tanzania, MOH/NMCP 2020: - National Malaria Strategic Plan (NMSP) 2021–2025
2. The United Republic of Tanzania, MOH/NMCP 2020: - National Guidelines for Malaria Diagnosis, Treatment and preventive therapies
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18. Thawer, S.G, Golumbeanu M., Munisi K., Sijenunu A., et al. 2022. - Robert W. Snow^{5,6} and Emilie Pothin The use of routine health facility data for micro-stratification of malaria risk in mainland Tanzania. *Malaria Journal* (2022) 21:345
19. Runge R., Thawer SG., Molteni F., Chacky F., et al., 2022. - Sub-national tailoring of malaria interventions in Mainland Tanzania: simulation of the impact of strata-specific intervention combinations using modelling. *Malaria Journal* (2022) 21:92

7.2. List of participants to Interviews (KIs and FGDs)

ORGANIZATIONS	INSTITUTION	LOCATION	POSITION	Total participants
Government Institutions (Central)	PO-RALG	Dodoma	Malaria Coordinator	1
			Vector Control Coordinator	1
	MoH Zanzibar	Zanzibar	Director - Preventive Services	1
	NMCP-Tanzania Main Land	Dodoma	Programme Manager	1
			Head Vector Control	1
			Head of SME	1
			Head Case Management	1
			Coordinator LSM	1
Sub/Total				8
Implementer	Swiss Tropical and Public Health Institute -- TEMT Project	Basel-Switzerland	Project Director	1
			Dar-es-Salaam	Team Leader
		Technical Advisor/Vector Control		1
		Technical Advisor/Case management		1
		Finance and Administration Director		1
		Finance and Administration Officer		1
		M&E Specialist	1	
Sub/Total				7
Key Malaria Donors	PMI	Dar-es-Salaam	Resident Advisor and Malaria Unit Lead -	1
	GF	Dar-es-Salaam	Malaria Specialist HIAf2	1
	Embassy of Switzerland	Dar-es-Salaam	Head of Health Domain	1
Sub/Total				3
Relevant International Organizations	World Health Organization	Dar-es-Salaam	Technical Officer - Malaria	1
Other Institutions working on Malaria in the Country	IHI/Shinda Malaria Project	Dar-es-Salaam	Chief of Party	1
	China-CDC	Dar-es-Salaam	China-CDC staff	5
	PMI Project/TVCA	Dar-es-Salaam	Chief of Party	1
	PSI-Dhibiti Malaria	Dar-es-Salaam	Chief of Party	1

	NIMR	Dar-es-Salaam	MTR/NMSP Consultant	1
	NIMR -- Amani Research Center	Tanga	TEMT Consultant/Costing	1
Sub/total				11
Regional /District and Councils	Tanga Region	Tanga	Acting RMO - Tanga	1
			RMFP	1
	District levels	Tanga	Acting DMO	1
			DMFP	1
			DVCO	1
		Handeni	Acting DMO	1
			DMFP	1
			DVCO	1
		Lushoto	Acting DMO	1
			DMFP	1
			DVCO	1
	Councils	Tanga	DED	1
			WEO	1
		Handeni	WEO	2
			VEOs	6
		Lushoto	WEO	1
			VEOs	3
	District LSM Evaluation Team	Tanga	Team Lead	1
		Tanga	Technician	1
		Handeni	Technician	1
Lushoto		Technician	1	
Sub/Total				29
Beneficiaries: community Representatives and CORPs	Representative Community members	Tanga City	Members	3
		Handeni	Members	12
		Lushoto	Members	6
	CORPs	Tanga City	CORP members	3
		Handeni	CORPs members	12
		Lushoto	CORPs members	6
Sub/Total				42
Total				100