Joint Appraisal report 2017

The italic text in this document serves as guidance; it can be deleted when preparing the Joint Appraisal report.

Country	Mozambique
Full Joint Appraisal or Joint Appraisal update	Full Joint Appraisal
Date and location of Joint Appraisal meeting	31 July – 4 August 2017
Participants / affiliation[1]	
Reporting period	January – December 2016
Fiscal period[2]	January – December
Comprehensive Multi Year Plan (cMYP) duration	2015 – 2019

1. SUMMARY OF RENEWAL AND EXTENSION REQUESTS

1.1. New and Underused Vaccines Support (NVS) renewal request(s)

Type of support (routine or campaign)	Vaccine	End year of support	Year of requested support	Target (population to be vaccinated)	Indicative amount to be paid by country	Indicative amount to be paid by Gavi
Routine	Rota	2018	2018		US$ 458500	US$4,303,500
Routine	IPV	2018	2018			

1.2. New and Underused Vaccines Support (NVS) extension request(s)

Type of Support	Vaccine	Starting year	Ending year
Routine	Penta	2018	2018
Routine	PCV	2018	2018

1.3. Health System Strengthening (HSS) renewal request

Total amount of HSS grant	US$
Duration of HSS grant (from…to…)	2015-2019
Year / period for which the HSS renewal (next tranche) is requested	2018
Amount of HSS renewal request (next tranche)	US$ 4.778.381

1.4. Cold Chain Equipment Optimisation Platform (CCEOP) renewal request

[1] If taking too much space, the list of participants may also be provided as an annex.
[2] If the country reporting period deviates from the fiscal period, please provide a short explanation.

<table>
<tr><td>Total amount of CCEOP grant</td><td colspan="2">Not Applicable</td></tr>
<tr><td>Duration of CCEOP grant (from…to…)</td><td colspan="2"></td></tr>
<tr><td>Year / period for which the CCEOP renewal (next tranche) is requested</td><td colspan="2"></td></tr>
<tr><td>Amount of Gavi CCEOP renewal request</td><td colspan="2"></td></tr>
<tr><td rowspan="3">Country joint investment</td><td>Country resources</td><td></td></tr>
<tr><td>Partner resources</td><td></td></tr>
<tr><td>Gavi HSS resources[3]</td><td></td></tr>
</table>

1.5. Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future[4]

<table>
<tr><td rowspan="3">Indicative interest to introduce new vaccines or request HSS support from Gavi</td><td>Programme</td><td>Expected application year</td><td>Expected introduction year</td></tr>
<tr><td>CCEOP</td><td>2018 (May)</td><td>2019</td></tr>
<tr><td>HPV</td><td>2018 (September)</td><td>2020</td></tr>
</table>

[3] This amount must be included either in an earlier HSS approval or else in the current HSS renewal request in section 1.4 above.
[4] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

2. CHANGES IN COUNTRY CONTEXT SINCE LAST JOINT APPRAISAL

The contextual environment in which the Gavi grant implementation took place in the second half of 2016 and early 2017 was greatly influenced by major social, political and economical factors which included a GDP reduction from 7.5% to 4.5% and with an increase in inflation from 6.5% to 16.5%. There was a general decrease in donors support, resulting in reduced disbursement from PROSAUDE partners to the Health Sector. as During the course of 2016 and early 2017 the country was under military instability being the central and northern regions more affected. This led to delays and inefficient distribution of medical supplies including vaccines and service delivery in those regions.

The detection of a type2 vaccine-derived poliovirus (VDPV2) in the newly created Derre district in central Zambezia province in January 2017 and the mass immunization response consumed most of the time of MISAU and technical partners during the first half of 2017. This constrained the implementation of 2016 planned activities that spilled into 2017 and significantly delayed new activities planned for 2017.

While responding to the vaccine-derived poliovirus (VPDV) event in Zambezia province from February to May 2017 (with 2 round SIA), several remote and difficult to access communities were identified through mapping which hitherto were not part of the target populations for the immunization program. According to available information, several communities continue to remain inaccessible especially, in Zambezia province, with children in these communities denied of critical child survival interventions including immunization.

As was the case last year, the findings from the 2016 Annual Report of prospective Full Country Evaluation (FCE 2013 – 2016), helped to provide additional insight into factors that affect the grant implementation and allowed for their more in-depth understanding.

Unfortunately, the 2017 JA process did not benefit from the inputs of the Ministry of Finance/Treasury which didn't participate in the JA this year, which in 2016 JA process, helped to enrich discussions around financial management, including bottle-necks to fund disbursement for the implementation of planned activities, especially those funded through the HSS grant. There was no participation from this very important line Ministry in the 2017 JA process. There was also no presence of MoH colleagues from the Policy & Planning, HR, HMIS and Health Promotion Departments. There was no sub-national presentation. According to the central EPI team, meetings were held before.

3. PERFORMANCE OF THE IMMUNISATION SYSTEM IN THE REPORTING PERIOD

3.1. Coverage and equity of immunisation

1. Coverage & Equity:

Some of the key coverage and equity achievements and challenges include:

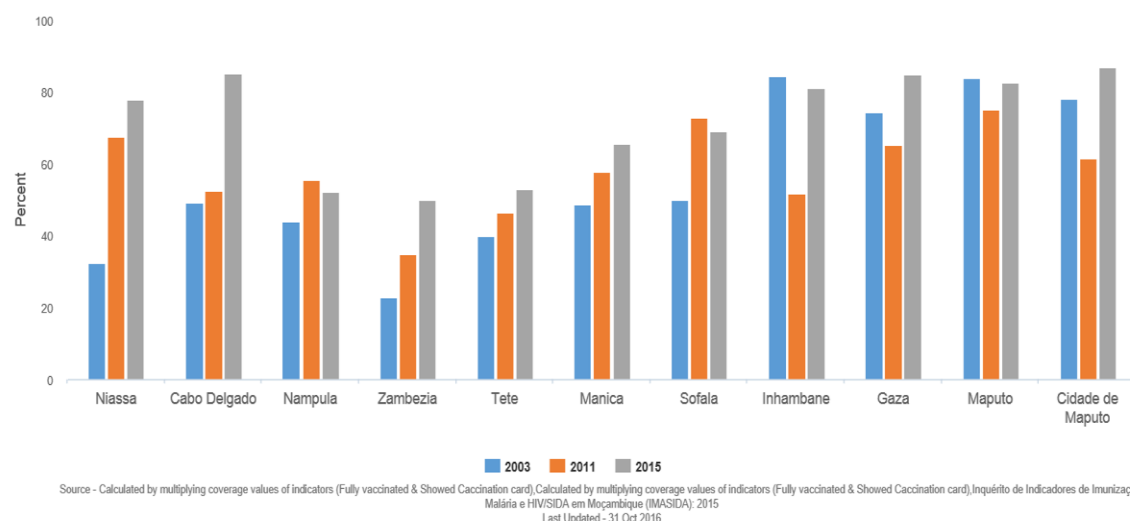
- In 2016, the country reported >90% national coverage for all the antigens including Gavi supported ones in line with the GVAP target except for MCV2 (51%), RV2 (76%) and IPV1 (84%) which were below 90%. The WUENIC estimates for the same period is < 90% for all the antigens and has shown a stagnation in coverage over the last 3 – 5 years
- The GVAP district coverage target (equity tracer) indicated that in 2016, 144/159 (91%) districts attained DTP3 coverage of ≥80%, an increment from 127/148 (86%) districts in 2015. Coverage of fully immunized children increased from 83% in 2015 to 88% in 2016 and

dropout rate decreased from 9% in 2015 to 7% in 2016

- Despite improvement in performance as indicated by the increase in national DTP3 coverage, and the increased number of districts with 80% DTP3 coverage in 2016, there is still very wide differences in coverage between districts with 62% in the worst performing district and 100% in the best. The same disparity was reported among the provinces, with Maputo province reporting 87.9% coverage of fully immunized children compared to 47.3% in Zambezia. According to JRF 2016, 15 districts of the country reported DPT3 coverage of less than 80%. These districts are in Zambezia (Luabo, Mocubela and Mulevala), Manica (Barue, Macossa, and Vanduzi), Niassa (Chimbonila and Ngauma), Sofala (Maringue and Muanza), Maputo Province (Matutuine and Namaacha), and Maputo City (Kamaxaquene).

- The above is consistent with the Immunization Inequity Assessment conducted in 2013 per which not only is the coverage of fully vaccinated children stagnated but also that there are important inequities across and within provinces. The most disadvantaged children live in the rural areas, have mothers with lowest academic level, are the poorest and live in the central region of the country and improving the provision of services to underserved communities in these provinces would potentially decrease the inequities in the country. The inequity assessment contributed to the selection of four priority provinces (Zambezia, Tete, Nampula and Manica) which consistently pooled the highest number of poorly immunized children according to 2003 and 2011 DHS.

FIC coverage by province, DHS 2003, 2011 and IMASIDA 2015

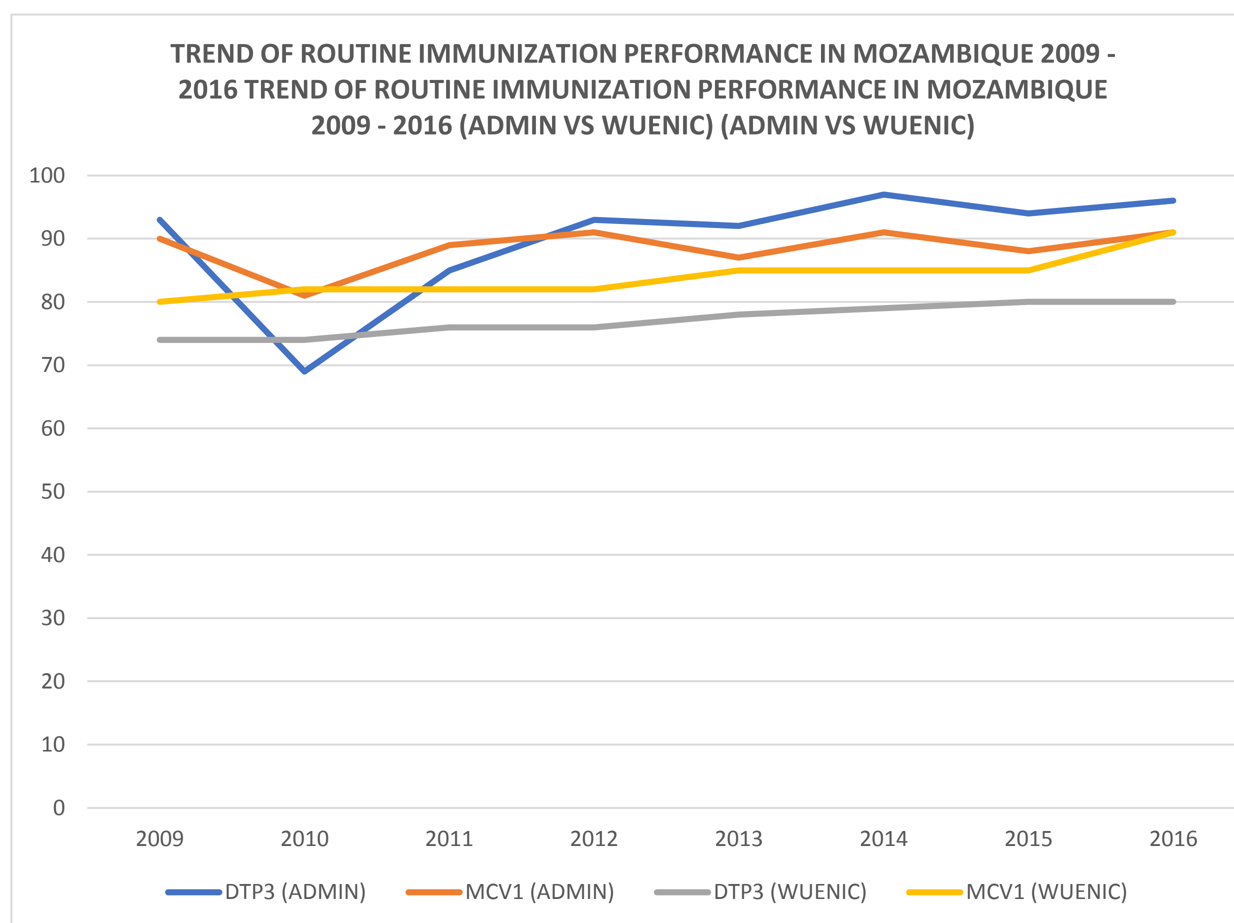


- The RED approach was revised into REC to increase its ability to identify and address inequities within Districts and piloted in 3 high priority districts in Zambezia from late 2014, leading to improvements in vaccination coverage – in Milange and Gurue administrative FIC increased from 60% and 55% in 2013 to 95% and 84% in 2016, respectively. In line with the recommendations of the last JA, the priority provinces were allocated with relatively higher HSS funding and technical support for identifying and addressing inequities, including through the use of the REC approach. The political instability and the response to Polio in general, and the inconsistent availability of needed resources (mainly transport means and fuel related to financial management challenges) in particular, have impaired the needed improvements in outreach planning and their consistent implementation and not permitted to curve the inequity trend yet. Concise plans are in place to progressively expand the REC approach to

all priority provinces.

Key immunization inequity drivers, DHS 2011 and IMASIDA 2015

Inequity drivers by DTP3 coverage	DHS 2011	IMASIDA 2015
Urban vs. Rural	*Urban - 86.3% *Rural - 72.4%	*Urban - 89.7% *Rural - 78.9%
Highest vs. Lowest Province	*Maputo - 96.7% *Zambezia - 60.3%	*Maputo - 97.5% *Zambezia - 68.2%
Maternal Education	*Highest Education - 85.6% *Lowest - 71.5%	*Highest Education - 92.6% *Lowest - 73.1%
Wealth	*Wealthiest - 87.1% *Poorest - 64.9%	*Wealthiest - 94.9% *Poorest - 72.8%



3.2. Key drivers of low coverage/ equity

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Key drivers of low coverage/equity

Health workforce: As per the organogram of the program (See fig), the central level has an EPI Manager with twelve officers providing support for the different components of the program. Similar structure exists at the provincial and districts but, with fewer officers. Per available

information from the national program, a total of 1620 health workers (1289 mid-level and 331 auxiliary preventive health workers) provide immunization services in the total 1536 fixed vaccination sites across the country. Both fixed posts and health workers are distributed as per the population densities of the provinces, with three of the most populous provinces (Zambezia, Nampula and Sofala) having the highest numbers.

Service delivery

High population dispersion coupled with limited health infrastructure remains a major bottleneck for equitable coverage of immunizations and other health interventions. 60% of the population has to walk beyond 8km to the nearest health centre.

The implementation of outreach services as a second resort has lagged behind expectation as it only contributed to 14% of the attained coverage in 2016. Community mapping exercises in the context of the Community Health Worker Program and the Polio response have shown that an important number of communities are still left out of outreach plans, either because they are not known or the availability of transport means and other resources are not consistently available at delivery level. Capacity and motivation of the health workforce remain a weakness to be more profoundly tackled.

The REC approach is one of the main strategies expected to address immunization inequities. While all four priority provinces have a pool of officers trained in the REC approach comprising of EPI, MCH, Nutrition and CHW managers and have developed chronograms and budgets and have been funded to initiate the REC training and microplanning in the districts, the actual expansion of REC has commenced but in a few districts (5 in Zambezia and 1 in Nampula). While there remain important conflicting priorities including the PCV switch and the MR campaign, the end of the response to polio should allow for rapid undertaking of equity improvement planning and implementation at district level. Updated REC expansion plans prioritise 17 districts in 2017 (7 in Zambezia, 3 in Nampula, 3 in Tete and 4 in Manica) and expect to cover all districts by end of Q2 2018. The REC microplanning in the new districts has begun to build on the community mapping as a lesson learnt. A thorough review of these and other lessons learned (e.g. streamlining funding and technical assistance for nutrition to build REC as a platform for delivery of integrated services) and of facilitating factors and bottlenecks to REC implementation is due in order to inform quality improvement as the REC is expanded.

From a complementary front, a total of 3617 community health workers (APEs) placed in remote areas throughout the country, are used as a source to increase demand of immunization services through assessment of vaccine status and referral to health facilities. APEs information tool it is to be updated in order to collect information regarding number of children that are referred to health facility for vaccination. Along with APES, other community volunteers are being trained as part of the REC package to trace children defaulting for immunization and vitamin A.

Supply Chain: The last EVM assessment which was conducted in 2015 indicated some improvements in some core EVM scores compared to those in the 2012 EVMA, though for some of the scores, no major improvements were recorded. The EVM improvement plan was recently finalized by UNICEF as part of its 2016 TCA plan. While Village Reach supported the strengthening of the National Logistics Working Group (NLWG), which provides technical oversight for immunization supply chain management in the country. This support was funded through the 2016 TCA funds.

System design activities conducted with Village Reach support were scaled up to reach 6 additional provinces, totalling 10 of the country's 11 provinces. While these 10 provinces are now implementing optimized distribution systems, full operationalization of the new systems is hindered by poor financial flows at subnational level (see below).

While supply chain system design alignments and integration between EPI and CMAM is considered by the Minister of Health as a way to maximise outcome from limited resources and to increase sustainability, both CMAM and EPI understand that the reforms needed for that may require long-term investments. Nonetheless, an assessment was conducted through PEF 2016 to identify short to long-term opportunities for these alignments. A final report is yet to be submitted by the consultants working on this.

Despite efforts to strengthen the supply chain system, problems such as presence of non-functioning equipment, delayed repairs and maintenance of equipment and stock out of vaccines continue to disrupt services delivery in several health facilities. In addition, financial flow problems at subnational levels are also a continuing constraint affecting the supply chain. An assessment conducted by VillageReach in 2016/2017, to understand reasons for delayed commencement of monthly distributions indicated financial flows as a principal cause (72%).

Demand generation / demand for vaccination: Generation of demand for immunization service and promotion of existing services remains a major focus of the program. Several districts persistently report high dropout rates. Along with inadequate services, lack of vaccines, distance to health facilities, limited interpersonal communication between care-givers and health workers is a key contributor to the dropout rates. There is also poor engagement of communities in the planning, implementation and monitoring of immunization services. As per the recommendations from previous assessments, the program has developed a communication strategic plan, which is awaiting finalization and approval. To improve interpersonal communication between caregivers/communities and health system, an IPC guide has been developed and will be incorporated into the EPI training materials. Multiple channels of of communication are being used for dissemination of health promotion messages and to encourage community engagement and participation

The program supported by technical partners is implementing several strategies to generate demand for immunization services. In districts implementing RED, defaulter tracing is conducted with the support of trained APEs who use community registers which are also harmonized with similar registers at the health facilities. The coverage by APEs is however, limited. The community engagement activities during mass immunization campaigns including, the recently conducted Polio SIAs are being documented to be used for routine immunization. Messages through radio and SMS have been used to complement the interpersonal communication and community engagement activities

Gender-related barriers: Though, health services, including immunization data are not routinely disaggregated by gender in Mozambique, however, periodic household surveys collect disaggregated data by gender. Per available data through these surveys, there are no significant disparities between boys and girls in terms of immunization coverage.

Leadership, management and coordination (LMC): The National Program has structures at the three tiers of the health systems to provide leadership and manage the immunization program at each level. At the national and province level, the flight of senior officers from the program to other organization with higher remuneration is a source of concern for MISAU senior managers (between June 2016 and June 2017 the program has lost a total of 8 senior officers) . Other leadership and management challenges at the national level identified in 2016 appear to persist (see 2016 JA report for details): For example, there are gaps in managerial capacity at the central level to provide the required monitoring and oversight of the sub-national level. There is lack of alignment of program plans at the various levels and implementation of plans is not closely monitored to identify constraints and take corrective actions. These gaps are most prominent around financial management, resulting in lack of funds for the implementation of program support activities including district review meetings and supportive supervision as well as service delivery through outreach. Staffing level to adequately manage the program at the sub-national level is constrained in several districts and

health facilities. Supportive supervisory visits from the central level to the provincial level are far and in between mostly due to competing priorities and lack of funds. Supportive supervisory visits from the provinces and districts to health facilities are mostly constrained by lack of funds.

There is weak capacity at the district and health facilities to develop and integrate EPI plans into the broader district health plans, which denies the program of the resources required at that level. Under the Gavi funded TCE, strengthening of managerial capacities at district level is foreseen. A training to the district teams will be held in 3 districts in November 2017 with the support of WHO.

The strengthening of the national EPI team programme management and leadership capacities requested in 2016 and 2015 (incl. updating of the EPI's HR plan to reflect current needs and new competencies) is largely yet to happen. As a short-to- medium term measure to address the financial management capacity gaps at the central level, MB-Consulting, a private Mozambican consulting Firm was engaged with Gavi TCA funding to provide technical support in this area. It is also responsible for financial flow tracking and financial management capacity building at the sub-national level. The recruitment of an HSS Advisor in MISAU by UNICEF through Gavi TCA funds was delayed.

Please refer to chapter 3.4 for a discussion of ICC functionality.

Public financial management: Efficient and sustainable financial management for the delivery of program results remains a major bottleneck despite recommendations made through various assessments to address the problem. Timely development and submission to the Planning Dept of annual plans constitute the first level of delay in funding disbursement. This is further compounded by the delays in the release of funds by the MoF to MISAU and to provinces and districts for implementation.

MISAU has attempted in 2016 to address the persistent challenges to financial management at all levels in response to recommendations from the JA process, through the outsourcing to MB-Consulting. However, the 2017 JA process identified continued gaps in these areas. The bureaucracies and complexities in the release by MoF, of Gavi grants to MISAU persist. The delays by MISAU to disburse funds to provinces and districts for the implementation of planned activities have also not ease. These factors have contributed significantly to the persistently low overall implementation rates of the various Gavi grants.

3.3. Data

Program information system and Data Quality: The quality of program data (routine immunization, surveillance, SIAs) remains a source of concern for the program. Sub-optimal data quality makes planning, monitoring and evaluation of the program performance challenging. For example, there is >10% point disparity between the official DTP3 coverage (>90%) and WUENIC and Coverage Estimate Surveys, which both put the coverage at <80% in 2016. Some provinces and districts (see table below) persistently report coverage figures of >100% for several antigens. Several previous assessments, including the last JA and 2016 EPI comprehensive review identified this problem and made recommendations to address it. However, the pace of implementation of actions to improve data quality remains slow and complicated by the lack of reliable demographic information, which is obtained mostly from annual population projections.

Districts with coverage greater than 100% (DPT3),2016

Provinces	# of districts with coverage greater than 100%
Niassa	5
Cabo Delgado	17
Nampula	16
Zambezia	10
Tete	10
Manica	4
Sofala	9
Inhambane	1
Gaza	3
Maputo Provincia	2
Maputo Cidade	4

Source: JRF 2016

A data quality improvement workshop was conducted in June 2016 with support of technical partners. However, the data quality improvement plan recommended by the workshop is yet to developed (it was part of WHO 2016 TCA).

With the placement of a data analytics Advisor (VAN Advisor) in the MOH, efforts have been made to improve data access and visibility at the central level. The VAN Advisor worked with the EPI team to develop a manual dashboard that brings management data from different sources for easy access by managers. While this is a positive move towards increasing data visibility, analytics and use, there are still challenges with data timeliness and quality. Data collection tools are usually not readily available at the health facility level. Most health facility workers lack the skills needed to use the data for corrective actions at that level.

There is also lack of harmonization of the different data management systems for different health interventions and tools into the mainstream HMIS, resulting in the use of various data management tools by different stakeholders.

Data collection tools are usually not readily available at the health facility level, and some cases at the provincial and district levels. Most health workers at provincial, district and health facility levels have limited skills to use data for corrective actions at that level.

- Current census which preliminary results show a population estimate of 28 million in 2017 instead of projected population of 27.1 million
- Mozambique complies with 3 out of 4 Gavi requirements in terms of data: annual data review (done in 2017), periodic coverage survey nationally representative (IMASIDA, 2015), indepth study of data quality (EPI comprehensive review done in 2016) .
- An approximation factor was jointly developed by MISAU/PAV, MCSP in coordination with the National institute of Statistics for calculating target groups. This new methodology has been already approved by NITAG, awaiting approval at the higher level of MoH and and the dissemination for use by DPC.
- All EPI indicators at all levels (Health facilities, District and Province) are integrated in the SISMA except for logistical indicators. This indicators are yet to the integrated in the SISMA. Data from Health facility level to district level is collected through paper forms and

at the district level is introduced on SISMA. Given the fact that SISMA is an online system, information can be visualised till health facility levels, However, minimal delays in data sharing are registered due to network failures.

- An Electronic System for Vaccine Logistics (SELV) was introduced with support of Village reach and scaled-up to cover 10 provinces, however, due to lack of informatics resources it is not yet available at district level. The MoH plans to gradually take over and is scale up to district level. It is MoH vision to integrate SISMA and SELV to improve data visibility at all levels.

3.4. Role and engagement of different stakeholders in the immunisation system

National Coordination Forum: Mozambique has an ICC which was created several years ago, to provide oversight, mobilize resources and coordinate partner support to the program. The committee is provided a secretariat support by the EPI Technical Working Group (TWG). Per the terms of reference of the committee, it is expected to hold quarterly meetings. However, the functionality of the ICC is reported to be sub-optimal with poor attendance by senior representatives of partner agencies at meetings, which in most case results in lack of decision making power of the oversight body; lack of preparation, documentation and follow through on decisions taken; and lack of informed quality discussions. ICC recommendations are hardly implemented. There has been some limited progress in implementing the recommendation in ICC strengthening from the 2016 and 2015 JA; the ToR and list of participants have revised in June 2017 without formal endorsement.

There is high level consensus for the escalation of the oversight of the ICC to higher Minister/Vice minister levels for strategic themes and better alignment with other DPs intervention in maternal and child health and health systems. As an example, the Minister of Health has called bilateral meetings for decision making on MR campaign and has recommended that EPI strategic issues be escalated to the Minister's regular coordination meetings.

Mozambique was one of the first countries to create the National Immunization Technical Advisory Group (NITAG) in the region charged with the responsibility of providing technical advice to program to guide major decisions, including the introduction of new vaccines. The Mozambique NITAG is currently supporting efforts to create the similar technical body in Angola

National Logistics Working Group (NLWG): was created in 2014, as a platform to specifically address EPI supply chain and logistics issues. The group is chaired by the MoH National Logistician. Members include VillageReach, CHAI, UNICEF, USAID, CMAM, and HAI. The group's aim is to ensure coordinated approach to supply chain improvement planning and execution to maximize collective impact. This include overseeing the implementation of the cIP. With the 2016 PCA funds, a consultant contracted by VillageReach conducted an assessment of the group in order to make recommendations for its strengthening.

Private Sector: In 2016, following a system redesign in Tete province, an opportunity to outsource a 3rd party company (3pl) for distribution of vaccines and other commodities was pursued by the DPS in a partnership VillageReach and with CMAM and MSF support. The pilot is the first in the country that conducts direct and integrated distributions from the provincial warehouse to health facilities through a private sector company. Results so far are promising (reduced stockouts and reliable deliveries). As a result in 2017 the DPS allocated funds in their HSS budget to expand the pilot from the initial 8 to 11 of the 15 Tete districts. The DPS and

involved partners see integration as a strategy for increasing resources and linking more closely to national plans and strategies (outside of EPI). As such, a costing study is currently underway at the request of CMAM, to inform the broader MOH supply chain for planning and replication. In addition, the NLWG is looking into the prospects of engaging a 4PL to support with management of the 3PL contract. Learning from this pilot should be well documented to inform future innovations for working with the private sector.

Cross-sectoral collaboration: The national program works in close collaboration with other programs of the MoH such as Nutrition and Malaria for the integration of micronutrients (vitamin A, deworming), distribution of ITNs during mass immunization campaigns and Child Health Days; with MoEd for HPV demo project in 2014-15 and currently for the preparations of the MR catch-up upcoming campaign, and MoF for donor grants application and management. However, the collaboration within the Government and between development partners requires strengthening

4. PERFORMANCE OF GAVI GRANTS IN THE REPORTING PERIOD

4.1. Programmatic performance

Gavi financial subventions to the Mozambique national program are helping to strengthen the health systems to deliver on immunization results focusing of the most deprived communities. Its support for the introduction of new and underutilized vaccines and new technologies has enabled the program to introduce several new and underutilized vaccines as well as new immunization supply chain technologies over the past decade. Since 2009 The country has successfully introduced Penta, PCV, RV, MCV2, IPV and HPV demo. Gavi PEF/TCA grants are also providing technical partners funds to provide technical support for addressing barriers to immunization coverage and equity in the country.

HSS grant

The HSS grant was approved in 2014, it has a 5 year duration and the first year was disbursed in July 2015 to MoF/MoH and UNICEF (for procurement activities). In April 2016, the implementation of HSS effectively started with the national program identification and implementation of strategies for addressing systems barriers to routine immunization coverage and equity in low performing districts in 4 priority provinces. These include 58 districts in Zambezia, Nampula, Manica and Tete with the support of technical partners identified. In several low performing districts in these provinces, the RED strategy was adapted to the country context and has been implemented since through strengthening of district and health facility-based micro planning and budgeting; building of local capacity to implement and monitor planned activities; engagement with communities for consensual outreach sections and defaulter tracing; ensuring the regular availability of all antigens and supplies as well as the upgrade of a functional cold chain.

The HSS grant is also being used to build capacity at all levels to improve program management, governance and coordination, through the embedding of technical experts in the MoH. Improved service delivery through fixed vaccination posts and outreach is also supported through this grants. However, in order to further improve program performance through health systems strengthen, there is the urgent need to accelerate uptake of the HSS funds in Mozambique as the country is entering its 3rd year of HSS implementation in July 2017 which has been low for several reasons to date, including delay disbursements from MoF to MoH and provinces, and low absorption/utilization capacity, especially at the sub-national level. The

For 2016 implementation the country is eligible to the performance based funding (PBF) as part of the HSS for the MCV1 coverage which has increased PBF between 2015 and 2016 (give value). Due to large discrepancies between sources of data (+16% points between WUENIC and JRF coverage rates) Mozambique is not eligible to the PBF for the DTP3 component. In order to improve HSS funds management, a dedicated HSS focal point was placed in EPI and

additional human resources were contracted to provide technical assistance in the 3 regions. In addition under Gavi funded TCA, an HSS advisor was contracted to provide direct technical assistance to the MoH HSS focal point as well as capacity building to the EPI team.

A process of inventory of the cold chain, motorcycles and neonatal equipment is taking place, where the real needs of all equipment and accessories for the operation of the cold chain in the health facilities will be clearly assessed, and with subsequent elaboration of a maintenance and expansion plan. It is expected that these needs will be budgeted in the next Work plan in order to ensure rapid and good execution of outstanding funds

NUVI & "Routinization"

Gavi subvention for the introduction of new and underutilized vaccines is helping to address most of the barriers to improved routine immunization coverage and to address inequity in services delivery. Since the commencement of NUVI in Mozambique, the routine immunization coverage at the national level and in several districts, has increased towards the GVAP targets.
In 2016, Mozambique did not introduce any new vaccine but continues to monitor the performances of the recently introduced new and under-utilized vaccines in 2015 (RV, MCV2 and IPV) to ensure that they attain targets set for traditional vaccines at both national and sub-national levels. "Routinization" of NUVI were constrained by supply shortage from the global level. For example, following the introduction of the Rotavirus vaccine in 2015, the coverage for RV2 was mere 59% at national level with 125/148 (84%) of districts reporting <80% coverage. With improved supply situation and the removal of other supply and demand side barriers in 2016, the RV2 coverage increased to 76% at the national level, while 57/159 (36%) districts reported coverage <80%. The single dose IPV introduced in late 2015 had a coverage of 84% in 2016 at the national level indicating rapid routinization. Unfortunately, the coverage for MCV2 which was introduced in 2015 remains quite low at 51% indicating continued challenge with the implementation of 2nd year of life strategy in the country. The country plans to introduce the measles/rubella containing vaccines into the routine immunization systems after a catch-up campaign in starting in mid-Oct 2017, which is being supported by Gavi.

PCV switch

PCV vaccine switch will be implemented in a phased manner in order to ensure that no PCV10 is dismissed. The process is expected to start taking place in the northern region in the last quarter of 2017. A national training of trainers was undertaken and once vaccine is available in the country training to other levels will take place.

COUNTRY PROGRAMMES - TOTAL DISBURSEMENTS - Inception to July 31, 2017

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Country	Programme Category	Programme	2015	2016	2017	Grand Total
Mozambique	Cash Support	HPV Demo - cash support				170,000
	HSS	HSS	5,514,068	1,596,863		7,110,931
	INS	INS				835,881
	ISS	ISS				1,665,500
	NVS	HPV Demo				56,503
		Measles	574,989	282,551	144,630	1,083,191
		Penta	195,183	3,621,153	863,420	43,836,706
		Pneumo	12,043,299	16,341,992	4,666,232	89,774,794
		Rotavirus	4,290,135	4,669,061	1,724,951	10,684,147
		Tetra DTP-HepB				16,897,320
		IPV	1,569,840	1,073,890	920,377	3,564,106
		Injection Safety Devices			1,340,969	1,340,969
		MR-Catch-up campaign			8,939,612	8,939,612
	Operational Support	MR-Catch-up campaign op.costs			7,879,866	7,879,866
	Vaccine Introduction Grant	Vaccine Introduction Grant	2,595,500	-23,199	933,198	4,709,499
	Product Switch Grant	Product Switch Grant			271,286	271,286
Mozambique Total			**26,783,013**	**27,562,311**	**27,684,541**	**198,820,311**

4.2. Financial management performance (for all cash grants, such as HSS, vaccine introduction grants, campaign operational cost grants, transition grants, etc.)

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Financial management performance

The Gavi HSS cash grant to Mozambique was approved in 2014 and disbursed to the country in July 2015, however, grant implementation only started in April 2016 as result of delays and bureaucracies. Of the total US $8.8m disbursed so far to the country (US $5.2m to MISAU and US $2.9m to UNICEF for the procurement and installation of cold chain equipment), utilization rate by MISAU is so far 49% as of July 2017, leaving a balance of US $3m unspent. UNICEF so far has utilization rate of 76% also as of July 2017. Gavi decided in early 2017 to top up the initial HSS ceiling with the 2015 VIG balance (USD 1,725 mi were left at the end 2016 out of the USD 2.5 mi disbursed in 2015).

The low utilization rate by MISAU is attributable to several factors, which include delayed release from MoF, delayed disbursement to sub-national level and sub-optimal utilization capacity at that level. During the just concluded JA, the low country absorptive capacity was discussed, including the ongoing efforts to improve the situation. Under Gavi TCA, a consultancy firm for Technical Assistant to the program of financial management of Gavi grants was contracted for a limited period. Support given included the design and harmonization of tools and, specific support to provinces in order to improve planning and budget execution and capacity building at all levels.

Mozambique has been compliant with the quarterly and annual reporting on all grants, though there is the need to follow up on old grants (ISS & HPV). There was however, a delay in the submission of external audit reports from the country (submitted in April 2017 instead of December 2016). To be noted the external audit of Government programmes is conducted by one unique entity the Tribunal Administrativo which workload explained the observed delay. Information on the implementation of the recommendations from the audit report is not readily available. Further MOH will need to provide to Gavi upon their request and ahead the conduct of the 2016 audit the detailed terms of reference to ensure MOH adheres to the new Gavi guidance of external audit requirements of the utilization of cash support whose use is mandatory since March 2017.

4.3. Sustainability and (if applicable) transition planning

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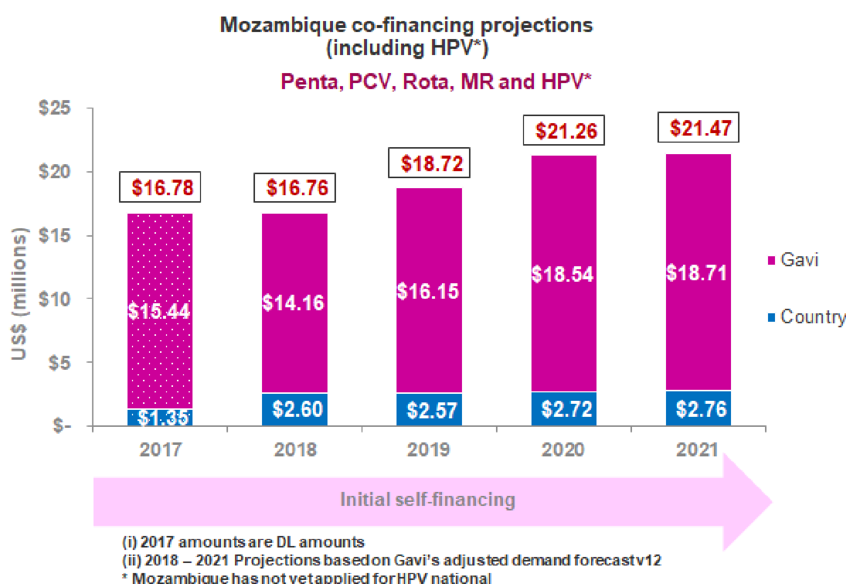
Sustainable Program Financing

The Government of Mozambique (GoM) has successfully co-financed the procurement of new and underutilized vaccines since 2009, when the co-financing amount was US$0.55m till 2017 with an amount of US$1.3m. The country has never defaulted in its co-financing commitment. While this shows a trend towards financial sustainability, there are however concerns over the declining trend in Government financing for the health sector.

Per Gavi projections, by 2021 the GoM co-financing for NUVI (including nationwide HPV for which the country has not applied) will be US$2.76m (See fig). Although in the next future it is not planned that the country will move to a different country grouping (Mozambique is in the initial self-financing group for Gavi with a GNI pc of USD 480 pc (WB Atlas method) in 2016. The country will pass into preparatory transition when it reaches a 3 year GNI pc average of USD 1,045 which is not planned in the next 5 years) there is the urgent need for the Government with support of stakeholders to commence fiscal space analysis for options to sustainably finance the program, to cover both traditional and NUVI and EPI operations.

The move towards supply chain systems alignments and integration is one example where sustainability can be achieved through increasing resource pooling.



4.4. Technical Assistance (TA)

Technical Assistance (TA) updates

The status of implementation of the Gavi TCA/PEF grants disbursed to the three core technical partners (UNICEF, WHO & Village Reach) in 2016 was reviewed during the JA. Overall, the technical support provided by the partners was appreciated, but there were however, general concerns about the delays in the implementation of several critical activities by the different partners and coordination between partners. Delays in the implementation were mostly attributed to the delays in the recruitment of staff (WHO started the recruitment of the an EPI officer in June 2016 and has not completed it to date while UNICEF experienced a 7 month gap in the provision of services of an HSS advisor in 2017) where this was required or

competing program priorities. Lack of enabling environment on the part of MISAU was also cited as a reason for the delayed implementation of technical assistance. Unfortunately Gavi rules do not allow utilizing 2016 TCA funds after end June 2016. 2017 TCA funds were received by WHO and UNICEF in April but implementation rate of activities is low, VR contracting by Gavi for 2017 TCA is currently on going, UNICEF contracting of HSS advisor is completed and support to REC expansion is ongoing.

At the end of this year's this JA Gavi convened a partners meeting with Already supported partners (UNICEF WHO and VR) and potential new partners (JSI, CHAI) where suggestions were made to improve implementation and coordination of the one consolidated TA planning for 2018.

5. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from previous Joint Appraisal	Current status
A. GOVERNANCE, PROGRAM MANAGEMENT & SUSTAINABLE FINANCING 1. To understand and improve the flow of HSS funds and availability of operational funds at the health facility level.	1. There is currently a joint effort to improve fund flow through the development and implementation of activity plans at all levels. With the support of MB Consulting, were developed financial tools as well financial reports including planning and activity reporting tools; on other hand all central and provincial fund managers were trained to use these tools including the GAVI work plan tool; was also possible to Integrate the EPI in the budget elaboration period in order to make funds available at both central and provincial level
2. Generate additional tools to capture expenditures of funds at district and health facilities	2. Tools developed to capture expenses at provincial level as of July 2017, and this will be expanded to district and HF levels, were also developed other tools to complement the financial report reflecting the cost centers according to E-Sistafe.
3. Undertake ICC internal review to broaden mandate of ICC to oversight of entire EPI and resource mobilization.	3. ICC ToRs and membership are under revision and will include Minister/Vice minister level oversight to key strategic issues (ps. Section 3.4)
4. Improve functionality of the national EPI team by reviewing the organizational structure, roles and process of national EPI, conducting a managerial training for EPI manager and team leaders	4. The EPI program with WHO technical support has adapted and proposed new EPI functional and structural organization, to respond to current program complexity and challenges. The post description and TORs for each of the proposed post has also been provided. The program will liaise with human resources department and build on this proposed new structure to build capacity of the EPI staff in accordance to the required competencies. The finalization of the plan is expected to take place 06 – 11 November 2017, and the staff capacity building will start in quarter 1 of 2018, under GAVI TCA 2017 funds.

5. Ensure integration and participation of EPI in the MoH initiative of domestic resources mobilization strategy	Following a 7 month gap in the provision of Gavi HSS advisor support due to recruitment issues, the now on board technical assistance, embedded in the MoH, will permit to advance the capacity building efforts on program and financial management, including English proficiency. This support includes knowledge gap assessment, team building and work flow improvement. 5. EPI was integrated in the GFF working group and took in part in the whole process of priority setting and development of the Strategy.
B. IMMUNIZATION SUPPLY CHAIN MANAGEMENT 1. Implement the EVM improvement plan	1. The EVM improvement plan is being implemented - the following activities have been implemented: Cold Chain Inventory at the national level; strengthening of cold chain through installation of cold rooms in 9 provinces; system design for vaccine distribution; through Unicef there is an ongoing procurement of 904 ColdTrace funded by HSS. Parallel to that, VillageReach during the year 2015/2016 supported the Ministry of Health in the implementation of ColdTrace at the Health Center level, installed in 3 provinces, 76 devices in Niassa, 48 in Tete and 105 in Gaza On the other hand, CHAI is supporting MOH in the implementation of the temperature monitoring device (Beyond wireless) in all provincial warehouse as well the central level.

2. Align EPI supply chain system design with CMAM PELF to accelerate integration	2. There is an ongoing consultancy to assess opportunities for alignment of system design between CMAM PELF and the new optimized EPI system (by VillageReach). The assessment aims at identifying short, medium and long term opportunities across all components of the supply chain. A draft report has been shared by the Consultant and awaiting review by NLWG.
3. Private Sector Engagement	3. Implementation of integrated systems in 8 districts in Tete province for distribution of vaccines and medicines to HFs from the provincial warehouse Positive results from a pilot using a 3rd party company for distributions in Tete province through non-Gavi funds led to the DPS including a budget to expand the initiative to 3 additional districts using Gavi HSS funds
4. TA for strengthening the National Logistics Working Group	4. TA for strengthening the NLWG, led by VillageReach, included supporting the group to revise and improve its TORs; jointly review and input into the development of the cIP and take leadership in overseeing its implementation. The NLWG has also served as a forum for evaluation of supply chain related pilots and for making recommendations for scale-up or not. Another key activity conducted towards the end of 2016 funding period was an assessment of the group's performance by a consultant who also made recommendations for further group strengthening. A draft report has been shared by the Consultant and awaiting review by NLWG.
C. SERVICE DELIVERY 1. Complete the RED/REC National plan	1. RED/REC National Plan developed/revised, comprising of the progressive scale-up of REC for the four priority provinces of Zambezia, Tete, Manica and Nampula and the

	implementation of RED approach in remaining provinces.
2. Continue with the scale up of RED/REC implementation prioritizing provinces and district with low performance	2. REC expansion is ongoing in the priority provinces of Nampula, Tete and Zambézia and Manica with the hope that by Dec 2017 the strategy will be implemented in 17 priority districts and will cover all districts by Q2 2018. Special attention will be given to identified low performance districts. (ps section 3.2).
3. Ensure integration RED/REC integration in the District PES	3. Where REC plans have been developed in Districts they are also integrated into wider health plans for 2018. It will be important to learn how this integration will facilitate the implementation of REC in 2018
4. Establish DHMT in selected district (pilot districts) to ensure financial and programmatic management	4. This activity, which was planned for Q1 of 2017, was not implemented, owing the unavailability of both EPI MoH and partners' staff that were engaged in the Polio response during the semester 1 of 2017. The support should include provision of tools – planning and financial management tools, including resource tracking funding and expenditure, and capacity building for provincial / district staff. MoH planning and cooperation and financial department will lead the process with WHO technical support, and they would like to initiate this activity this year in pilot district, so that from quarter 2 of 2018, the country considers the expansion to other districts.
D. DEMAND CREATION & COMMUNITY LINK WITH SERVICES	
1. Update Health Promotion Strategy to include aspects to convince vaccine resistant groups – including community leaders – to fully utilize immunization services.	1. A EPI communication strategy for all vaccines was developed and finalized by May 2017, it is currently being revised for approval On the other hand the national communication strategy for health

	promotion includes the routine Immunization component, with the number of families with children under 5 years old who have a health card in the day, as one of the indicators for the certification of model families.
2. Engagement of community leaders in defaulter tracing, service utilization and promotion of benefits of immunization	2. Through the REC approach, APEs and other community actors are being mobilized and trained to identify and refer children with suboptimal vaccination status. A revision of lessons learned in the implementation of REC will inform the adoption of these approaches for other provinces not using the full REC approach.
E. DATA QUALITY IMPROVEMENT 1. Develop and implement Data Quality improvement plans at all levels	1. In June 2017 with the support of WHO, under Gavi funded TCA, a workshop was held on the quality of data for all levels, meanwhile, a data quality improvement plan is being developed. This activity was previously planned for Q1 2017, and the delay owes the engagement of EPI MoH and Partners staff in the response of Polio outbreak, through almost all semester 1 of 2017. The plan is expected to be finalized in the week of 02-06 October 2017, and training of staff on data quality analyses for decision making is planned to start the week of 09-13 of same month.
2. Set standardized methodology to redefine denominators from national to district levels	2. An approximation factor was jointly developed by MISAU/PAV, MCSP in coordination with the National institute of Statistics for calculating target groups. This new methodology has been already approved by NITAG, awaiting approval at the higher level of MoH and the dissemination for use by DPC.
3. SELV Scale up	3. SELV (Electronic System for Vaccine Logistics) was scaled-up to cover 10 provinces. A VAN Advisor was placed within the EPI team to strengthen the EPI team's capacity to access, view, analyse and use data for planning and decision-

	making. The VAN Advisor works with the EPI data team to bring together data from different sources into a single dashboard to assist easy access of this data by managers for tracking progress on KPIs
4. Subnational TA	4. TA was provided at regional level through VillageReach Regional Advisors placed in all 3 regions, and co-funded through the PEF for support in supply chain planning, budgeting, distributions, and CC remote temperature monitoring
F. VACCINE PREVENTABLE DISEASE SURVEILLANCE 1. Provide support to plan and implement active surveillance and supervision with focus on low performing district	1. The support allowed the classification of active surveillance sites and organization of active case search sites on weekly, monthly and quarterly bases, and implementation of active surveillance accordingly, in order to reduce the number of silent districts. This has led to improvement in the surveillance indicators of diseases targeted for elimination / eradication. For instance, NPAFP rate improved form 2.6 in 2015 to 3.7 in 2016, and as of August 2017 the rate is 2.8. Meanwhile, stool adequacy was of 81% in 2015 vs 82% in 2016. The number of silent districts reduced to 8% (maximum acceptable is 10%). Non measles febrile rush illness rate was of 5.4 in 2016, well above the minimum recommended (4/100,000 inhabitants).
2. Scale up and strengthen surveillance of diseases targeted by New Vaccine (Rotavirus, Meningitis and Pneumococcus) to all provinces	2. There is ongoing strengthening of surveillance of rotavirus in 4 sentinel posts (Maputo, Sofala, Zambézia and Nampula) through staff training, supportive supervision and provision of lab reagents/supplies. Meningitis surveillance is ongoing in Maputo, Beira and Nampula, with expansion plan by Jan 2018 to Zambézia, Gaza and Cabo Delgado province.

3. Train and regularly update health care providers on detecting and reporting AEFI, and strengthen overall technical assistance on AEFI/ADR (adverse drug reactions).	3. There was the engagement of pharmacovigillance in the adaptation of training materials; there is also ongoing designing of AEFI guides with eventual creation of the committee. The training on AEFI is planned for September 2017, and establishment of the AEFI committee in November 2017.
Additional significant IRC / HLRP recommendations (if applicable)	**Current status**

6. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND TECHNICAL ASSISTANCE NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL

Overview of key activities planned for the next year:

The JA process identified several barriers to the performance of the various components of the immunization program in the country and based on the outcomes of group works, actions for addressing the barriers in the different components were agreed upon. These actions were proposed based on the status of implementation of actions from previous JA. In some of the cases, the same activities will be implemented addressing reasons why they were not implemented during previous plans. In other cases, completely different activities were proposed to be implemented based on new evidence, including lessons learned and innovations
Activities that will require additional technical support from partners were identified and partners with comparative advantages were identified.

Planned activities will focus on addressing barriers identified in the following areas of the program:
- Service Deliver
- Leadership, Management & Coordination
- Demand generation for services
- Data quality improvement and data use for decision making analysis and use
- VPD Surveillance and AEFIs

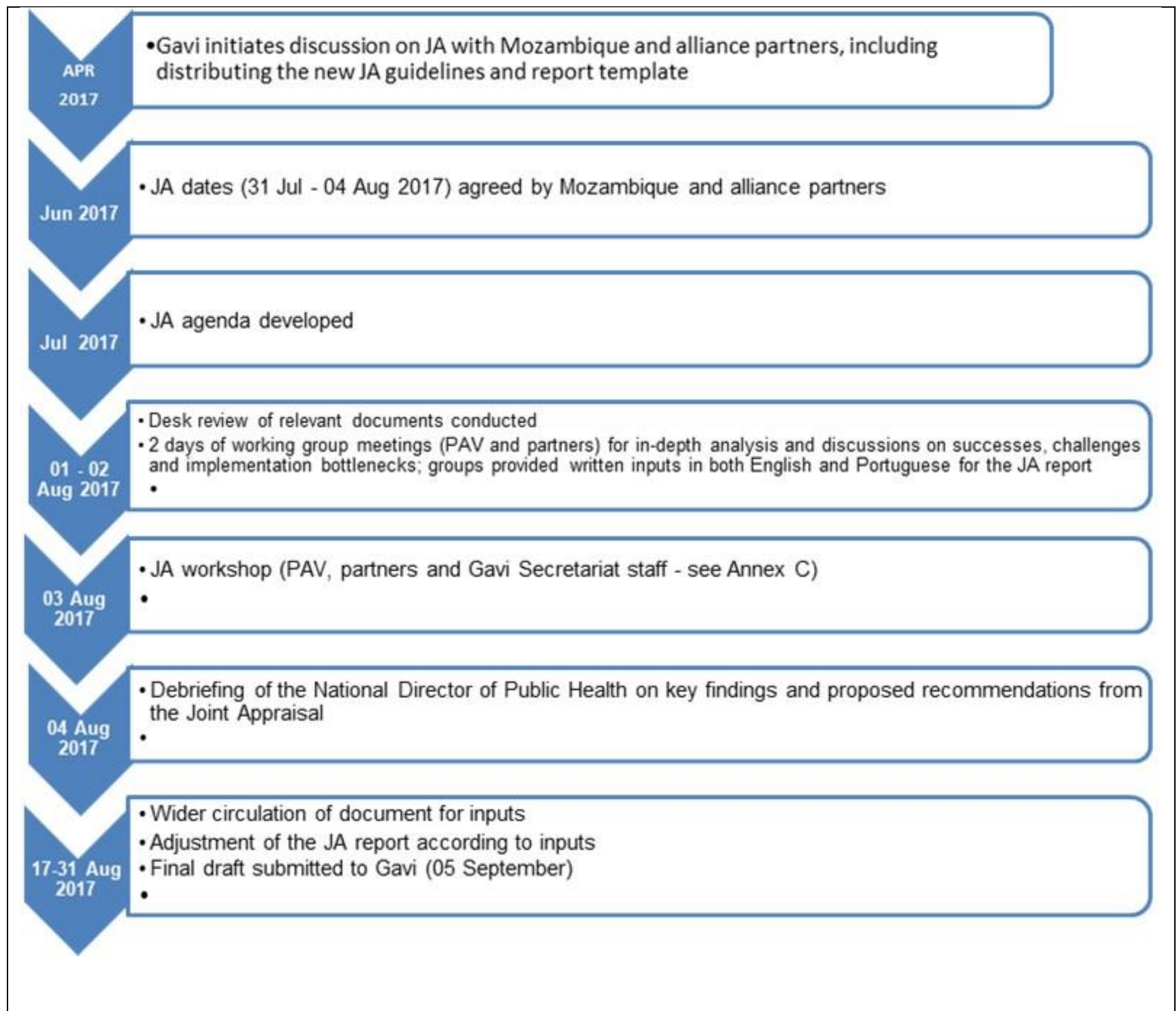
Key finding 1	**GOVERNANCE, PROGRAM MANAGEMENT & SUSTAINABLE FINANCING:** Delays in the disbursement of funds for the implementation of activities
Agreed country actions	Develop SOPs that clearly outline simplified processes for funds disbursement and the tracking of flow of funds at all levels
Associated timeline	-
Technical assistance needs	TA required
Key finding 2	**GOVERNANCE, PROGRAM MANAGEMENT & SUSTAINABLE FINANCING:** Lack of leadership and management capacity of the national EPI team and the provincial level EPI HR plan to respond to the increasing and complex demands of the program
Agreed country actions	Improve functionality of the national EPI team by reviewing the organizational structure, roles and process of national EPI; Build capacity of the EPI staff in accordance to the required competencies; Provide managerial training and coaching for staff at all levels with a focus on the national level
Associated timeline	
Technical assistance needs	TA needed
Key finding 3	**GOVERNANCE, PROGRAM MANAGEMENT & SUSTAINABLE FINANCING:** Sub-optimal functionality of the ICC with poor attendance by senior representatives of partner agencies at meetings
Agreed country actions	Finalise and implement the new ToR/more inclusive list of participants Strengthen the ICC Secretariat and lift it up to the level of DG Public Health Develop monitoring indicators to hold ICC members responsible for their oversight support to the program Coach ICC members and the Secretariat on their role and provide tools (e.g. performance dashboards of the EPI programme) as needed Escalate critical EPI performance bottlenecks/HSS implementation issue to Minister level by including Gavi issues with the Heath sector coordination mechanism
Associated timeline	
Technical assistance needs	TA needed
Key finding 4	**DEMAND CREATION & COMMUNITY LINK WITH SERVICES** Weak engagement of communities in the planning, implementation and monitoring of immunization services
Agreed country	Develop guidelines for engaging community resource persons and trained

actions	health facility workers, including community health workers in community engagement.
Associated timeline	
Technical assistance needs	TA needed
Key finding 5	**COVERAGE AND EQUITY** Existence of several communities/areas not covered by the health systems
Agreed country actions	Train Health Facility and community health workers, including APEs on the mapping of all communities within the catchment areas. Leverage and complement mapping exercise for MR campaign and for CHW to inform equity improvement plans.
Associated timeline	
Technical assistance needs	TA needed
Key findings 6	**DATA QUALITY AND USE** Sub-optimal data quality and data use for decision making
Agreed country actions	Finalize and implement data quality improvement plan. The plan will include, establish a system for routine data verification at national and subnational levels and strengthen staff's capacity through training and provision of adequate tools for data analysis to support planning and decision making
Associated timeline	
Technical assistance needs	TA is needed to develop the data quality improvement plan and support adaptation of tools and training of staff
Key finding 7	**SERVICE DELIVERY** Weak planning and management capacity at district level, which denies / limits availability of program resources at that level
Agreed country actions	Build capacity and establish District Health Management Teams (DHMT)
Associated timeline	
Technical assistance needs	TA needed
Key finding 8	**SERVICE DELIVERY** Existence of several communities/areas not covered by the health systems
Agreed country actions	Train Health Facility and community health workers, including APEs on the mapping of all communities within the catchment areas; Leverage and complement mapping exercise for MR campaign and for CHW to inform equity improvement plans.
Associated timeline	
Technical assistance needs	TA needed

Key finding 9	**SYSTEMS STRENGTHENING** Need to continue strengthening supply chain systems and the role of NLWG
Agreed country actions	Logistics: - Continue strengthening system designs and strengthen capacity of provincial teams to implement new optimised distribution systems. - Align EPI systems with PELF according to recommendations by consultant when and as opportunities arise. - Continue efforts to strengthen NLWG by implementing consultancy recommendations. Cold Chain: - Establish a National Tool for CC equipment live Inventory that will be easily updated on an ongoing basis. - Develop a Comprehensive CC Expansion Plan using National CCE Inventory data from August 2017 - Expand RTM- Cold Trace at Distrital warehouses and health facility levels.
Associated timeline	
Technical assistance needs	TA needed

7. JOINT APPRAISAL PROCESS, ENDORSEMENT BY THE NATIONAL COORDINATION FORUM (ICC, HSCC OR EQUIVALENT) AND ADDITIONAL COMMENTS

Please attach list of participants


APR 2017
•Gavi initiates discussion on JA with Mozambique and alliance partners, including distributing the new JA guidelines and report template
Jun 2017
• JA dates (31 Jul - 04 Aug 2017) agreed by Mozambique and alliance partners
Jul 2017
• JA agenda developed
01 - 02 Aug 2017
• Desk review of relevant documents conducted
• 2 days of working group meetings (PAV and partners) for in-depth analysis and discussions on successes, challenges and implementation bottlenecks; groups provided written inputs in both English and Portuguese for the JA report
03 Aug 2017
• JA workshop (PAV, partners and Gavi Secretariat staff - see Annex C)
04 Aug 2017
• Debriefing of the National Director of Public Health on key findings and proposed recommendations from the Joint Appraisal
17-31 Aug 2017
• Wider circulation of document for inputs
• Adjustment of the JA report according to inputs
• Final draft submitted to Gavi (05 September)

8. ANNEX

Compliance with Gavi reporting requirements

Please confirm the status of reporting to Gavi, indicating whether the following reports have been uploaded onto the Country Portal.

It is important to note that delayed reporting may impact the decision by Gavi to renew its support.

	Yes	No	Not applicable
Grant Performance Framework (GPF) reporting against all due indicators	X		
Financial Reports			
Periodic financial reports (HSS)	X		
Annual financial statement (HSS, VIGs)	X		
Annual financial audit report (HSS VIGs)	X		
End of year stock level report	X		
Campaign reports			X
Immunisation financing and expenditure information		X	
Data quality and survey reporting			
Annual desk review	X		
Data quality improvement plan (DQIP)		X	
If yes to DQIP, reporting on progress against it			
In-depth data assessment (conducted in the last five years)	X		
Nationally representative coverage survey (conducted in the last five years)	X		
Annual progress update on the Effective Vaccine Management (EVM) improvement plan		X	
Post Introduction Evaluation (PIE)			X
Measles-rubella 5 year plan	X (as part of the MR catch up campaign application)		
HSS end of grant evaluation report			X
HPV specific reports			X
Transition Plan			X

In case any of the required reporting documents is not available at the time of the Joint Appraisal, provide information when the missing document/information will be provided.