**Action Plan: Sao Tome and Principe Health Product Leakage**

**UNDP Update, 15th May 2015**

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| **Area** | **Context/finding** | **CT recommendations** | **Responsible party** | **Timeline** | **UNDP Update**  **11th May 2015** |
| **Insecticide reception procedures** | Limited auditable track of documentation regarding the exact nature and quantities of the insecticide procured by the PR (and then handed over to SR) | Develop procedures for the reception of products and share it with the different entities | UNDP (PR), CNE (Centro Nacional de Endemias), PNLP (Programme National de Lutte contre le Paludisme), Zatona Adil (SR), FNM (Fonds National de Medicaments) | Immediately | UNDP requested the creation of the Product Reception Committee, proposing its membership (Sept 2014).  UNDP drafted the Committee’s terms of reference (Oct 2014).  UNDP secured an official statement from CNE officialising the creation of the Product Reception Committee and its terms of reference (Oct 2014).  UNDP designed a product reception form to be signed by Product Reception Committee members each time insecticide stocks are received by the PR (Nov 2014)  All arriving UNDP/GF Project products (Insecticide, ARV, MDR-TB etc.) have been officially received by this Committee since Sept. 2014.  UNDP drafted reception procedures, based on models from other UNDP GF Projects (Nov. 2014 Mali). Reception procedures need to be finalised.  UNDP plans to promote the incorporation of the Product Reception Committee into the National Procurement Committee which it currently helps to operationalise. |
|  |  | Set up a reception committee for medicines and health products purchased for the Global Fund grant. The committee for the malaria products concerned should be composed of at least a representative from PNLP and a representative from CNE. | UNDP, CNE, PNLP, Zatona Adil, FNM | Immediately | The membership of Product Reception Committee includes PNLP, PNLS, PNLT (for the reception of their respective products) and UNDP. |
|  |  | Each reception must be evidenced by a record of receipt signed by representatives of the various entities that have participated. | UNDP, CNE, PNLP, Zatona Adil, FNM | Immediately | The product reception form has been designed and introduced for product reception at customs. Representatives’ signatures have been collected for product arrivals since September 2014). |
|  |  | A copy of this report should be made available to the different entities by the PR | UNDP, CNE, PNLP, Zatona Adil, FNM | Immediately | Copies of the signed product reception form are made available by UNDP to all parties involved.  Archiving of completed receipts and supporting documents is being done. UNDP will continue to seek for improvements. |
| Insecticide Warehouse: Storage, human resources, procedures | 2014-2015 health product stock value is USD 2 mil. Of this, Bendiocarb represents USD 1 mil (50%) of the health product budget across the 3 diseases for STP. Therefore, 50% or USD 1 million worth of health products is currently under the management of the SR | Considering the value of the health program assets and need for the segregation of duties, the CT recommends a shift of warehousing responsibility of Bendiocarb from the SR to FNM (Fonds National de Medicaments/Central Medical stores), under the oversight of UNDP. FMN manages other health products’ stock in a more structured manner (regular monthly stock take, inventory management, reporting, etc.) and has gained good experience in terms of warehousing of health products. The new arrangement would allow for greater segregation of duties. In addition, the new arrangement would involve more direct oversight of UNDP and the government. In preparation an assessment of the FNM would be conducted to potentially contribute to the strengthening measures. | UNDP, CNE, FNM | 3 months | The FNM agreed to receive the Bendiocarb stock from Zatona under certain budgetary conditions (Sept 2014).  These were approved by the Global Fund (Nov 2014).  A Memorandum of Understanding for a two-staged transfer process, proposed by UNDP, was signed by FNM and Zatona in December 2014  Stage 1. Transfer of the management of the Monta Alegre warehouse (so called “Zatona warehouse”) from Zatona to FNM staff was completed on 29/12/2014.  Stage 2: Physical transfer of the Bendiocarb stock and gloves from the Monta Alegre warehouse to the FNM warehouse was completed on 06/04/2015.  It was decided that spraying machines and other IRS team equipment will be handed over to Zatona for the duration of the IRS campaign. They will be returned By Zatona to the FNM in between campaigns.  The time during the two stages was used to complete all building works at the FNM Bendiocarb warehouse. The latter was officially inaugurated by the Health Minister on 26 March 2015.  FNM Bendiocarb Warehouse Manager and Warehouse Assistant) were recruited by UNDP and contracted by FNM in early February 2015, at the start of the 9th campaign.  In between the MoU signature and the staff recruitment, the contract of the Zatona Warehouse Assistant was extended in order to facilitate the transition process.  FNM warehousing capacity was assessed by the LFA on 15-19 December 2014. The FNM and UNDP are waiting for the Global Fund to communicate the assessment recommendations. |
|  | In the current SR warehousing arrangement, the SR stores the stocks and then distributes the stock through its own staff. Hence, there is no segregation of duties between storage and distribution. | Strengthen the capacity of the FNM warehouse manager (plus 1 additional rep. to be potentially recruited due to Bendiocarb oversight) by training inventory, arrangement of health products | UNDP, FNM | 1 month | Draft TORs for this training workshop were developed in December 2014. The training was initially planned for January 2015, with international facilitation, and for an audience beyond the FNM (i.e. Pharmacy Technicians from other disease Programmes and districts).  The PMU workload did not permit its organisation until now. Also, to ensure availability of FNM warehouse staff, UNDP is waiting for the end of the current IRS campaign to carry out the workshop.  However, general orientation of FNM warehouse staff into Bendiocarb warehousing has been provided in February 2015. |
|  | **Findings at the SR warehouse -** | | | | |
|  | Stock cards provided for all products stored at the warehouse appear to have been newly reproduced (all showing the same even handwriting, use of the same pen, similar alignment of entries, etc.) | Update/develop a FNM manual describing all relevant warehousing activities including standard operating procedures for receiving, storing and inventory management of the insecticide | UNDP, FNM | 2 months | UNDP has deemed it preferable to wait for completion of Bendiocarb stock transfer and recruitment of FNM warehouse staff, before moving on this activity.  Technical assistance will be sourced. The activity is currently planned for after the end of the current IRS campaign.  The transmission by the Global Fund of recommendations from the FNM capacity assessment will help in developing the FNM manual. |
|  | Limited security of the SR warehouse | Update/set up at the warehouse a register to control access to the warehouse. This register must be filled by anyone entering the premise. Information such as date of visit, visitor identity, visitor function and organization, purpose of visit, arrival time, departure time and signature must be recorded. | UNDP, FNM | 1 month | The access register was introduced in December 2014 at the Monta Alegre warehouse.  A CCTV camera was installed in the FNM Bendiocarb warehouse in January 2014. The contracted security company operates the camera system.  Other security measures were introduced at FNM warehouse including 1) metallic bars at the main entrance and windows, 2) limiting access to the warehouse to the Manager, Assistant and Chefes de produto (see below).  The use of the access register is less relevant in the case of the FNM warehouse because of the reduced number of people who come to the warehouse, compared to the Monta Alegre warehouse. |
|  |  | PR should verify the filling of this register on a regular basis | UNDP | 1 month | This is done by the UNDP PSM staff. |
|  | Insufficient training of the warehouse manager |  |  |  | See comment above about training, planned for in between the 2015 spray campaigns (9th and 10th cycle). |
|  | Storage conditions at the warehouse are not fully compliant with Good Storage Practices, in particular for Bendiocarb | Ensure that FNM warehouse is equipped with (a) fire extinguishers that are suitable for storage locations; (b) suitable shelves for storing Bendiocarb boxes and other materials; and (c) thermometers and hydrometers in order to record and monitor internal temperature and humidity | UNDP, FNM | 1 month | The FNM warehouse is now fully equipped with fire extinguishers, suitable shelves, extractors, CCTV camera, door and window bars as mentioned above.  Office equipment has also been purchased for FNM warehouse and non warehouse staff including desktop and laptop computers, UPS, office desk and chairs.  3 of the 4 air conditioners budgeted for Bendiocarb warehouse had to be redirected to the medical products warehouse due to the urgent need for them. Also, there is much less need for air conditioning equipment than planned in the Bendiocarb warehouse.  Procurement and installation of all the above was carried out in the December 2014 – February 2015 period and represented a great deal of effort on the part of UNDP PSM team. |
| **Insecticide Warehouse: Inventory Management** | Further findings at the SR warehouse:  Daily Bendiocarb need estimates exceed the actual consumption at the end of the day by up to 40% | UNDP and the Taiwanese Cooperation have recently developed an electronic warehouse tool for the recording of unused sachets received and returned daily. This would allow for more documented tracking and daily opening and closing stock balances and accountabilities. This electronic tool will enable the PR/FNM to do daily reconciliation between stock received, stock used, stock returned on a daily basis and daily projections going forward. Tool to be implemented | UNDP, FNM, Taiwanese Cooperation | 2 months | The implementation of the electronic data management tool could not start until the computer equipment was delivered to UNDP, which happened in March 2015.  The Taiwanese Cooperation has offered 3 licenses for the File Maker Pro software, respectively for CNE, FNM and Zatona. One license will be used to install the software and the warehouse database in 2 computers of the FNM (Warehouse Manager and Assistant).  The installation will be carried out at the end of May 2015. FNM Warehouse staff will be trained in the use of the software in June 2015.  In June 2015, a second license will be required to install the File Maker Pro software, together with the warehouse database in 2 computers of UNDP Malaria Project team. UNDP staff will be trained at the same time as FNM staff.  While waiting for the installation of the Data Centre, FNM will give UNDP access to warehouse data by sharing its data files on Dropbox.  Despite the progress made so far, there is still a need to acquaint stakeholders who are not directly involved, with the software and its applications. The introductory / orientation meeting initially planned for early January 2015 is still necessary and will be rescheduled for June 2015. |
|  | Lack of systematic stock inventories | PR to review and validate the quantities of Bendiocarb to be distributed from the warehouse to each SR spray team during the spray cycle. | UNDP | During spray cycles, bi-weekly | This bi-weekly review was not possible during the first phase of the current campaign. However, on a daily basis, Zatona Adil has validated the quantities of Bendiocarb to be distributed.  For the second phase of the 9th campaign, in collaboration with Zatona, UNDP will forecast bi-weekly consumption and distribution needs for Bendiocarb, and will do so per district.  Chefes de produto or “product leaders” are members of the IRS teams. They are now the primary recipients and only handlers of Bendiocarb throughout its distribution chain.  IRS team supervisors are no longer receiving Bendiocarb from the warehouse. As recommended, they are concentrating on supervising the team, as opposed to supervising the team AND the distribution/consumption of the insecticide. |
|  |  | PR to adjust quantities needed based on regular / bi-weekly reforecasting during the spray cycles | UNDP | 1 month | For the second phase of the 9th campaign, in collaboration with Zatona, UNDP will forecast bi-weekly consumption and distribution needs for Bendiocarb, and will do so per district. |
|  | Stock card format not providing areas for several key pieces of information about a product | Design a new/more structured stock card, which is not reproducible or replaceable. The new stock card must:  -be printed on cardboard and secured by a serial number and two empty spaces that will be reserved for PR signatures (including the PR´s procurement officer). The first signature will be made at the time of provision of the stock card to the warehouse manager and the second one at the end of the use of the stock card. All stock cards should be first approved by the PR’s procurement officer before they can be used. Replaced stock cards must be archived for control purposes,  -contain at least the following elements: product trade name, common name of the product, dosage, formulation, packaging, code, batch number, expiry date and donor. | UNDP, FNM | 1 month | The warehouse stock cardwas designed in October 2014.  It has already been used during the initial phase of the current RIS campaign.  FNM warehouse staff is already acquainted with its use. |
|  | **SR spraying implementation and supervision. See sections above for findings on the SR warehousing and implementation. Additional finding concerning SR implementation and general supervision include:** | | | | |
|  | Key documents can be and appear to be easily reproduced and replaced (no serial numbers, single sheets instead of counterfoil books, etc.) | SR to continue with the spraying implementation, however to be placed on probation for 2 subsequent spray rounds. LFA verification required on the implementation of strengthening / mitigation measures to be completed to determine the lifting of probation | Zatona Adil and LFA | 2 spray rounds (approx.. 1 year) | Zatona has already been notified of its probation during the meeting of 23 September 2014 and the meeting of 8 October 2014. It has responded in writing to UNDP on the issue of probation in late September / early October 2014.  Zatona has already complied with two major aspects of its probation: 1) transfer all Bendiocarb stocks to FNM and 2) submit to UNDP a comprehensive IRS Plan which UNDP has helped finalise and has sent to the GF 6 weeks before the onset of the next IRS campaign, as requested.  Zatona’s work as the IRS implementer is overseen in a comprehensive manner through the implementation of the IRS Supervision Plan. The PNLP, UNDP, CNES and FNM are all involved in supervising IRS activities, with UNDP more directly involved in the supervision of Zatona.  The challenge during the first phase of the 9th cycle has been the documentation of supervision visits, particularly by the PNLP. Without documentation of findings and recommendations, it is difficult for Zatona to adequately implement corrective measures.  The second phase of the 9th cycle, due in May 2015, should provide opportunities to improve on supervision.  As per the Supervision Plan, UNDP PMU staff now includes an M&E Assistant focusing on IRS. The jobholder will increase UNDP capacity for monitoring and oversight of the SR Zatona Adil. |
|  |  | UNDP and the Taiwanese Cooperation have recently developed a detailed electronic database for the recording of the no. of rooms, houses sprayed, Bendiocarb used, including malaria testing outcome and incidence cases per age and areas etc. The intention being that the tool would be managed by the Taiwanese in the short/medium term. Tool to be implemented. | UNDP, Taiwanese Cooperation | 2 months | The two additional staff requested by Zatona in order to adequately operate the database (“Informáticos”) have been in post since the first quarter of 2015.  The Taiwanese Cooperation trained Zatona staff in the use of FileMaker Pro and the IRS database in January – February 2015.  In March 2015, UNDP delivered the 2 computers planned for Zatona in this Action Plan. Subsequently, with the 2nd license, the Taiwanese Cooperation installed File Maker Pro and the IRS database on those two computers.  In June 2015, the IRS database will also be installed at the level of UNDP (where the File Maker Pro software will also be installed as mentioned above). While waiting for the operationalisation of the Data Center at the level of CNE, Zatona will share its IRS datafiles with UNDP, using Dropbox (as FNM for warehouse data).  The 3rd license procured by the Taiwanese Cooperation will be used to install the File Maker Pro software at the level of CNE Data Centre. This is to enable CNE to access warehouse and IRS data from respectively, FNM and Zatona.  Through this Bendiocarb Action Plan Budget, UNDP has already procured all required equipment for the CNE Data Centre (including laptops and server). All Data Centre equipment were delivered to UNDP in May 2015.  In relation to malaria disease data, a couple of years ago, the Taiwanese Cooperation installed File Maker Pro for the malaria disease database. 7 district health authorities already have the software and the malaria disease database installed on their computers. Districts are currently able to input and send malaria disease data to the CNE via dropbox (and not internet) as described in the Malaria Concept Note.  The CNE/Taiwanese Cooperation Plan is primarily to extend the malaria disease data management platform to Health Posts (i.e. beyond Districts). The pilot for such an extension is the Agua Grande District.  Secondly, the plan is to extend the pilot to remaining districts. Finally, the platform will be extended to other disease data.  The need to introduce all relevant stakeholders to the tools developed by the Taiwanese Cooperation is clear as the level of awareness, outside a small group of insiders, seems to be limited.  The CNE Data Centre Manager, budgeted for under this Plan, has not been recruited yet. |
|  | Documents that should be regularly filled in and (counter-) signed according to Zatona Adil’s SOPs were not all available or/ incomplete. This led to data gaps and a limited traceability of Bendiocarb movements between the different distribution levels | A general accountability mechanism for IRS programs is that when insecticide sachets are used in the field, the empty packaging is kept to provide a basic audit trail as to the product being used. This control was not implemented in the 7th spray round by the SR, and possibly not before. To be implemented – SR to keep all used sachet packets for reconciling use of Bendiocarb dispatched from the FNM. | Zatona Adil | Immediately | During the 9th Cycle (2015), UNDP has ensured that empty packaging is referenced (with the name of the district) in order to allow for further control or reconciliation.  The IRS Supervision Plan for the 9th Cycle which was developed by Zatona and UNDP, with the participation of CNES, PNLP, and CNES fully responds to the recommendation to put in place a general accountability mechanism at all levels.  As mentioned above, the Supervision Plan was submitted to the GF 6 weeks before the campaign as requested by the GF (November 2014). |
|  | Systematic collection and documentation of unused and of empty insecticide bags not implemented prior to the July 2014 spray round | The planning of spray rounds to be reinforced and strengthened by UNDP, CNE, PNLP and Zatona Adil. | UNDP, CNE, PNLP and Zatona Adil, Taiwanese Cooperation | 6 weeks before spraying round starts | In line with the recommendation to reinforce planning, Zatona and UNDP worked to produce the comprehensive 9th IRS Cycle Plan which was submitted to the GF in late November 2014.  The Plan was submitted to the GF 6 weeks before spraying round starts as requested by the GF. |
|  |  | In addition, the Taiwanese Cooperation to be involved in planning processes for technical support | UNDP, CNE, PNLP and Zatona Adil, Taiwanese Cooperation |  | The Taiwanese Cooperation was consulted during the development of the 9th Cycle Plan. It features among the Plan’s e-mailing list.  The Taiwanese Cooperation also takes part in IRS coordination meetings. |
|  |  | Comprehensive spray plans to be submitted to the Global Fund 6 weeks before the start of each round | UNDP, CNE, PNLP and Zatona Adil, Taiwanese Cooperation | 6 weeks before spraying round starts | Done as mentioned above. |
| Lack of systematic and efficient supervision by PR, CNE, PNLP |  | The supervision of spraying activities to be reinforced by UNDP, CNE, PNLP and Zatona Adil. | UNDP, CNE, PNLP and Zatona Adil, Taiwanese Cooperation |  | Done through the IRS Supervision Plan as mentioned above. |
|  |  | Comprehensive supervision plans to be submitted to the Global Fund 6 weeks before the start of each spraying round | UNDP, CNE, PNLP and Zatona Adil, Taiwanese Cooperation | 6 weeks before spraying round starts | Done as mentioned above |
|  | The SR distributes Bendiocarb to the spray teams through a representative who drives to distribute the product to team supervisors. This “pass through” mechanism is sub-optimal and prone to possible risk | The SR distribution arrangement requires a reconfiguration. Greater accountability would be achieved if the team supervisors collected the stocks from the warehouse directly, instead of this “pass through” arrangement | Zatona Adil | 1 month | During the current campaign, in consultation with UNDP, Zatona and FNM has gone beyond this recommendation. As described above, it is only the chefes de produto (not the supervisors) who 1) come to the warehouse and receive the Bendiocarb, 2) distribute the Bendiocarb, 3) control and report consumption, 4) make new requisitions.  IRS team supervisors DO NOT touch the Bendiocarb.  To comply with the idea of a “general accountability mechanism”, UNDP has also introduced IRS insecticide stock cards as follows:   * Order form from IRS chefe de produto to the FNM warehouse * Dispatch form from FNM warehouse to IRS chefe de produto * Dispatch form from IRS chefe de produto to field level operators   The IRS Supervision Plan also describes how FNM is due to conduct random supervisory visits in order to ascertain if quantities received in the field by the operators reflect quantities dispatched by the FNM. These visits have been conducted by the FNM. |
|  | Significant delays of the start of daily spraying activities in the 7th IRS cycle due to poor coordination and implementation of stock distribution, household allocation and documentation procedures | In terms of supervision, to allow teams to start their activities on time and also to limit any wastage of Bendiocarb, Zatona Adil should ensure that:  -Teams are provided with their detailed itinerary for next day at the latest the day before their departure  -The supplying of the teams with insecticide should take place directly at the central warehouse by each team’s insecticide manager. In this way, the general supervisor should no longer need to manage the stock but can rather focus on the supervision of the quality of spraying | Zatona Adil | 1 day in advance of spraying day | The GF recommendations are well reflected in the 9th Cycle IRS Plan and Supervision Plan as described above.  In relation to the issue of teams having their itineraries well in advance, the Plan introduces the organisation of IRS community mobilisation activities 3 days before the arrival of the IRS teams. This allows for the timely transmission of itineraries to these teams.  As described above, chefes de produto get their insecticide supplies directly from the warehouse.  During the current campaign, the recruitment of 2 warehouse staff (Warehouse Manager and Warehouse Assistant), as opposed to just 1 in previous campaigns, has accelerated the distribution of products from the warehouse.  In terms of division of responsibilities, the Warehouse Manager checks and approve order forms submitted by the chefes de produto. The Warehouse Assistant counts the product and dispatches it according to the order form. |
|  | As previously above, documents that should be regularly filled in and (counter-) signed according to Zatona Adil’s SOPS were not all available/ or incomplete. This led to data gaps and a limited traceability of Bendiocarb movements between the different distribution levels | -To also have a good view of the consumption of insecticide over the entire distribution chain, the transaction tools used, including order form, stock return form and stock dispatch for to sprayers (i.e. the transaction between team insecticide managers and sprayers) need to be improved. They should be designed as counterfoil book with serial numbers. Each strain should be in three sheets of different colours: the first sheet should be annexed to the spraying team reports, the second sheet should be kept in the central warehouse files and the third remains in the book for archiving. The structure of these tools should also provide information on the product batch number | Zatona Adil | 2 months | This recommendation is fully incorporated in the 9th Cycle Plan and Supervision Plan.  The counterfoil book with serial numbers, three sheets of different colors and information on the product batch number were developed and used during the 9th cycle (i.e. the current campaign). |
|  |  | These documents should be subject to weekly verification by the PR and Zatona Adil teams | UNDP and Zatona Adil | During spraying | These documents (stock return form, stock dispatch form to sprayer) are verified by the PR. |
| Concentration | Bendiocarb concentration used in the spraying is above the WHO recommended range (6.6 versus a max. range of 0.4) | UNDP has recently been proposing to the national stakeholders that the concentration of Bendiocarb should be reduced as the current usage is significantly above the WHO recommended range. UNDP, CNE/PNLP and WHO to agree the concentration of Bendiocarb to be used in the spraying | UNDP, CNE, PNLP and WHO | 1 month | The Plan describes this issue clearly.  This concentration has been applied to the 8th campaign (Sept-Nov 2014).  It is being applied during the 9th cycle |
| Quality control | Quality control activities appear variable in implementation | UNDP, CNE and PNLP, in collaboration with the Taiwanese to complete on bioassay to test the quality of current spraying. To be implemented on an ongoing basis | UNDP, CNE, PNLP and Taiwanese Cooperation | Immediately | This activity, which is under the responsibility of the CNE/PNLP, will be carried out in May-June 2015. |
| Criminal case | The criminal case remains to be fully pursued with STP authorities | UNDP is requested to work with CNE and MoH to pursue the criminal investigation with the required authorities | UNDP, MoH, CNE, authorities | Immediately | According to the latest verbal update received from the Health Minister, the person identified as responsible for the Bendiocarb leak is hiding from the authorities.  UNDP has not received any other updates. |
| Incinerator |  |  |  |  | The reflection and attempts at procuring an incinerator for STP have now been framed in a UNDP/GF Project Waste Management Plan and Budget, submitted to the Global Fund on 7th May 2015 (see attachment).  A container has been identified for which the quality turned out to the unsatisfactory. Efforts to find a suitable container for the Monta Alegre non-incinerable waste will be pursued. However the challenge remains in the national authorities not forthcoming with propositions for a location for the container. Meetings with the Ministry of Environment and further meeting with Ministry of Health on the issue are being considered. |