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Ethiopian Businesses Explore Mosquito Net Production at Kenyan Factory

Eight Ethiopians representing four commercial companies and the Federal Ministry of Health traveled to Mossnet Ltd. in Nairobi to study the details of setting up a mosquito net sewing operation. The trip was sponsored by the USAID Regional Economic Development Services Office for East and Southern African (REDSO). No mosquito nets are currently made in Ethiopia; however, there is growing interest among the public and private sectors to create a local net production capacity for this nation of 65 million people with 48 million exposed to malaria each year. In 2003, the East African Group Ltd. launched the ITN brand *Salaam Enkilf* with the support of the USAID/Ethiopia and the USAID NetMark Program. This was the first Ethiopian ITN brand to enter the local market; however, the net itself was imported from Tanzania as no local source of nets was available.

NetMark has been helping to improve the quality and efficiency of African net manufacturers since 2003. Given the strong interest expressed in local net production, USAID/Ethiopia invited NetMark to hold a technical meeting on net production in Addis Ababa in May 2005. This meeting was held with the Honorable Minister of Trade and Industry in attendance as well as various company representatives and USAID staff. NetMark reviewed global and African net production and the strong competition coming from Asian firms. A lengthy discussion was held on options for Ethiopian companies to start local net production and the relative costs of manufacturing nets from yarn compared to sewing nets using imported netting. Given the strong interest in sewing nets in Ethiopia, NetMark offered to organize a Business Tour to a net garmenting operation so Ethiopian companies could clearly understand what is needed to set up a sewing facility and the challenges it will face as a business investment. Mossnet Ltd. of Kenya, a producer of high quality nets for over a decade, agreed to host the group. The Business Tour took place from September 6-7, 2005. The topics covered included:

1. *Basic Requirements for Setting Up A Mosquito Net Stitching Plant*
2. *Production Department - Organization Chart*
3. *Production Department Records And Responsibilities*
4. *Production Work Instructions*
5. *Production Output Targets*
6. *Daily Production Output And Machines Required*
7. *Quality Control Process*
8. *Cutting Patterns And Dimensions*
9. *Suppliers Of Machinery, Fabrics & Other Inputs*
10. *Marketing Competition & Challenges*

11. *Manufacturing of Netting (visit to textile factory)*

The participants were hosted by Mossnet's Managing Director Michael Oddenyo and his staff. They provided the participants with handouts on the requirements for setting up a stitching factory, type and cost of needed equipment, organization of a production facility, records and responsibilities, quality control, cutting patterns, etc. A lengthy discussion was held on all inputs and components required for the production of bednets (e.g., netting fabrics, threads and yarns, packaging labels, baling materials, treatment kits and chemicals, etc.) providing a clear picture of the physical inputs that go into net production.

The Mossnet production manager took the participants through the facility to see all the steps in net production starting with the receipt and storage of netting fabrics and other inputs into the factory and the Quality Control Unit for examination of the netting prior to cutting. They were introduced to the cutting methods for various types of nets (e.g., conical and rectangular). The Mossnet manager emphasized the need for precision cutting that minimized any waste of netting, noting that the cutting process is a critical factor in production and one of the key productivity indicators.



The participants followed the distribution of pre-cut fabric panels and components to the tailors who do the stitching of the nets. The participants asked many questions about the sewing process, the training and unit productivity of staff, and the number of staff required for varying levels of net production. The importance of quality control was stressed, noting that it was a continuous process that started with the ordering of inputs and checking of the materials received through each step in the production process, with a final check of the project before packaging and shipment. The Mossnet staff discussed the challenges of ensuring steady supplies, facing heavy competition, and marketing their net and ITN products. A frank discussion was held on the difficulties faced by a relatively small garmenting operation and how it could be made profitable.



The participants were also taken on a tour of a local textile manufacturer (Sunflag Knitting and Textile Mills) to see the process of making netting from yarn and make a connection with a possible supplier of netting. The group was given a guided tour of the factory seeing the entire

production process from yarn preparation, knitting, dyeing, heat setting and final rolling to packing for supply to stitching factories such as Mossnet. Following the Nairobi trip, the company representatives returned to Addis Ababa to brief their corporate colleagues on what they had learned. Three of the four companies have reported that they want to set up net stitching operations and have asked for NetMark assistance on finding equipment and netting suppliers and arranging for the training of Ethiopian staff on net garmenting.